

Upper Cibolo Creek and Cow Creek Groundwater Conservation District Education Initiative

(Watershed Stewardship Initiative)

Final Report

July 7, 2015

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Executive Summary

This project was funded through a Section 319 (h) Federal Nonpoint Source Pollution Grant to support and enhance the objectives of the Upper Cibolo Creek Watershed Partnership and the Cow Creek Groundwater Conservation District's mission of conserving and protecting the Cow Creek Aquifer system. This project aimed to achieve three goals:

- Goal 1. Promote stewardship of the groundwater/surface water quality and quantity
- Goal 2. Develop awareness of the need for sensitive development
- Goal 3. Foster cooperative stakeholder dialogue on growth

This two year project, referred to by project participants as the Water Stewardship Initiative (WSI) was conceived in response to CCGCD concerns that: 1) expected regional growth has a high potential for increasing nonpoint sources of bacteria, sediment, and nutrient pollution, and; 2) historical water consumption and land-use practices do not conserve and protect water sufficiently to sustain today's levels of water affordability, quality, and availability. To address these concerns, the project developed and conducted an education and outreach program in two phases with the long term goal of changing people's knowledge, behavior and attitude about water from that which characterizes a Water Waste Culture to that which reflects a New Water Culture based on water and land stewardship. Phase 1, which took place in the project's first year, focused on Materials Development. These materials were incorporated into the Phase 2 Public Outreach program which took place in the project's second year. (See box for details.)

The CCGCD formed a Phase 1 Design Committee to produce the project videos and the water manual. It also hired a project coordinator through the Greater Edwards Aquifer Alliance who convened Design Committee meetings, drafted the project's educational content, administered contract reporting, and ensured the project adhered to the project scope. All of the organizations that participated in the Design Committee contributed significant third-party in-kind match through their participation in committee meetings. Two partners, the Cibolo Nature Center and Farm (CNCF) and the Guadalupe-Blanco River Authority (GBRA), contributed in-kind match that far exceeded project requirements as follows:

- Ben Eldredge of CNCF performed all of the video editing and the majority of filming, contributing over 100 hours toward the project;
- Janet Thome of GBRA completed the final formatting and production of the water manual contributing over 160 hours to the project.

Two Phase Program

Phase 1: educational materials in the form of a water owner's manual, Water: Yours, Mine, and Ours, educational videos, power point presentations and literature templates for download and adaptation by other organizations, including groundwater districts;

Phase 2: presentations and workshops to a wide audience that included homeowners, students, businesses, developers, and public sector representatives; documentation of program impacts that included changes in knowledge, attitudes, and behaviors characteristic of the New Water Culture.

Without their skills, passion for the issues, and commitment to completing the project, the quality of this project's products would not have been nearly as high. Finally, it is noteworthy that the CCGCD contributed the total cost of printing 10,000 Water Manuals at a cost of \$40,029.35.

At the end of Phase 1, the Design Committee concluded its work on the project materials. Committee members subsequently dissolved the Design Committee and reconstituted themselves as the Public Outreach Committee (POC) in order to design and implement Phase 2. On November 2, 2013 the POC launched Phase 2 at the Boerne Rainwater Harvesting Revival. The Cow Creek Groundwater District spearheaded the Committee's presence at the Revival with several members of the Committee presenting on this project's core topics, hosting an information booth, and distributing the project's materials. Throughout Phase 2, the project conducted more than a dozen presentations to over 500 participants representing diverse audiences as directed in the project scope of work. In conjunction with these presentations, the project conducted pre-and post-event surveys to measure changes in knowledge and attitudes about water. See Appendix for a summary of Outreach and Education Activity and Performance Measures.

At the conclusion of the project, the CCGCD Manager and Board of Directors indicated that this project was exactly what CCGCD needed at this time to strengthen its ability to protect and conserve groundwater.

Introduction

The WSI project is essentially an extension of a long-term collaboration between the Cow Creek Groundwater Conservation District and the City of Boerne. For several years, both entities have served jointly as the primary voice in Kendall County for water conservation and protection. The outreach and education programs of both entities have routinely presented at schools, business meetings, public forums, and conferences, oftentimes collaboratively. This project greatly benefited from this collaboration history which was further enhanced by outreach and education activities of the UCCW Partnership. The UCCW Partnership in turn has greatly benefited from the use of this project's innovative and compelling educational content.

Outreach and education is one of the most important CCGCD activities. In the years preceding this project, the CCGCD invested resources in developing a water video, power point presentations, and compelling educational content to help residents understand:

- where their water comes from
- why factors such as water waste, unpredictable rain patterns, and the area's geologic profile (that features both natural and manmade pathways for pollutants to enter the aquifers such as sink holes, caves, and abandoned water wells) combine to create a highly sensitive water regime
- that a drought stage declaration is not a signal to start conserving water, rather conservation, for residents who depend on the Cow Creek Aquifer system, is a year around practice that needs to be adopted in perpetuity, in both wet and dry years.

Project Significance and Background

The Cow Creek Groundwater Conservation (CCGCD) District encompasses the majority of Kendall County and includes the City of Boerne, several subdivisions and ranches. High population growth, moderately productive aquifers, and karst, permeable geology render this area susceptible to both water supply shortages and degradation. The Upper Cibolo Creek's "significant groundwater recharge through fractures in the streambed" in combination with "a history of elevated bacteria levels", dissolved oxygen impairment, and TCEQ studies in 2006 and 2008 showing potentially declining instream aquatic life levels were significant enough factors to compel the City of Boerne and the Cibolo Nature Center to apply for and receive a Clean Water Act Section 319(h) grant award to develop a Watershed Protection Plan for the Upper Cibolo Creek (UCC) Watershed.

The UCC Watershed Partnership (UCCW Partnership) formed in 2010 to address bacteria impairments and coordinate stakeholder involvement in Watershed Protection Plan development. Noting the prevalence of ground and surface water interaction in the UCC, the CCGCD in 2011 also applied for a 319(h) grant, called the Upper Cibolo Creek and Cow Creek Groundwater Conservation District (GCD) Education Initiative (later abbreviated to the Water Stewardship Initiative ((WSI)) as indicated above), to support and enhance the outreach and education objectives of the UCCW Partnership as well as advance the CCGCD's capacity to educate area residents about the sensitivity of the aquifer, the integral relationship between surface and groundwater, and the necessity of forming a New Water Culture based on land and water stewardship irrespective of any drought stage. The TCEQ awarded CCGCD's WSI grant in 2012 as the UCCW Partnership was winding down its stakeholder process.

Methods

To ensure that the WSI enhanced and did not duplicate efforts of the UCCW Partnership, the UCCW Partnership Project Manager participated in the WSI Design and Outreach Committees. A carefully coordinated approach to WSI project design resulted in a target audience similar to the Partnership's: "residents, tourists, land managers and local decision-makers". In addition, similar strategies were implemented to reach this audience, including "events, workshops, trainings and literature resources". Both projects also placed an emphasis on behavioral changes that reduce threats to water quality from nonpoint source pollution (NPS).

The two projects were different, yet complementary in several ways. The WSI's primary focus was on reducing NPS threats to groundwater quality as well changing behaviors that needlessly draw down the aquifer to levels that reduce Upper Cibolo Creek flows and weaken the impact of UCCW Partnership NPS reduction efforts. This is because reduced in-flow to the creek from groundwater elevates pollutant concentrations in the creek irrespective of reductions in NPS pollution from surface runoff.

This complementary approach was extended to the WSI outreach and education strategy. This not only reinforced the Partnership's stewardship message, but also diversified the outreach and education tools available to all water stewardship partners in the area with the production of a water "owner's manual" (titled, Water: Yours, Mine and Ours), five educational videos, power point presentations on water conservation and rainwater harvesting, and three brochures (on water Conservation, Capture, and

keeping water Clean). All of these materials were unique to the WSI project and did not duplicate work funded through the UCCW Partnership. They also allowed the CCGCD to offer high quality outreach and education materials for adaption and use by other groundwater conservation districts in the region.

Content Development

A Design Committee (DC) formed within the first months of the project launch to identify outreach and education themes and content and to ensure that the education content and message were technically and scientifically sound and consistent with the intent of the NPS program, TCEQ, CCGCD, UCCWPP, and collaborating partners. Members included:

- Micah Voulgaris, CCGCD General Manager
- Milan Michalec, CCGCD Board of Directors
- Bob Webster, CCGCD Board of Directors
- John Kight, CCGCD Board of Directors
- Ryan Bass, City of Boerne and Coordinator of the Upper Cibolo Creek Watershed Partnership
- Paul Bartlett, City of Boerne
- Ben Eldredge, Cibolo Nature Center and Farm
- Annalisa Peace, Greater Edwards Aquifer Alliance
- Eric Mendelman, Greater Edwards Aquifer Alliance
- Cinde Thomas-Jimenez, Guadalupe Blanco River Authority

This committee met on a consistent basis to design and complete the requirements of the project scope of work, including the materials, presentations, workshops, and web-based components. The DC determined that the most effective way to invoke behavior changes among project participants was to: 1) draw a distinction between a Water Waste Culture and a New Water Culture that is based on land and water stewardship, and; 2) challenge participants to abandon the ways of Water Waste and join the New Water Culture. The DC identified four factors that characterize a Water Waste Culture:

- 1) lack of understanding about where our water comes from;
- 2) widely held assumptions that water supply is plentiful or unlimited;
- 3) beliefs that individual behaviors are insignificant in managing water resources;
- 4) the belief that water conservation is expensive and time consuming.

By contrast, a New Water Culture recognizes that we cannot control the quantity of our water supply, i.e. drought is inevitable. Its citizens therefore, are committed to taking action based on an understanding of:

- 1) where our water comes from and how our natural system of aquifers, springs, streams and reservoirs functions;
- 2) how humans disrupt and impact this natural system;
- 3) how we can minimize the impact of drought on humans and nature through water conservation, rainwater harvesting, and nonpoint source pollution reduction.

The suite of tools and activities that was developed by the DC and mentioned briefly in this report's Executive Summary, were designed to help people clearly understand the characteristics of both water use cultures, identify which culture they are perpetuating, and offer simple, tangible behaviors and habits they can adopt to begin the shift toward stewardship. A detailed explanation of these materials follows:

1) Water Owner's Manual.

Water: Yours, Mine, and Ours. This publication was developed as a water owner's manual, comprehensive in scope, yet easy to read with recommendations on compelling, simple, and effective stewardship actions. The document features an Introduction followed by five chapters that present compelling reasons to adopt the habits of a New Water Culture. The message of the entire document revolves around the three main components of the New Water Culture. These include: 1) water Conservation; 2) water Capture, and; 3) keeping water Clean.

To help the reader fully embrace these three components, the document's Introduction begins with a brief history of water in the Hill Country, followed by an orientation on where CCGCD residents' water comes from, the planning framework intended to protect water, a water Myth Busting section, followed by an introduction to the CCGCD as the "go-to" source for factual information about water. This is followed by an appeal to join the New Water Culture and to take the 40 Gallon Challenge as a first significant step.

Chapter 1 Water in Nature. This chapter orients the reader as to how water moves cyclically through our natural environment reflecting a single system containing ground, surface and atmospheric waters. This is followed by an overview of how important healthy ecosystems are to our future and what characterizes a healthy ecosystem. The reader is then introduced to the Cow Creek Aquifer System, including aquifer features that emerge on the earth's surface such as caves and sinkholes. Finally, this natural system is linked to each of us as a precious inheritance.

Chapter 2 Our Impact on Water. This chapter drives home the point that water stewardship is not possible without proper stewardship of the land. Numerous impacts to the land are discussed and linked to water resource impacts: impervious cover; nonpoint source pollution; number of water wells; Impacts to soil microbes, and; the impact of excessive water use. Two futures are contrasted: one in which water is wasted, polluted, expensive, and scarce, and: another in which water and land are managed to produce sustainable, clean, and affordable water supplies.

Chapter 3 A New Water Culture. This chapter presents components of a New Water Culture in both urban settings and rural settings. Urban areas utilize Low Impact Development design to manage storm water in ways that mimic natural systems. Streamside stewardship favors establishment or preservation of riparian buffers that allow streams to expand, contract and meander with fluctuations in flow without significant erosion. The importance of spring to the New Water Culture is also emphasized along with rangeland stewardship and conservation easements.

Chapter 4 Conserve. This chapter discusses conservation priorities for the home and yard with a special emphasis on water conscious landscaping.

Chapter 5 Capture. This chapter discusses rainwater harvesting planning, design, and construction with a presentation of helpful case studies.

2) Companion Video Series. (https://www.youtube.com/channel/UCprPvjs3oe2-sRGRB_FVTZw)

A series of five videos were produced as a companion to the water manual.

Video 1 **Introduction to Rainwater Harvesting**

An overview of rainwater harvesting throughout history and its viability in modern times.

Video 2 **Creating a Rainwater Harvest System**

Explore the basic components of a rainwater harvest system.

Video 3 **Residential Rainwater Harvesting**

Tour a residential rainwater harvesting system with John Kight, one of the top rainwater harvesting experts in the United States.

Video 4 **Harvesting Rainwater for Irrigation**

Capturing rainwater for landscape irrigation.

Video 5 **Harvesting Greywater & Condensation**

Simple ways to capture and utilize greywater and condensation for landscape irrigation.

3) Power Point Presentations and Literature Templates.

Two Power Point Presentations were developed, Water Conservation and Rainwater Harvesting. These presentations included extensive notes to assist presenters delivering the presentation even with minimal preparation and background knowledge of water resource issues. The Power Point content closely followed the manual, with manual referencing the videos as a companion resource. Three brochures were developed as Literature Templates that could be adapted for use by anyone with a need to educate people on Water Conservation, Water Capture, and Keeping Water Clean.

4) Outreach and Education Activities.

The project launched its outreach and education phase at the November 2, 2013 Rainwater Harvesting Revival in Boerne (Micah and Ryan actually presented to the 7th graders on October 31 and November 1st). This was followed by a series of workshops and presentations to promote the New Water Culture message, promote and distribute this project's outreach tools, and document adoption of stewardship behaviors.

Results and Observations

The project fully completed all of the project deliverables. A task summary and completed deliverables table follows:

Task 1- Project Administration. This task included 5 subtasks.

Task 1.1 Project Oversight. CCGCD secured the services of the Greater Edwards Aquifer Alliance through a subcontract to provide technical support, coordinate project tasks and reports, and train CCGCD administrative staff on completing FSR's and QPR's. The project requested and received approval for one budget change and one budget amendment to reallocate a portion of

the CCGCD cost share to third-party in-kind. This did not result in any changes to project funding levels. It did allow the project to capture more third party in-kind match than originally anticipated when the project proposal was written. This included:

- \$40,000+ in printing costs contributed by the CCGCD
- \$8,000+ in professional editing services from the GBRA
- \$5,000+ in professional video production and editing services from the CNCF

In total the project generated a total of \$53,000 in third party in-kind match, which was \$35,000 over what was required by the grant funding program.

Task 1.2 QPRs. CCGCD completed all Quarterly Progress Reports on time with minimal corrections.

Task 1.3 Contract Communication. CCGCD followed the communication plan required in the project work plan. This included:

- Participating in a post-award meeting at TCEQ headquarters on September 18, 2012
- Quarterly conference calls to discuss financial and programmatic issues.

Task 1.4 Coordination Meeting with US Environmental Protection Agency (EPA). (This meeting was not requested by EPA)

Task 1.5. Annual Report Article. (TCEQ did not request an annual report article)

Task 2. Outreach and Education Tools

Task 2.1. Form Design Committee. Design Committee (DC) was formed in October 2012 comprised of representatives from the CCGCD Board of Directors, the City of Boerne (including the Upper Cibolo Creek Watershed Partnership), the Greater Edwards Aquifer Alliance, the Cibolo Nature Center and Farm, the Guadalupe-Blanco River Authority, and the Hill Country Conservancy. The DC produced video scripts and the outline for the Manual, filmed and edited video content, drafted and edited manual text, and in general provided the technical guidance to ensure that the educational content was technically and scientifically accurate, the presentation of the material matched the intended audience and the subject matter covered by the materials met the goals of the grant, the CCGCD, and the UCC Watershed Partnership.

Task 2.2 Design Watershed/Aquifer Owner's Manual/Guide. The DC ensured that the Water Owner's Manual covered content applicable to the project's intended audience as well the UCC Watershed Partnership.

Task 2.3. Draft and Publish Final Watershed/ Aquifer Owner's Manual/Guide. The final Manual was titled, Water: Yours, Mine, and Ours. The completed draft was produced in Microsoft Publisher. For final production, the GBRA donated the services of its graphics department to provide professional formatting of the document, resulting in a very high quality product. The document included five chapters and an introduction that distinguished between a Water Waste

Culture and A New Water Culture based on three key components: Water Conservation, Water Capture, and Keeping Water Clean. Key content included: A brief history of water in the Hill Country, an overview of the natural water environment including geology, soils, and water cycle, how humans impact water, water myths, and the specific behaviors that can be distinguished between a Water Waste Culture and a New Water Culture. The manual served as the repository of all of the content for this project.

Task 2.4. Develop Educational Power Point Presentation. Two Power Point Presentations were produced and posted to the CCGCD website: one covered Water Conservation and the second covered Rainwater Harvesting. Speaker notes were included to guide presenters of any level of expertise in presented the Power Point.

Task 2.5. Develop Literature Templates. Three brochures were developed in a format that could easily be adapted to the outreach needs of other partners. These three brochures covered the three main themes of the New Water Culture: Conserve, Capture, and Clean. These were posted for download to the CCGCD Education web page (<http://www.ccgcd.org/?page=education>).

Task 2.6 Design Education Video Series. A series of five videos were produced and posted for download to YouTube (https://www.youtube.com/channel/UCprPvjs3oe2-sRGRB_FVTZw). A link to them is posted to the CCGCD Education web page (<http://www.ccgcd.org/?page=links>).

Task. 2.7 Outreach and Education Task Report.

Attached you will find copies of the completed outreach and education materials.

Task 3: Implement Outreach and Education System. This task established a framework for using the outreach and education materials produced in Task 2.

Task 3.1 Distribute Manual. The manual was distributed at presentations, at public meetings, and at the CCGCD upon request. Over 5,000 manuals were distributed. The manual is available at <http://www.ccgcd.org/Education/Water%20Yours%20Mine%20and%20Ours%20-%20Web.pdf>

Task 3.2 Conduct Collaborative Presentation. Over a dozen presentations were conducted in collaboration with the UCCW. The presentations utilized the project's power point presentations, videos and were an outlet for distribution of the manual. Workshop surveys which are summarized in the Appendix documented an increase in knowledge and awareness. The audience for these presentations included: over 500 7th grade students.

Task 3.3 Conduct Collaborative Workshops. The project conducted two collaborative workshops. Topics included: Water truths and myths, general groundwater knowledge. Workshop one included 2 speakers and 75 participants with surveys indicating around a 60% increase in knowledge. Workshop two included 2 speakers and about 50 participants with surveys indicating a 70% increase in knowledge. Collaborators in conducting the workshop

included: The City of Boerne, The Cibolo Nature Center and the CCGCD. Attached is an email describing the workshops and the survey results.

Task 3.4 Regionally Promote Outreach and Education Materials. There was a high demand for the materials produced by this project. The CCGCD filled approximately 50 requests from Partners within its district and at least 10 requests from partners outside the district. The materials were promoted externally by CCGCD at Groundwater District and Water Planning Meetings. Other regional promotion was conducted by GEAA, GBRA, and the Hill Country Alliance.

Task 3.5 Implement Outreach and Education System Task Report.

Task 4 Document Steps Taken to Implement NPS Reduction. The purpose of this task was to document increases in motivation to implement NPS reduction practices.

Task 4.1 Document Stewardship Practices Implemented by Landowners. Using the event surveys as well as direct conversations with landowner who were exposed to this project's materials and/or presentations, this project documented 125 landowners who either conducted or committed to conduct within 3 months various land stewardship practices promoted by this project. These practices included water conscious landscaping, protection of caves and sink holes, and reducing impervious cover.

Task 4.2 Document LID Practices Implemented by Developers and Municipalities. The CCGCD and the City of Boerne Planning Department promoted this project's materials and LID practices to several developers and within the City of Boerne. A total of 2 developers were contacted and presented with the materials. None of the developers reported considering or implementing LID practices as a result of this project.

Task 4.3 Document Steps Take to Implement the NPS Reduction Strategies Task Report. Please see Attachment for a copy of this report.

Task 5 Promote Adoption of Outreach and Education Materials by Other Entities.

Task 5.1 Outreach and Education Materials Promotion. CCGCD promoted this project's materials as follows: GMA 9 Meetings, through GEAA, through the HCA, the City of Boerne, and by providing new well owners with a copy of the manual.

Task 5.2 Outreach and Education Materials Promotion Task Report.

Yours, Mine, & Ours Owner's Manual Distribution

Entity/Event/Person	# of manuals
Rainwater Revival	216
Paul Barwick	76
Milan Michalec	108
Bob Webster	87

Keith Marquart	36
Cibolo Nature Center	1,008
Development Office	36
Daryl Lux	72
Clerk's Office	25
City of Boerne	360
Library	144
Chamber	180
KAD	144
Kendall County Abstract	72
Bergmann Lumber	36
Saws Conference	525
Hill Country Alliance	324
Phillip Bell	36
GMA 9 Meeting	36
TAGD	36
Walk ins	1,800
<hr/>	
Total	5,257

Task 6 Project Report. The project report was formatted and submitted as directed by the projects work plan.

Measures of Success Summary

This project's success measures measured success as follows:

1. Promote Stewardship of Groundwater/Surface Water Quality and Quantity. Using pre and post event surveys the project documented changes in stewardship attitudes, knowledge and behavior as well as adoption of LID and stewardship techniques.
2. Develop Awareness of the Need for Sensitive Development. This success measure was documented through pre and post event surveys.
3. Foster Cooperative Stakeholder Dialogue on Growth. Workshops and presentations included stakeholder feedback forms that recorded participant changes in attitudes about growth. Overall, participant attitudes reflected a recognition that growth in Kendall County needs to be sensitive to the land and water system that supports the production and storage of clean affordable water.

Completed Deliverables Table

The table below summarizes completion of project deliverables:

Task No.	Deliverable	Due Date	Status
1.1	Project oversight status	With QPR's	Completed
1.2	QPRs	The 15 th of the month following each state fiscal quarter	Completed
1.3	Post Award Meeting	Within 30 days of contract execution	Completed
1.3	Post Award Meeting Minutes	Within 15 days of Post Award Meeting	Completed
1.3	Quarterly conference call or meeting with the TCEQ Project Manager and Minutes	The second month of each state fiscal quarter; Within 15 days of meeting	Completed
1.4	Coordination Meeting with EPA and Minutes	Within 24 months of contract execution, if requested	n/a
1.5	Project Annual Report Article	Upon TCEQ Request	n/a
2.1	Design Committee Meeting and Minutes	Within 3 months of contract execution; minutes within 15 days of meeting(s)	Completed
2.2	Submit Watershed/Aquifer Owner's Manual Outline for review	Within 7 months of contract execution	Completed

2.3	Draft Watershed/Aquifer Owner's Manual	Within 9 months of contract execution	Completed
2.3	Final Watershed/Aquifer Owner's Manual	Within 12 months of contract execution	Completed
2.4	Develop two (2) or more Education Power Point Presentations and post to the website	Within 12 months of contract execution	Completed
2.5	Develop Literature Templates and post to the website	Within 12 months of contract execution	Completed
2.6	Submit Education Video Series outline for review	Within 6 months of contract execution	Completed
2.6	Complete a minimum of five (5) 5-7 minute videos, post to YouTube, and post YouTube link on the District's Website	Within 12 months of contract execution	Completed
2.7	Draft Outreach and Education Task Report	Within 15 months of contract execution	Completed
2.7	Final Outreach and Education Task Report	Within 18 months of contract execution	Completed
3.1	Documentation of number of manuals distributed	Within 32 months of contract execution	Completed
3.2	Conduct four (4) presentations total; Submit Sign-in sheets, materials, and survey results	Within 32 months of contract execution	Completed
3.3	Coordinate and conduct two (2) workshops total; Submit Sign-in sheets, materials, and survey results	Within 32 months of contract execution	Completed
3.5	Draft Implement Outreach and Education System Task Report	Within 32 months of contract execution	Completed
3.5	Final Implement Outreach and Education System Task Report	Within 34 months of contract execution	Completed
4.3	Draft Steps Taken to Implement NPS Reduction Strategies Task	Within 32 months of	Completed

	Report	contract execution	
4.3	Final Steps Taken to Implement NPS Reduction Strategies Task Report	Within 34 months of contract execution	Completed
5.2	Draft Outreach and Education Materials Promotion Task Report	Within 32 months of contract execution	Completed
5.2	Final Outreach and Education Materials Promotion Task Report	Within 34 months of contract execution	Completed
6.1	Draft Project Report	Within 34 months of the contract execution	Completed
6.2	Final Project Report	Within 36 months of the contract execution	Completed

Summary

The District and all the partners have received continued positive praise for the Manual and all of the videos produced through the grant. To date, the District has distributed over 5,000 of the Manuals (<http://www.ccgcd.org/Education/Water%20Yours%20Mine%20and%20Ours%20-%20Web.pdf>) and the videos (https://www.youtube.com/channel/UCprPvis3oe2-sRGRB_FVTZw) have over 400 views.

One of the biggest “wins” is how many realtors and land brokers who have requested copies of the manual. There is definitely an increased awareness of where landowner’s water comes from (both existing and prospective property owners).

The District has received numerous requests from surrounding Groundwater Conservation Districts, Land trusts, watershed associations and nature centers about how to best get their hands on the information compiled in the Manual. The District has provided all the files associated with the manual to any group who has requested the information.

The videos also provide an excellent tool for presentations since they are available anywhere an internet connection is available.

References

Water: Yours, Mine and Ours, A user's manual produced by the CCGCD, available at:
<http://www.ccgcd.org/Education/Water%20Yours%20Mine%20and%20Ours%20-%20Web.pdf>

Companion Videos, available at:
<https://www.youtube.com/user/CowCreekGCD/videos>

Brochures, attached

PowerPoint templates, attached

Appendices

Workshops:

October 24, 2013 Myths and Truths about Water

Gentlemen:

Thought you might be interested in the evaluations returned after the program Milan and I gave Thursday night. (Water truths and myths) Approx. 75 people attended, 39 evaluations returned. I entered the appropriate numbers and answers on a copy of the form.

My conclusions:

Everyone increased their water knowledge, by an average of around 60%
Everyone increased their knowledge of our groundwater district. Average was about 100%, but many tripled or quadrupled their knowledge, some even more
No one thought the information too basic, only a few thought it was too complex
Everyone like the presentation and the presenters
I was very gratified that every single person said the program would help them make better choices about water, all but 2 said they would reduce their future water use because of the program.
I was not surprised that 8 wanted programs on rainwater harvest, but a little surprised that 4 wanted a program on graywater use.

The Boerne paper is already asking when we will repeat it.

Evaluation (39 returned)

Please circle the word or number that most accurately indicates your answer to the question.

HOW WOULD YOU RATE YOUR GENERAL KNOWLEDGE ABOUT WATER?

Before the program: 1 2 3 4 5 6 7 8 9 10 (avg. 4.54) (range 1-10)
Knew a little Knew a lot

After the program 1 2 3 4 5 6 7 8 9 10 (7.65) (3-10)
Know a little Know a lot

HOW WOULD YOU RATE YOUR KNOWLEDGE OF OUR GROUNDWATER DISTRICT?

Before the program 1 2 3 4 5 6 7 8 9 10 (3.77) (1-10)
Knew a little Knew a lot

After the program 1 2 3 4 5 6 7 8 9 10 (7.52) (4-10)
Know a little Know a lot

HOW EASY WAS THE PROGRAM TO UNDERSTAND?

1 2 3 4 5 6 7 8 9 10 (6.84) (5-10)
Too basic About right Too complex

HOW WOULD YOU RATE THE KNOWLEDGE OF THE PRESENTERS?

1 2 3 4 5 6 7 8 9 10 (9.59) (8-10)
Poor Excellent

WHAT DID YOU FIND MOST INTERESTING ABOUT THE PROGRAM _____

WILL THE INFORMATION PRESENTED HELP YOU MAKE BETTER CHOICES ABOUT WATER USE?

No Maybe Yes
(39/39)

WILL YOU PERSONALLY BE MORE CONSERVATIVE IN FUTURE WATER USE AFTER HEARING THIS PROGRAM?

No Maybe Yes
(2/39) (37/39)

ARE THERE OTHER WATER RELATED PROGRAMS YOU WOULD LIKE TO SEE PRESENTED

Rainwater Harvest-8 Graywater Harvest-4

IN THE FUTURE? _____

For more information about our water visit: ccgcd.org

Bob

March 20, 2014 Myths and Truths about Water

Approximately 50 people in attendance, no survey summary

Presentations:

7th graders (approximately 350 students): October 31, November 1, 4, & 5th, 2013

Rainwater Revival (Approximately 50 people): November 2, 2013

7th Graders (approximately 150 students) : March 23 and 24th, 2015