

Progress Report October 2011

I. Work in Progress

1. Draft Report II: **Task 2**
2. Approved meeting with TCEQ: **Task 3**
3. Summary of Initial Model Outputs: **Task 1 (Data collection) and Task 2 (modeling)**
Rainwater Harvesting Models are currently being programmed and evaluated. Progress to date:

MODELING LOCATION	DATA ENTRY (1987-2011) COMPLETED THROUGH
Austin	September 2011
Blanco	September 2011
Boerne	September 2011
Burnet	September 2011
Dripping Springs	September 2011
Wimberley	September 2011
Menard	August 2011
Fredericksburg	* In progress, to be completed Nov 20
San Marcos	* In progress, to be completed Nov 20

- Examination of models programmed to date indicates that the period since 2008 can be defined as the “critical” period.
- 2007 was a very wet year, providing a starting year at the inception of the drought period 2007 rainfall would result in a fairly full cistern (upon startup, any cistern could be filled with imported water), so it is clear that a “critical evaluation” of the rainwater harvesting strategy could be obtained with a 5-year model, 2007-2011.
- Therefore, all other locations will be examined using such a model.
- Examination of modeling results to date for a “base case” indicates that, for a family of 4 consuming an average of 50 gallons/day each, a rooftop on the order of 4,500 sq. ft. and a cistern volume on the order of 35,000 gallons is the “nominal” system to hold need for backup supplies to a “minimal” level.
- For example, the Dripping Springs model with those inputs incurred a need for backup supply in 4 of the 25 years in the model. 2,000 gallons would have been required in 1996 and 2008, and 8,000 gallons would have been required in 2009. However, through September in 2011, the model shows that 12,000 gallons would have already been required, with 3 months of predicted low rainfall remaining in the year. This highlights how the uncertainty over whether the impacts of climate change will make the recent period of “lower-than-normal” rainfall the “new normal”, and how that would impact on the viability of the water supply strategy which is the subject of this project.

Issues regarding Task 1 (Data collection) and Task 2 (modeling)

An open issue is how to obtain the remainder of the 2011 data in a “timely” manner so that the full, updated evaluations can be completed as an input to the stakeholder review process, tentatively scheduled for mid to late January. The source used to complete the inputs to date lag about 2 months in posting monthly reports.

4. Outlines and criteria for regulatory meeting/workshop
5. Coordination and planning for “Kick off Workshop”

II. Work Completed

1. Report I: **Task 1**
2. TCEQ Introductory meetings/workshop: **Task 3**
 - * TCEQ meeting for November is temporarily on hold due to TCEQ lack of staff to participate. During the “Drinking Water Protection Working Group” stakeholder meeting in response to HB 3391, TCEQ asked to conduct a separate meeting for questions regarding the TWDB project.

III. People Contacted for TCEQ Coordination

1. Cindy Haynie, TCEQ, Water Supply Division
2. Joel Klumpp, TCEQ, Water Supply Division (at DWA WG meeting)

IV. People contacted for “Project Support”

1. Developers with potential dove-tail projects to use as a demonstration site for the modeling: Catherine Werth, Terra Scena, Dripping Springs; Chad Nemec, Ceres Park, Hays & Travis Counties.
2. Contact with Hays County Development Coordinator, Clint Garza, to alert him to the grant study; request recommendations on potential rainwater developments within county; and request his participation in regulatory discussions when time appropriate.
3. Discussions with several members of EPA regarding Clean Water Act and other rules guiding the use of rainwater as a potable water supply.
4. Following TCEQ DWA WG meeting on October 25, 2011, at TCEQ there was an ad hoc meeting among representatives from ARCSA, TRCA and TWDB grantee team. Discussion centered around a coordinated response to TCEQ for new rulemaking on rainwater harvesting as a result of new legislation. The following individuals participated: Billy Kniffen, John Kight, Barry Wall, Paul Lawrence, Joe Wheeler, Mark Pape, Jack Holmgreen, Jim Crownover, Randy Smith, Wade Kolb, Jim Champion, Stephen Colley, Stacy Bray/RSI, David Venhuizen, Karen Ford)
 - The principals of the TerraScena development in Hays County – Catherine Werth and Joe Wigley – and the principal of the Ceres Park development in Travis County – Chad Nemec – were interviewed regarding their interest in cooperating with our project, to provide information on costs, challenges and opportunities which they encounter and to assist us in the consideration and evaluation of various matters which may impact on implementing a successful water supply strategy relying on site-harvested rainwater, such as governance, system maintenance and backup supply strategy.
 - Winton Porterfield, a representative of Wimberley Springs Partners, was also contacted to determine his interest. No reply has been received to date.
 - The following architects have been contacted, requesting their input and assistance in reviewing and evaluating building design issues: Peter Pfeiffer, Jay Hargrave, Jay

DuPont, Burton Baldrige, Sinclair Black, the Shiflet Group, and Keenan Smith. Pfeiffer, Smith and DuPont have responded to date. A phone discussion was held with Pfeiffer. Appointments have been set to meet with Smith and DuPont.

- Rainwater system installer/maintainer Alan Rossing was contacted to solicit information on system design standards and installed costs. He declined to participate. A list of other such firms to be contacted is being assembled.
- A list of water haulers in the local area has been assembled.

IV. People to be contacted

1. Texas State Senate and House Legislators in the Central Texas region

V. Next Activities

1. Prepare report from the 10/25/11 DWAAG meeting.
2. As a courtesy, contact Central Texas legislative delegation and/or staff via phone to inform them of the grant-funded study and apprise them of study's goals. Follow up with an email reiterating the conversation.
3. Await news from TWDB regarding TCEQ participation in the grant project with regard to the regulatory questions and issues.
4. Develop guide and questions for TCEQ meeting.
5. Schedule meeting with TCEQ, TWDB and RSI teams.
TCEQ – pending information to be provided by Robert Mace, TWDB