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Meeting Date
8/22/2017



AGENDA	
Section	Consent
Item No.	II.A.1

AGENDA REPORT
BREVARD COUNTY BOARD OF COUNTY COMMISSIONERS

SUBJECT:	Florida Department of Environmental Protection (DEP) Grant - Groundwater Pollution: Engaging the Community in Solutions Fiscal Impact: \$1,000,000 Revenue
DEPT/OFFICE:	Natural Resources Management Department

Requested Action:

It is requested that the Board of County Commissioners: (1) Authorize the Chairman to execute DEP Contract No. LP05112 for a project titled Groundwater Pollution: Engaging the Community in Solutions; (2) Authorize the Chairman to execute a Contract with the Marine Resource Council (MRC) to conduct the grant-funded project; (3) Authorize the County Manager to execute amendments to either contract, as needed, subject to the approval of the County Attorney's Office and Risk Management; and (4) Approve associated budget change requests.

Summary Explanation & Background:

Groundwater pollution appears to be the largest conduit of upland pollution to the Indian River Lagoon, however little data is available on the specific sources of groundwater pollution. Septic effluent is assumed to be a significant source of groundwater pollution and models exist for estimating the plume of pollution that emanates from each septic drain field, but these models have not been calibrated or validated to actual field conditions in Brevard County. Staff worked with the Marine Resources Council to develop a funding request that was approved by the Florida Legislature to engage the community in addressing this data gap.

MRC will work with partners at Applied Ecology Inc. (AEI), the Florida Institute of Technology Indian River Lagoon Research Institute (IRLRI), and the University of Central Florida (UCF) to investigate environmental, geologic, and social drivers for wastewater contamination in Brevard County groundwater. MRC will train and organize volunteer citizen scientists to help complete a comprehensive investigation of wastewater and septic tank effluent contamination of groundwater throughout Brevard County. A map of lagoon-front homeowners with septic tanks will be used to select sites where soil samples will be collected and characterized and groundwater testing will be performed quarterly for two (2) years.

MRC will conduct a survey of septic system owners to gain information on the maintenance knowledge and practices of septic system owners. MRC will select a priority area to conduct a pilot study on the effectiveness of a product that can be added to septic systems in-situ to improve nutrient removal. They will test public participation levels and measure the resulting improvement in groundwater quality.

The project will clarify the roles of soil, groundwater table elevation, distance from open water and septic system maintenance in pollution attenuation or transfer. Results will be used to calibrate the DEP approved model for septic load estimating in Brevard County. The model can then be used to predict future water quality improvement in the Lagoon if specific neighborhoods are connected to sewer service and other specific septic systems are upgraded in place or treated in -situ. This information will inform annual updates of the Save Our Indian River Lagoon Project Plan to improve the efficiency and effectiveness of Trust Fund investments.

Clerk to the Board Instructions: **Execute 2 originals each for the grant agreement with DEP and the contract with MRC**

Exhibits Attached: External Pollution Sources Pie Charts, County Attorney and Risk Management Contract Review Forms
Exhibit A: DEP Agreement
Exhibit B: MRC Contract

Contract /Agreement (If attached): Reviewed by County Attorney		Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	PR	<input type="checkbox"/>
County Manager Frank Abbate	Assistant County Manager John Denninghoff			Department Director / Extension Virginia Barker/ 5x2014			