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Sustainable Silicon Valley Comments: And Feedback on Phase Two of the Water Energy Technology (WET) Grant Program

Additional submitted attachment is included below.

Sustainable Silicon Valley (SSV) is building on San Francisco's work to enable on-site water treatment and reuse for San Mateo and Santa Clara counties. SF has a unified city/county governmental structure that makes inter-agency collaboration easier. Currently, outside of San Francisco, responsibility for water is scattered among hundreds of agencies with no mandate for collaboration to manage water. Our strategy for scaling is to create a model ordinance for statewide use, through collaboration with the California Department of Water Resources and updates to the Uniform Plumbing Code. Through case studies and local implementation guidelines, SSV will create an easy to replicate process that will speed adoption.

SSV is investing time and staff in providing education on on-site water reuse technologies, reaching out to tech companies and municipalities to identify private and public pilot projects and facilitating the development of guidelines and a master ordinance to streamline the process of getting projects reviewed, permitted and monitoring. We will be seeking funding for project staff, experts and our organizational costs to be able to deliver services to establish regulatory frameworks, understanding of the technology and processes and responsibilities to enable these systems to be implemented in a way that inter operates with centralized waste water treatment and reuse systems.

Many agencies may be involved in designing and permitting an integrated water management plan for a site. US-EPA if the groundwater is contaminated, the Santa Clara Valley Water District for managing storm water and discharge into streams and other waterways, the local land use agency (city or unincorporated county) building inspection and possibly public works, the potable water providers, waste water treatment plant operators, the county department of environmental health, the state regional water quality control board, as well as the developer, land owner and property manager.

How can this draft GFO best complement efforts to reduce on-site GHG emissions and improve water efficiency in the commercial, industrial, and residential sectors? What specific changes would you suggest to the GFO to best accomplish this?

SSV believes that distributed treatment and reuse of water can reduce the significant quantities of energy that it takes to treat water centrally and then pump it back uphill through a purple pipe system. Some water reuse systems also capture heat energy and methane, further reducing the GHG emissions associated with water treatment.

Distributed treatment of water takes work to create workflows and assignment of responsibilities among a variety of agencies who normally do not have to coordinate their efforts. This coordination will help regions manage their water in an integrated fashion resulting in less water pollution and reducing the risk of water shortages.

What grant award amounts would be most appropriate and what percentage of the project cost would this represent?

$1 million to bring on-site water reuse to entire Bay Area and to create master ordinance and implementation guidelines for statewide use.

How can this phase of the WET Program best bring benefits to disadvantaged communities? Lower water costs and increased potable water security

Based on SSV's work in East Palo Alto, designated as a disadvantaged community, there is an important opportunity to help implement water efficiency and reuse measures for residential, commercial and institutional applications. East Palo Alto faces constraints on water resources so water reuse will be particularly helpful for them. Communities can use recycled water to cultivate urban gardens, and disadvantaged communities will benefit doubly from utility efficiency and developing a locally sourced food network. On-site water treatment will also create permanent jobs in construction, quality inspection, maintenance, health monitoring, research and development. This type of public-private sector collaboration creates opportunities for the lower and middle classes while fostering environmental sustainability.

What is the capability of obtaining utility data for pre- and post-energy and water use? If utility data are not available, how will pre- and post-results be documented?

Within SSV's pilot projects, project managers will collect pre- and post-energy utility data to demonstrate water and energy savings. All data will be publicly disseminated and our reports will be instrumental in establishing guidelines for future adoption. An advanced metering infrastructure by itself would not qualify. There has to be a mechanism that shows behavioral changes (less leakage, less usage by monitoring). Results are required. The "sunk" energy content of the water is not to be included. The technology has to save water and energy locally.