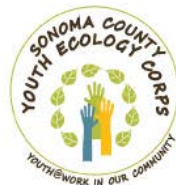


Lawn Replacement Pilot Program

Final Report & Lessons Learned

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For
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Executive Summary

The Sonoma County Water Agency (SCWA) contracted Daily Acts and Conservation Corps North Bay (CCNB) to execute an eight (8) week pilot program to replace lawns in the cities of Rohnert Park and Cotati including the installation of up to five (5) model sites. The scope of the model sites went beyond lawn replacement and included design, planting, and drip irrigation installation. The program, and associated contracts, were approved by the Sonoma County Board of Supervisors on August 11, 2015. CCNB was contracted to provide labor for the project four days per week (Monday through Thursday) from 9am to 2pm. Daily Acts served as Project Manager and was responsible for training the crew, interfacing with property owners, performing site assessments, obtaining permission to perform work, ordering materials, managing landscape design professionals (in the case of the model sites), providing general oversight, quality control, photography, media coordination, and reporting.

On Monday, August 17th, Daily Acts facilitated a full-day training/orientation for the CCNB crew members. This orientation took place at the Cavanagh Center Food Forest and Community Garden in Petaluma. A portion of the day was dedicated to the crew taking the QWEL exam in order to gauge pre-existing knowledge and serve as a baseline for learning. The team managed to remove 30 lawns and create three (3) new model sites in 30 business days (note that 20 days were dedicated to residential lawn removal and the team was able to convert 1.5 residential lawns per day with each lawn averaging 925 sq. feet).

The three (3) model sites that were installed are St. Elizabeth Seton Parish, Sonoma Mountain Village Office Park and Event Center, and Cotati City Hall. Each of these sites are highly visible to SCWA customers and will serve as a wonderful example for years to come.

The educational component of this project was an important one given the nature of the crew and CCNB's involvement. Daily Acts provided the crew members with invaluable insight into water conservation and sustainability in general. The crew participated in two field trips; one to tour Grab n' Grow's composting facilities in Santa Rosa, and one to the Permaculture Skills Center in Sebastopol where they learned more about basic Permaculture principles.

Overall the program was seen as a huge success for all stakeholders. Residential participants were thrilled with getting their lawns replaced for free and model site participants were equally thrilled to participate. CCNB gained a new core competency in sheet mulching and is actively pursuing funding to leverage this new-found skill. Daily Acts was honored to manage this important pilot program for SCWA and learned a lot about working with youth crews and ways to take these kind of water-saving efforts to scale.

High-Level Facts

- 30 (Business) Days
- 30 Residential Lawns Replaced
- 3 Amazing Model Sites
- 2 Educational Field Trips
- 43,050 Total Square Feet Replaced (*an American Football Field is 48,000 Square Feet*)
- 724,313 Gallons/Year of Water Saved (*an Olympic Swimming Pool is 660,430 Gallons*)
- 129 Yards of Compost (*or 1,548 Wheelbarrows*)
- 57 Rolls of Cardboard
- 392 Yards of Mulch (*or 4,704 Wheelbarrows*)
- 387 Native, Drought-Tolerant Plants and Trees

Outreach and Participant Signup

- 134 signed up for the program via Google Form which worked great.
- Suggest adding field to capture email address in order to facilitate follow-up, especially to those on wait list.
- Went to “wait list” status within the first week of going live. SCWA staff followed up with those on waitlist when project.
- Consider making it more clear during signup what the specific criteria are for being selected.

Site Visits / Selection Criteria

- 37 sites were visited, 7 rejected due to lack of operational sprinklers, 30 were selected and subsequently completed.
- Both front and backyards were deemed eligible. Given desire for biggest impact consider limiting future lawn replacements to front yards only due to higher visibility.
- There was some concern regarding replacing “brown” lawns and the decision was made to move forward with these lawns if they had functioning irrigation. The number of “green” lawns is very limited in the Rohnert Park/Cotati and likely these residents are not (yet) ready to give up their lawn.
- Setting a boundary (Rohnert Park/Cotati only) was critical and made things manageable from a site scoping perspective.

Conservation Corps North Bay Crew

- The initial crew was comprised of the following: Daniel R. (Supervisor/Lead), Austin D., Isaiah M., Heaven H., David D., Hugo M., Michael S., and Calvin B.
- For the most part the crew remained intact for the duration of the pilot. There were a few days when there were only five (5) crew members which typically wouldn’t have been an issue. Unfortunately, one of the days there was a small crew was the first day of the installation of the first model site which contributed to the project taking a bit longer than expected. Conservation Corps North Bay (CCNB) made some mid-course corrections and attendance improved.
- It isn’t fair to compare productivity of this kind of crew against a professional, for-profit landscaping organization. When planning future projects it is important to assume a slightly lower level of productivity due to learning curves, substitute personnel, and the inevitable one or two individuals who from time to time are not interested in participating.
- Daily Acts was impressed with the crew’s ability to quickly learn the new skills and the initiative that most crew members showed. Within the first two weeks crew members found their niche and hit the ground running. At times they moved a bit too fast and needed to be reminded of why they were doing what they were doing (i.e., trenching along a fence isn’t necessary).
- Crew members had ample opportunity to interact with media, homeowners, and the general public. They all were able to articulate what they were doing and why.

- Daily Acts was very impressed with the respect the crew members demonstrated for each other (even on very hot days when even the best of us might be a bit agitated).
- The crew took great pride in their work and never complained when asked to make corrections (i.e., this trench needs to be deeper)
- Daniel (Danny) did a great job managing the crew. He provided regular progress updates and never hesitated to call if he had questions and/or concerns.

Educational Components

- The crew participated in a full day orientation on Monday, August 17th. In addition to learning the basics of sheet mulching and capping irrigation (major focus of program), the crew toured the Cavanagh Center food forest, community garden, water catchment systems (above and below ground) and toured Daily Acts Executive Director, Trathen Heckman's urban homestead.
- The QWEL exam was administered on the first day (see below for before/after results).
- A "Sustainability Assessment" was also completed by each crew member to determine the crew members sense of awareness, and a post-assessment was also completed on the second-to-last day of the pilot. Noticeable changes were seen in areas the crew received training and experience in, awareness around key sustainability issues/concepts increased marginally and confidence in various skills increased as well.
- Hands-on sheet mulching instruction was provided by Daily Acts staff, Kellen Watson and Carl Shuller, at the first residential site. The basics of laundry-to-landscape greywater systems was also demonstrated at one of the residential properties.
- Early on in the project the crew gained considerable experience in residential lawn irrigation repair. The subsequent decline in the number of repairs is proof that the crew learned from their "mistakes."
- The crew toured the composting facilities at Grab n' Grow and gained an appreciation for where the materials they were using on a daily basis came from.
- The field trip to Permaculture Skills Center was a huge success, with several crew members talking about it well after our visit. Crew members were given the opportunity to talk about the work they had been doing in the field to date and how it has personally impacted them. It was great for them to witness two young and enthusiastic leaders (Ryan Johnston and Sam Gerhard) working in a field they are passionate about. The tour opened their eyes to ways Permaculture can be applied with several crew members expressing an interest in taking what they are learning back to their homes and communities.
- Daily Acts staff, Brianna Schaefer and Carl Shuller, provided an introduction to the various plants that were specified for the various model site projects. The proper methods of planting and plant care were covered. Hands-on instruction in drip irrigation was also provided. An important by-product of this instruction was experience reading architectural drawings and learning about scale.

- One model site (St. Elizabeth Seton) provided the opportunity for the crew to lay out swales on contour using “A” frames. The concept of swales were discussed. Note that the client used heavy machinery to dig the 100+ feet of swales!
- Consider making expectations relating to education more tangible in terms of time budgeted. Finding a balance between getting work done and taking time to "educate" was difficult, and consequently, Daily Acts defaulted to getting work done. From a productivity standpoint arranging specific field trips probably worked better than many small training events.

Material Procurement / Vendor Assessment

- Grab n’ Grow (A+)
 - Ordering materials at least a week or more in advance helped ensure materials were onsite when needed. There were zero instances of materials not being available. Brett and his team were excellent to work with and very accommodating in the few instances that materials needed to be delivered outside of their service level window.
- Wyatt Irrigation (A+)
 - It is critical to have knowledgeable vendors like Wyatt. Kris Loomis and her team were very helpful and responsive. Consider having an open PO that materials can be billed against moving forward in order to eliminate the need to “manually” pay each invoice.

Scheduling

- Scheduling went very well. Daily Acts left room in schedule to accommodate unknowns like slips in model site schedules. In the future be sure to leave some room to move things around as needed and set expectations with home owners that we reserve right to change dates. Daily Acts had to reschedule five (5) jobs for various reasons and each homeowner was more than amenable (as was vendor, Grab n’ Grow).

Residential Sites

- Resources for residents:
 - Consider including signed disclaimer regarding Bermuda grass and likelihood that it will breach the confines of any/all cardboard eventually.
 - Consider creating a one-page document on drip irrigation planning/installation.
 - Consider creating a handful of design templates to help homeowners get a jump start on planting.
 - Consider including notice in waiver that a sign will be installed in yard upon completion. While there were no complaints, it would be good to have in writing so expectations are clear.
 - Include in 'thank you' letter a reminder for home owners to turn off their timers.

- It is very important to be mindful of property lines and anticipate potential issues, especially in cases where the client's lawn blends with a neighbor's lawn. It is important to initiate contact with the neighbor (and better yet ask the client to talk to their neighbor prior to work commencing) and inform them of what you will be doing. There was one case where the client's sprinkler heads were well over a foot inside their neighbor's yard. Digging a clean, straight trench along the property lines is critical in ensuring that mulch doesn't easily migrate into the neighbor's yard.
- Consider creating a dedicated tool box to irrigation repair parts, anticipating any number of possible scenarios. Daily Acts staff made ten (10) separate trips to local hardware stores over the course of the eight (8) week pilot.

Model Sites

- Three model sites were installed during the eight (8) week pilot: Cotati City Hall, Sonoma Mountain Village and St. Elizabeth Seton Church. Considerable time and effort was required to identify, vet, secure and design these sites. Special thanks to Patrick Picard at Equinox Design for his flexibility on such short notice and his ability to turn around two quality designs.
- Contingency planning is critical when working within such a short window of time. Make sure to leave free days in the schedule in case the crew needs to come back to complete tasks.
- Consider budgeting for plumbing/irrigation professionals to execute any/all work related to tapping into a client's existing system as there is a greater risk of something going wrong. Daily Acts did not experience any issues but in the case of the church, considerable time went into installing filters/pressure reducers in a new box.
- Remember to contact USA Dig whenever doing any major digging (better safe than sorry).
- In the future consider getting written agreements with all clients and subcontractors. While there were no issues, this pilot moved very fast (especially the development of the model sites) and it is good practice to get things in writing (in the form of an agreement/contract vs. email threads).
- When the scope of work includes planting and installing drip irrigation, make absolutely sure that there is ample time in the schedule to get water to the plants no later than 24 hours after planting (assuming that the plants get a good soak with the hose directly after planting). Daily Acts ran into delays at the Church that pushed planting to Thursday and due to the hot weather, staff had to visit the site over the weekend to ensure that the plants were getting the water they needed.
- Consider not including planting in scope during such warm months. On related note, Daily Acts has some concern regarding potential for model site stakeholders to not be totally vested.

Quality Control / Feedback

- All sites were inspected upon completion and any deficiencies addressed. It is important to note that there were very few issues with the quality of work performed. Main areas for improvement are consistency associated with “edging”. Every site was left well swept and in general, better than it was found.
- Each homeowner was asked to fill out an online survey regarding their experience (see below for results of survey). Almost without exception expectations were exceeded in every aspect of the program.

Project Management

- It is critical to have an experienced project manager on the team who can anticipate potential issues before work starts and instruct the crew. Daily Acts was in the field almost every day to ensure things went smoothly.
- Communication was open and just frequent enough. It is a bit surprising to note that no face-to-face meetings were required beyond the initial kick-off meeting.

Media

- Press Democrat
- LA Times

Photography

- The pilot was extensively photographed (and video was captured as well). Pictures of the crew in action can be found online at <https://www.flickr.com/photos/dailyacts/>