

Texas Water Resources Institute

Implementing Agriculture and Rural Management Measures in the Update to the Arroyo Colorado Watershed Protection Plan (ACWPP) 2017 to Address NPS Pollution and Impairments

**FY 2019 CWA §319(h)
TSSWCB 19-05**

EPA State Categorical Program Grants – Workplan Essential Elements
FY 2018-2022 EPA Strategic Plan Reference
Strategic Plan Goal – Goal 1 Core Mission
Strategic Plan Objective – Objective 1.2 Provide for Clean and Safe Water

Quarter no. 2 from 1/1/2020 through 3/31/2020

I. Abstract

This Quarter the Extension Associate continued to invest significant effort in meeting with County Extension Agents, NRCS personnel, TSSWCB staff, AgriLife Extension Specialists and AgriLife Research scientists to see where TWRI could help and assist with distributing educational information to producers. The Extension Associate collaborated with TSSWCB, NRCS, and County Extension Agents to add new producers to the direct mailing list via email for this year's programs. TWRI assisted with a small acreage and socially disadvantaged Ag committee, to coordinate and facilitate this year's educational outreach programs. The Extension Associate also continued to assist producers with getting financial and technical assistance for Water Quality Management Plans (WQMP) by sending out 319 funding updates via email. The Extension Associate (EA) and Arroyo Colorado Watershed Coordinator (ACWC) set up a booth at the Coastal to expo and used the rainfall simulator to demonstrate sediment and nutrient run-off to children from across the RGV. The EA & ACWC participated in the Falcon Lake Public Based Learning workshop in Los Fresnos. TWRI staff spoke to middle school children inform 3 middle schools in Los Fresnos TX about Non-Point source pollution & Point Source in watersheds, watersheds and functions, rock types, rock density, topographic maps, plant types and adaptations, water sampling and explained different careers in the field of science. TWRI and CEAs worked together to put together a Feral Hog Eradication training program for producers in Cameron County. USDA – NRCS, TWRI and CEAs worked together on local workgroups in Hidalgo, Cameron, and Willacy counties. The Extension Associate presented Non – point source pollution in the ACW at the Master Ranchers program lead by the Cameron County Extension Agent. The Extension Associate assisted the RGV CEAs at the Bull Gain test and heifer development field day. Next quarter, the Extension Associate will continue to promote Best Management Practices, and Financial and Technical assistance at the producer Workgroup meetings held by the County Extension Agents, TSSWCB, and USDA-NRCS.

II. Overall Progress and Results by Task

TASK 1: Project Administration

Subtask 1.1: TWRI will prepare electronic quarterly progress reports (QPRs) for submission to the TSSWCB. QPRs shall document all activities performed within a quarter and shall be submitted by the 15th of January, April, July and October. QPRs shall be distributed to all Project Partners.

The following actions have been completed during this reporting period:

- a. The year 1, quarter 2 report was completed and sent to TSSWCB on April 2, 2020.

8% Complete

Subtask 1.2: TWRI will perform accounting functions for project funds and will submit appropriate Reimbursement Forms to TSSWCB at least quarterly.

The following actions have been completed during this reporting period:

- a. As of April 2, 2020, a total of \$18,237.35 or 6% of total project funding has been expended.

8% Complete

Subtask 1.3: TWRI will host coordination meetings or conference calls, at least quarterly, with Project Partners to discuss project activities, project schedule, communication needs, deliverables, and other requirements. TWRI will develop lists of action items needed following each project coordination meeting and distribute to project personnel.

The following actions have been completed during this reporting period:

- a. The Extension Associate held regular communications with project partners at the TSSWCB Harlingen Regional office and the NRCS county field offices.

8% Complete

Subtask 1.4: TWRI will develop a Final Report that summarizes activities completed, conclusions reached during the project and discusses the extent to which project goals and measures of success have been achieved.

The following actions have been completed during this reporting period:

- a. No activity has been done.

0% complete

TASK 2: Conduct Education and Outreach to Increase Landowner Participation in BMPs and Incentive Programs

Subtask 2.1: The Extension Associate will continue to maintain and develop a mailing list of producers in the Arroyo Colorado Watershed and updated the mailing list as needed.

The following actions have been completed during this reporting period:

- a. The Extension Associate has added new producers to current mailing list via email.

8% Complete

Subtask 2.2: The Extension Associate will periodically distribute emails to producers identified in Subtask 2.1. Direct mailings and personal contact will be geared toward highlighting the availability of and involvement in available incentive programs. Also, emails and news releases will advertise upcoming educational opportunities. Further, AgriLife Extension will engage producers through personal contact. Direct contact will be made with individuals identified in Subtask 2.1 as well as attendance at SWCD meetings (twice annually at each SWCD).

The following actions have been completed during this reporting period:

- a. TWRI has let producers know that applications for 319 funding are available through the TSSWCB.
- b. The Extension Associate also let producers know that USDA-NRCS is accepting applications for funding through their funding programs.
- c. The Extension Associate attended SWCD meetings in January and February in Willacy, Cameron, and Hidalgo counties.

8% Complete

Subtask 2.3: The Extension Associate will use information in the USDA-NRCS Field Office Technical Guide (FOTG) to develop educational materials that highlight specifications, beyond descriptions, about various BMPs that are of interest to producers. The Extension Assistant will work with AgriLife Extension Department of Agricultural Economics to incorporate information on the economics of BMPs as a primary driver for adoption. Materials will be distributed at the various educational events in the following subtasks. Also, materials that educate producers on technical and financial assistance will be updated and delivered at educational events to further encourage the adoption of BMPs through assistance programs.

The following actions have been completed during this reporting period:

- a. TWRI has passed out current information given from USDA-NRCS to help inform producers on EQIP funding.
- b. TWRI and the Agricultural Economics Specialist are collaborating to prepare a pasture, range, and forage decision tool for producers in South Texas.

8% Complete

Subtask 2.4: The Extension Associate will coordinate an Irrigation Training Program that will be held once annually. This program will consist of specialists that will present on various topics including, but not limited to:

- *Economics of BMP adoption*
- *Irrigation scheduling*
- *Irrigation technologies and BMPs*
- *Water quality issues*
- *Crop-specific guidelines*

Materials will be printed and provided to participants.

The following actions have been completed during this reporting period:

- a. TWRI and CEA's are coordinating an irrigation program focused in Cameron and Hidalgo Counties specifically on irrigation technologies and BMPs, water quality issues, and Irrigation Scheduling.

8% Complete

Subtask 2.5: The Extension Associate will coordinate with SWCDs, NRCS, HRO, and cooperating producers to host one educational meeting annually, specifically dedicated to promoting technical and financial assistance programs. The Extension Assistant will utilize previously developed materials as well as develop technical materials that highlight the specifications of BMPs in the NRCS FOTG (subtask 2.3).

The following actions have been completed during this reporting period:

- a. The TWRI Extension Associate, USDA-NRCS, and CEAs worked together and had Local Workgroup meeting on how to correctly fill out forms for financial assistance in Hidalgo, Cameron, and Willacy counties in February 2020.
- b. TWRI, NRCS, and HRO, worked together to update educational materials for upcoming events.

8% Complete

Subtask 2.6: AgriLife Extension will coordinate with SWCDs, NRCS, HRO, and cooperating producers to host field tours that demonstrate benefits of BMPs and WQMPs. At least one field tour will be held annually. Demonstrations will include the use of equipment to illustrate the efficacy of BMPs.

The following actions have been completed during this reporting period:

- a. The Extension Associate has met with CEAs, SWCDs, and NRCS to demonstrate the use of feral hog traps to producers who have suffered with significant hog damages.

8% Complete

Subtask 2.7: The Extension Associate will host workshops targeting small acreage producers and beginning farmers that cover range/pasture management, prescribed grazing, and water conservation.

The following actions have been completed during this reporting period:

- a. The TWRI Extension Associate and the CEAs, have worked together to facilitate a soil health workshop for small acreage producers in Lyford TX to inform them on soil testing and cover crops.
- b. The Extension Associate presented at the Master Rancher program in Cameron county on TSSWCB 319 financial assistance and non-point source pollution in the ACW.

8% Complete

Subtask 2.8: The Extension Associate will support, promote, and participate in at least one annual field day, demonstration, site tour, or education event sponsored by NRCS, HRO, and/or SWCDs for the Arroyo Colorado watershed, as appropriate. Extension Assistant will host workshops targeting small acreage producers and beginning farmers that cover range/pasture management, prescribed grazing, and water conservation.

The following actions have been completed during this reporting period:

- a. The Extension Associate participated in an educational event hosted by CEAs and their livestock committees to demonstrate bull gain testing and heifer development on feed rationing to improve herd stock.

8% Complete

TASK 3: Support and Facilitation of ACWPP Update Implementation and Coordination of Watershed Steering Committee and Workgroups

Subtask 3.1: Watershed Coordinator Continuation — TWRI will continue to employ an Arroyo Colorado Watershed Coordinator (WC) to engage and facilitate the Arroyo Colorado WSC, watershed stakeholders, and entities identified in the Arroyo Colorado WPP. The WC will be stationed in the watershed area and serve as the primary conduit for interaction with landowners, citizens, and entities to facilitate the implementation of the WPP. Funding for the Watershed Coordinator will not be funded until the last 3.6 months of this contract.

The following actions have been completed during this reporting period:

- a. TWRI Extension Associate has worked with the ACWC to facilitate the implementation of the ACWPP through O&E to ACW stakeholders at the local Pre-Plant Conference, and demonstrating run-off using the rainfall simulator and demonstrating the watershed model with students from Los Fresnos middle schools.
- b. The WC presented at the Arroyo Colorado Watershed-Los Fresnos Teacher & Student Workshops- There were 2 workshops. On the first day, January 20, 2020-The

- WC gave his presentation to the 3 Resaca Middle School Science teachers to get them familiar with the content. The next day, January 21, 2020-the WC gave the presentation to the entire student body at Resaca Middle School. In order to give the presentations to the entire student body, the Los Fresnos Resaca Middle School teachers and staff doubled up the classes (2 classes in 1 room/presentation) for 6 separate classes throughout the day.
- c. The WC and the Extension Associate worked with the Los Fresnos CISD Science Coordinator to plan and facilitate the Falcon Lake Public Based Learning (PBL) workshop. The PBL is a science field day for middle students designed to give the students exposure and hands on instruction on Watersheds, NPS vs PS Pollution, Weathering, Erosion & Deposition, topographic maps & transects, Abiotic/Biotic levels of organization, micro-habitats & bio-diversity, plant classification, plant adaptations & behavior, water sampling/water testing careers in Water resources/water conservation, geology, horticulture/nursery and Science Curriculum Coordinator. There were 3 separate field trip and agendas for all 3 three middle schools that attended. The schools are listed below:

Tuesday STEAM Day from Resaca Middle School:

7th Grade 52 students

Teachers: Christopher Devlin & Ezequiel Garcia

6th Grade 86 students

Teachers: Ezequiel Navarro & David Rodriguez

Wednesday Falcon Pond PBL:

Liberty Memorial MS – 7 students

Teacher: Denjuami Barker

Los Cuates MS – 24 students

Teachers: Wendy Wilson & Robert Cepeda

8% Complete

Subtask 3.2: Workgroup & Watershed Steering Committee Facilitation — TWRI will facilitate public participation and stakeholder involvement in the watershed planning process, specifically by hosting semi-annual meetings of the Arroyo Colorado Workgroup and quarterly Steering Committee meetings. TWRI will assist with agenda development and facilitation as needed. TWRI will coordinate meetings, secure meeting locations, and prepare and disseminate meeting notices and agendas. Meeting summaries will be prepared and posted to the project website. Meeting summaries will include: agenda, meeting summary, attendance list, and meeting materials.

The following actions have been completed during this reporting period:

- a. The Extension Associate worked with USDA-NRCS to host Local Workgroup meetings in Hidalgo, Cameron, and Willacy counties to inform the public of financial and technical assistance programs.

8% Complete

Subtask 3.3: Coordination with critical watershed groups — TWRI will attend and participate in other public meetings as appropriate to communicate project goals, activities, and accomplishments to affected parties. Such meetings may include, but are not limited to, county commissioners' courts, Clean Rivers Program, Basin Steering Committee and Coordinated Monitoring meetings, local SWCDs, groundwater conservation districts, Lower Rio Grande Valley Development Council, Region M Water Planning Group, International Boundary and Water Commission Public Forum meetings, and other appropriate meetings of critical watershed stakeholder groups. Coordination activities will be documented in the Quarterly Progress Reports.

The following actions have been completed during this reporting period:

- a. The Extension Associate has coordinated with TWRI research transboundary scientist to facilitate a two-day ground water district conference in McAllen TX set for October 14-15, 2020.
- b. The ACW program coordinator attended and participated at the Region M meeting on February 5, 2020 in Weslaco, TX.

8% Complete

Subtask 3.4: Contribute agricultural information to Annual Newsletters — TWRI will develop, publish, and distribute annual newsletters that are designed to keep landowners and entities informed of ongoing WPP implementation activities, including water quality data collection and progress toward achieving milestones in the ACWPP Update. The newsletter will be distributed to individual landowners and entities in the watershed. TWRI will solicit content matter for the newsletters from project partners as appropriate. TSSWCB must approve all project-related content in any informational materials and promotional publications prior to distribution.

The following actions have been completed during this reporting period:

- a. No activity done this quarter.

8% Complete

III. Related Issues/Current Problems and Favorable or Unusual Developments

- None this quarter.

IV. Projected Work for Next Quarter

- Continue work on developing educational materials on BMPs
- Continue working to advertise the, TSSWCB WQMP program and EQIP
- Distribute project fact sheets

- Continue work to schedule the field tours
- Continue to meet with FSA and NRCS to expand the mailing list
- Continue to work with CEA's on promoting BMPs and helping producers
- Attend more SWCD meetings, and irrigation district board meetings