



MEMORANDUM

Date: October 23, 2018

To: Water Utility Board

From: Tom Heikkinen,
General Manager

Amy Barrilleaux,
Public Information Officer

Adam Wiederhoeft,
Engineer 4

Re: Water Conservation House Project Status Update

Background and Objectives

In early 2017, Madison Water Utility was authorized to proceed with planning and public participation efforts towards a proposed water efficiency demonstration home project ([Legistar File 45826](#)). In early 2018, Madison Water Utility was authorized to hire Engberg Anderson, Inc. for design services and proceed with the Water Conservation House as a land development project ([Legistar File 49594](#)).

The proposed '[Water Conservation House](#)' project consists of designing and overseeing the development of an affordable, energy efficient residential home that incorporates innovative design components and building systems that emphasize water conservation. The home will be built on surplus Water Utility property that will be sold to a qualified builder or developer in order to recover project design and development costs. After construction is completed, the house will be used for several months as a demonstration home to provide educational outreach opportunities promoting water conservation and efficient building systems to the general public and residential design/build professionals.

Progress To-Date

Engberg Anderson and the project team completed the pre-design and schematic design phases of the contract, evaluating two preliminary design concepts for the home to be located at vacant Utility property at the corner of Spaanem Ave and Allis Ave, directly south of Unit Well 9. The team unanimously selected an efficient split-level design concept fronting Allis Ave. The proposed home was presented in April 2018 at the [Lake Edge Neighborhood Association meeting](#). Engberg Anderson has since developed the concept to 95% complete construction documents before the team temporarily paused the project in summer 2018.

Engberg Anderson, Inc. has completed 95% of the design & construction document phase of the project and 0% of the proposal administration & construction oversight phase of the contract.

Total billings to-date are \$54,150 (total contract value is \$72,000).

Design Concept Overview

A modest, 2-3 bedroom single-family home, the Water Conservation House will feature innovative water-saving technology inside and out, anticipated to cut per-person water use in half.

Current plans include:

- [A 500-gallon rainwater harvesting system](#) *PDF*
- [Energy efficient water heating](#) *PDF* , including a wastewater heat recovery system
- [Native plants & turf, rain gardens and permeable pavement](#) *PDF* designed to keep nearly all rain water on site.
- High-efficiency appliances and plumbing fixtures

Design Concept renderings:



(South elevation)



(Northeast Elevation)

Next Steps

Over the course of the next month, Engberg Anderson and the project team will be evaluating anticipated project costs and land development requirements in preparation for final design, including implications of alternative sites, which may reduce development costs. The recommended final design proposal will be presented to the Water Utility Board for review and approval prior to submitting the request for development proposals.