



S A W P A

SANTA ANA WATERSHED PROJECT AUTHORITY
11615 Sterling Avenue, Riverside, California 92503 • (951) 354-4220

NOTICE OF REGULAR MEETING OF THE PROJECT AGREEMENT 22 COMMITTEE

Interregional Landscape Water Demand Reduction Program

Committee Members:

- Joe Grindstaff, General Manager, Inland Empire Utilities Agency
- Doug Headrick, General Manager, San Bernardino Valley Municipal Water District
- Paul D. Jones, General Manager, Eastern Municipal Water District, Chair
- Michael Markus, General Manager, Orange County Water District, Vice Chair
- John Rossi, General Manager, Western Municipal Water District

THURSDAY, NOVEMBER 16, 2017 – 8:00 A.M.

AGENDA

1. **CALL TO ORDER** (Paul D. Jones, Chair)

2. **PUBLIC COMMENTS**

Members of the public may address the Committee on items within the jurisdiction of the Committee; however, no action may be taken on an item not appearing on the agenda unless the action is otherwise authorized by Government Code §54954.2(b).

3. **APPROVAL OF MEETING MINUTES: OCTOBER 26, 2017**.....3

Recommendation: Approve as posted.

4. **COMMITTEE DISCUSSION ITEMS**

A. **SMARTSCAPE PROGRAM SUB-GRANTEE AGREEMENT WITH ORANGE COUNTY COASTKEEPER AND ROLES FOR SAWPA AND THE SAWPA MEMBER AGENCIES (PA22#2017.23)**.....7

Presenter: Ian Achimore

Recommendation: That the OWOW Steering Committee:

1. Execute the Sub-Grantee Agreement with Orange County Coastkeeper and approve the Roles and Responsibilities Memorandum; and,
2. Authorize payment of pre-contract preparation expenses, \$14,054, incurred between Jan to Aug 2017 by Orange County Coastkeeper in developing the scope of work and agreements for the Smartscape program under SARCCUP.

B. **EMERGENCY DROUGHT GRANT PROGRAM SCHEDULE AND BUDGET UPDATE (PA22#2017.24)**.....83

Presenter: Ian Achimore

Recommendation: Receive and file.

C. **PROPOSITION 84 INTEGRATED REGIONAL WATER MANAGEMENT DROUGHT GRANT AMENDMENT UPDATE (PA22#2017.25)**.....85

Presenter: Ian Achimore

Recommendation: Receive and file.

5. FUTURE AGENDA ITEMS

6. ADJOURNMENT

PLEASE NOTE:

Americans with Disabilities Act: Meeting rooms are wheelchair accessible. Please contact (951) 354-4220 or kberry@sawpa.org at least 48 hours prior to the meeting if you require disability related accommodations, and specify the nature of the disability and the type of accommodation requested. Materials related to an item on this agenda submitted to the Commission after distribution of the agenda packet are available for public inspection during normal business hours at the SAWPA office, 11615 Sterling Avenue, Riverside, and available at www.sawpa.org, subject to staff's ability to post documents prior to the meeting.

Declaration of Posting

I, Kelly Berry, Clerk of the Board of the Santa Ana Watershed Project Authority declare that on Thursday, November 9, 2017, a copy of this agenda has been uploaded to the SAWPA website at www.sawpa.org and posted in SAWPA's office at 11615 Sterling Avenue, Riverside, California.

/s/

Kelly Berry, CMC

2017 Project Agreement 22 Committee Regular Meetings

Fourth Thursday of Every Month

(Note: All meetings begin at 8:00 a.m., unless otherwise noticed, and are held at SAWPA.)

July 7/27/17 Regular Committee Meeting [cancelled]	August 8/24/17 Regular Committee Meeting
September 9/28/17 Regular Committee Meeting [cancelled]	October 10/26/17 Regular Committee Meeting
November 11/16/17* Regular Committee Meeting*	December 12/28/17 Regular Committee Meeting

* Meeting date adjusted due to conflicting holiday.

2018 Project Agreement 22 Committee Regular Meetings

Fourth Thursday of Every Month

(Note: All meetings begin at 8:00 a.m., unless otherwise noticed, and are held at SAWPA.)

January 1/25/18 Regular Committee Meeting	February 2/22/18 Regular Committee Meeting
March 3/22/18 Regular Committee Meeting	April 4/26/18 Regular Committee Meeting
May 5/24/18 Regular Committee Meeting	June 6/28/18 Regular Committee Meeting
July 7/26/18 Regular Committee Meeting	August 8/23/18 Regular Committee Meeting
September 9/27/18 Regular Committee Meeting	October 10/25/18 Regular Committee Meeting
November 11/15/18* Regular Committee Meeting*	December 12/27/18 Regular Committee Meeting

* Meeting date adjusted due to conflicting holiday.



PROJECT AGREEMENT 22 COMMITTEE
Interregional Landscape Water Demand Reduction Program
REGULAR MEETING MINUTES
October 26, 2017

COMMITTEE MEMBERS PRESENT

Joseph P. Grindstaff, General Manager, Inland Empire Utilities Agency
Paul D. Jones, General Manager, Eastern Municipal Water District [Chair]
Michael Markus, General Manager, Orange County Water District [Vice Chair]

COMMITTEE MEMBERS ABSENT

Doug Headrick, General Manager, San Bernardino Valley Municipal Water District
John Rossi, General Manager, Western Municipal Water District

STAFF PRESENT

Dean Unger, Ian Achimore, Larry McKenney, Richard Haller, Rick Whetsel, Zyanya Blancas

1. CALL TO ORDER/PLEDGE OF ALLEGIANCE

The meeting was called to order at 8:01 a.m. by Chair Jones at the Santa Ana Watershed Project Authority, 11615 Sterling Avenue, Riverside, California.

2. PUBLIC COMMENTS

There were no public comments.

3. APPROVAL OF MEETING MINUTES: August 24, 2017

MOVED, approve the August 24, 2017 meeting minutes.

Result:	Adopted (Unanimously; 3-0)
Motion/Second:	Markus/Grindstaff
Ayes	Grindstaff, Jones, Markus
Nays:	None
Abstentions:	None
Absent:	Headrick, Rossi

4. COMMITTEE DISCUSSION ITEMS

A. PROPOSITION 84 INTEGRATED REGIONAL WATER MANAGEMENT DROUGHT GRANT AMENDMENT UPDATE (PA22#2017.17)

Ian Achimore noted that SAWPA is awaiting DWR's approval of the Proposition 84 Integrated Regional Water Management Drought Grant Amendment. The delay is caused by DWR's current work load. Staff will continue to follow up with DWR in order to obtain an approved amendment in a timely manner.

This item was for information purposes only; no action was taken on Agenda Item No. 4.A

B. CONSERVATION-BASED WATER RATES PROJECT UPDATE (PA22#2017.18)

Ian Achimore provided a PowerPoint presentation with an update on the Conservation-Based Water Rates Project. The retail water agencies that have contracted with SAWPA to study and possibly adopt conservation-based water rates are in different stages of the rate setting process.

Since the last updates, the City of Garden Grove and Cucamonga Valley Water District's governing boards decided not to move forward with a conservation-based water rate structure. Cities of Chino and Chino Hills have completed their rate studies and are now working on their public outreach campaigns. City of Hemet will adopt the new rate structure in February 2018. Staff continues to meet with agencies to ensure they have the tools needed to prepare their governing boards for a rate evaluation. The allocation of surplus funds from agencies that have dropped out will be discussed at a future PA22 Committee meeting.

The lessons learned throughout the process are as follows:

- The amount of State grant funding has not significantly impacted governing board support whether to proceed with conservation based water rates.
- High amount of GIS staff time devoted to “scrubbing” the retail agencies customer demand data once it is available from a retailer’s billing system;
- Outdoor water budgets based on a certain percentage of parcel lots may be more appealing from a data management perspective;
- It’s helpful for a governing board to adopt policy objectives for their rates prior to the rate change decision;
- After process of creating water budgets, retailers have useful information for demand forecasting and water conservation.

Achimore stated that the City of San Jacinto is planning to propose a rate structure where there is no difference in the price of tier 1 and tier 2 water because the City is projecting a need for just one source of supply. The rate structure would still comply with the PA22 Committee’s policy definition of conservation-based rates as the City’s tier 3 water price is escalating. Chair Jones voiced his agreement.

As discussed at the April 27 PA22 Committee meeting, staff explored the use of the California Data Collaborative’s Rate Comparison Tool as a potential eligibility gate for the Santa Ana River Conservation and Conjunctive Use Program’s (SARCCUP) conservation-based rates component. It was the consensus of the Advisory Workgroup that an eligibility gate, which would be in addition to DWR’s grant standard requirements, would dampen interest from potential retail water agencies; therefore, staff will recommend retailers to use the tool instead of making it a requirement.

The seven Frequently Asked Questions (FAQ) documents have been released. There is a remaining balance of approximately \$6,500 in the CV Strategies contract, SAWPA is working with the six remaining retail agencies to see if they would benefit from an educational video that compliments Proposition 218 rate notifications.

This item was for information purposes only; no action was taken on Agenda Item No. 4.B

C. RETAIL WATER AGENCY METER GEOCODING AND BUSINESS TYPE CLASSIFICATION PROGRAM (PA22#2017.19)

Rick Whetsel provided a brief oral update on the Retail Water Agency Meter Geocoding and Business Type Classification Program. Miller Spatial, Inc. (consultant) will support agencies in the Santa Ana River Watershed, as well as the Eastern Municipal Water District and Western Municipal Water District service areas within the Upper Santa Margarita Watersheds. The support services to be performed by the consultant are as follows:

- Water Meter Account to Water Meter Service Area Matching Services
- Business Account Type Classification Services based upon North American Industry Classification System (NAICS) Data
- Identification of Mixed Use Commercial, Industrial and Institutional (CII) Accounts
- Project Reporting following Prop 84 Reporting Formats and Requirements

Program is estimated to be completed by June 30, 2018.

Whetsel highlighted the October 25, 2017 workshop held by SAWPA, which focused on tools to support retail agencies across the Santa Ana River Watershed. An electronic questionnaire survey form was sent to participating agencies. The results will allow SAWPA staff and the consultant to determine the agency's needs. The deadline for program participation is COB Wednesday, November 22, 2017.

This item was for information purposes only; no action was taken on Agenda Item No. 4.C.

D. WEB-BASED WATER CONSUMPTION REPORTING AND CUSTOMER ENGAGEMENT PROJECT (PA22#2017.20)

Rick Whetsel provided an oral status update on Web-Based Water Consumption Reporting and Customer Engagement Project (Project). Whetsel stated that half of retail agencies that signed agreements to participate in the Project have not launched the Dropcountr customer outreach component of the Project. This is due to agencies not having dedicated staff to operate the tools and a mismatch of the agency's billing cycles to the tools. SAWPA staff and Dropcountr are working to get these items fixed.

Committee member Grindstaff said that part of the issue is the technological transition and stated that as technology improves this Project will be more important and useful to customers. Chair Jones suggested a thorough debriefing with Dropcountr and their customers at a future PA22 Committee meeting. Whetsel stated that at this time OmniEarth and Dropcountr are working on their benefit reports and lessons learned report.

This item was for information purposes only; no action was taken on Agenda Item No. 4.D.

E. ON-LINE WEB APPLICATION AND CLOUD SERVICE (PA22#2017.21)

Dean Unger provided an oral report on the On-line Web Application and Cloud Services. It was recently discovered that the standard ESRI agreement and subscription agreement did not meet some of the Proposition 84 IRWM Grant Agreement requirements. SAWPA's legal counsel and ESRI's legal counsel will meet on Friday, October 26, 2017 to resolve agreement differences. An update on the outcome of this meeting will be provided at a future PA22 Committee meeting.

This item was for information purposes only; no action was taken on Agenda Item No. 4.E.

5. FUTURE AGENDA ITEMS

- Vice Chair Markus requested SAWPA staff provide an overview presentation of the status of the different components of Proposition 84 Program and the percentage of funds each has used.

6. ADJOURNMENT

Committee member Grindstaff announced that Halla Razak will officially be the new Inland Empire Utilities Agency's General Manager on December 4, 2017.

There being no further business for review, Chair Jones adjourned the meeting at 8:48 a.m.

**Approved at a Regular Meeting of the Project Agreement 22 Committee on Thursday,
November 16, 2017.**

Paul D. Jones II, Chair

Attest:

Kelly Berry, CMC
Clerk of the Board

PA 22 COMMITTEE MEMORANDUM NO. 2017.23

DATE: November 16, 2017

TO: SAWPA Project Agreement 22 Committee

SUBJECT: Smartscape Program Sub-Grantee Agreement with Orange County Coastkeeper and Roles for SAWPA and the SAWPA Member Agencies

PREPARED BY: Ian Achimore, Senior Watershed Manager

RECOMMENDATION

That the OWOW Steering Committee:

- 1) Execute the Sub-Grantee Agreement with Orange County Coastkeeper and approve the Roles and Responsibilities Memorandum.
- 2) Authorize payment of pre-contract preparation expenses, \$14,054, incurred between Jan to Aug 2017 by Orange County Coastkeeper in developing the scope of work and agreements for the Smartscape program under SARCCUP.

DISCUSSION

SAWPA staff, working with the Conservation Coordinators Workgroup, has prepared a Sub-Grantee agreement that allow Orange County Coastkeeper (OCCK) to implement the Santa Ana River Conservation and Conjunctive Use Program's Smartscape Program in the Santa Ana River Watershed in the service areas of Eastern Municipal Water District, Inland Empire Utilities Agency, San Bernardino Valley Municipal Water District and Western Municipal Water District. Smartscape is described as a Santa Ana River Conservation and Conjunctive Use Program (SARCCUP) subtask in the Proposition 84 Integrated Regional Water Management (IRWM) 2015 Round Grant Agreement. The Sub-Grantee Agreement defines a budget of \$386,034, a two-year schedule, a scope of work, qualifications that must be maintained for OCCK training and outreach personnel, a task list and OCCK's costs for implementation each task, OCCK deliverables such as grant report writing, and the process for OCCK to receive payment. In order to divide the available budget across the four service areas evenly, the Workgroup was supportive of splitting the available implementation funding evenly. The amount of funding for each service area would be \$92,995 ($\$371,980 / 4 = \$92,995$).

SAWPA staff, working with the Workgroup, has also developed a Roles and Responsibilities Memorandum that describes the duties of SAWPA and the four SAWPA member agencies who are requesting OCCK to implement Smartscape in their service areas. SAWPA's role is to collect and work with OCCK on two documents on a quarterly basis in order to manage the Program:

1. Grant progress reports to be submitted to the State, and
2. Invoices to be submitted to the State.

The SAWPA member agencies will receive the following documents on a monthly, or on an as needed basis, from OCCK in order to direct OCCK to implement specific tasks:

1. Documentation of tasks performed by OCCK, such as sign-in sheets.
2. Tracking Reports that indexes each of the specific tasks requested by the four SARCCUP agencies.

3. Deliverables such as Smartscape outreach material for comment and review.

SAWPA will be copied on these submittals. As the memorandum explains, the four SAWPA member agencies will be managing the Program by ensuring that the total costs of the tasks requested and the tasks executed not exceed each Project Partner's \$92,995 allocation. In order to provide quality control for the Project tasks provided by OCCK, the Project Partners will provide feedback on Project deliverables, such as draft copies of written material or videos, by submitting feedback to OCCK and copy to SAWPA.

Also since January 2017, OCCK staff has worked with the staffs of the four SARCCUP agencies who have agreed to help fund the Smartscape program as well as SAWPA staff on the sub-grant agreements. OCCK is seeking reimbursement for their costs which include presentation documents, preparing and attending meetings at SAWPA, billing trainings, project partner meetings and meetings with SAWPA staff. OCCK is not a consultant to the SARCCUP agencies but rather a project partner and a non-profit organization that is dependent on outside funding and grants to operate. Further, the funding amount being requested is fairly minimal, \$14,054.00, or \$3,513.50 per each of the four SARCCUP agencies. SAWPA recommends utilizing the SARCCUP Smartscape budget for OCCK reimbursement.

BACKGROUND

OCCK, which includes the Inland Empire Waterkeeper as a program, designed the Smartscape Program in partnership with the SAWPA member agencies in 2015 during the development of the Proposition 84 IRWM 2015 Round grant application for SARCCUP. The Smartscape Program is focused on supporting entities that have transitioned from turf grass to drought tolerant landscaping. It includes conducting training workshops and seminars for homeowners, and landscape professionals; distribution of training manuals, brochures, flyers and reports; and social media posts. The support will also assist entities that have drought tolerant landscaping and need assistance with their landscaping to adapt to site specific soil, water and vegetation conditions.

Based on the PA 22 Committee direction at their July 28, 2016 meeting, Orange County Water District is not participating in the Smartscape Program. Subsequent to that meeting, Orange County Water District's share of participant fees (also known as local match) was moved from the Smartscape Sub-Task to the Conservation-Based Water Rates Sub-Task.

CRITICAL SUCCESS FACTORS

The following OWOW critical success factors are addressed by this action:

1. Administration of the OWOW process and plan in a highly efficient and cost-effective manner.
2. Data and information needed for decision-making is available to all.
3. Active participation of a diverse group of stakeholders representing counties, cities, and water districts, as well as the private sector and the regulatory, environmental, and environmental justice communities who integrate the different interests in the watershed beyond political boundaries. Ensuring all perspectives are heard and valued.

RESOURCE IMPACTS

Funding for the Smartscape program, as shown in the detailed SARCCUP budget which is included in the SAWPA member agencies own SARCCUP Sub-Grantee agreements, will come from participant fees and the Proposition 84 IRWM 2015 Grant. The total cost for implementation of the Smartscape

Program is \$437,400, with \$243,000 provided by the Grant and \$194,400 provided by participant fees. While \$386,034 is included in the OCCK Sub-Grantee Agreement, the remaining \$51,366 is to be utilized by SAWPA staff for project management with a small contingency.

Attachments:

1. PowerPoint Presentation
2. OCCK Sub-Grantee Agreement
3. Roles and Responsibilities Memorandum
4. SARCCUP Detailed Budget – Attachment B to SAWPA Member Agency Sub-Grantee Agreements
5. Sample of OCCK Drought Tolerant Landscaping Materials
6. OCCK \$14,054 Invoice

Smartscape Program

Sub-Grantee Agreement with Orange County Coastkeeper and Roles for SAWPA and the SAWPA Member Agencies



Ian Achimore
Senior Watershed Manager
Santa Ana Watershed Project Authority





Program Overview

- Developed the Smartscape as a partnership between SAWPA member agencies and OC Coastkeeper in 2015 during SARCCUP development;
- Supports water customers (“clients”) that have transitioned from turf grass to drought tolerant landscaping through specific tasks:
 - Landscape site visits
 - Develop written training materials
 - Workshops, training, etc.

Orange County Coastkeeper SmartScape



¿Qué son SmartScapes, y por qué son importantes?

SmartScapes son jardines que son tolerantes a la sequía. Son importantes porque estamos en la peor sequía en la historia recordada y cada gota de agua cuenta. Coastkeeper ofrece asistencia a propietarios, contratistas de jardinería, residentes y las empresas que desean convertir sus jardines a obras de arte que son conscientes del medio ambiente, y que ahorran agua.

Who is Coastkeeper?

The mission of Orange County Coastkeeper (Coastkeeper) is to protect and promote water resources that are accessible, drinkable, usable, and sustainable.

Coastkeeper is a nonprofit, client-focused organization that serves as a protection shield and will do whatever it takes to protect coastal private interests from state building policies and unsustainable water resources for public and private interests. We are currently working on legislative, administrative, and court proceedings. We are a program of Coastkeeper.

Why SmartScape?

Traditional landscaping is expensive and wasteful. SmartScape offers a beautiful, sustainable, and low-maintenance landscaping at a cost that is 50% less than traditional landscaping.

What is SmartScape?

SmartScape is a drought-tolerant landscaping program that uses native and drought-tolerant plants to create a beautiful and sustainable landscape. SmartScape offers a beautiful, sustainable, and low-maintenance landscaping at a cost that is 50% less than traditional landscaping.

How did SmartScape begin?

In response to the most severe drought in California history, the Orange County Board of Supervisors created the SmartScape program to help homeowners and businesses create a beautiful and sustainable landscape that is drought-tolerant and low-maintenance.

How does it work?

Coastkeeper staff will assist you in the process of planning, constructing, and managing your new landscape.

This includes:

- Assessing your questions
- Providing you with planning advice
- Training you through construction
- Your own staff

SmartScape Benefits

- Significant water savings
- Lower plant maintenance costs
- Reduced water requirements
- Reduced environmental impact
- Reduced overall cost to manage an established landscape

www.coastkeeper.org/smart-scape



Planting a Drought Tolerant Plant

70 views

SHARE

Water Use Efficiency Budget







Task / Sub-Task	Grant Amount	Participant Fees	Total Cost
12.6 Water Use Efficiency	\$826,000	\$826,000	\$1,652,000
12.6.1 Conservation-Based Water Rates	\$583,000	\$631,600	\$1,214,600
12.6.2 Smartscape*	\$243,000	\$194,400	\$437,400

*OCWD's local cost share funding originally intended for Smartscape Task 12.6.2 was added to Conservation-Based Water Rates Task 12.6.1.

Detailed Budget



Sub-Task	Grant Amount	Participant Fees	Total Cost
12.6.2 Smartscape	\$243,000	\$194,400	\$437,400
 SAWPA Project Management and Contingency	\$28,536	\$22,829	\$51,366
 Orange County Coastkeeper	206,656	\$165,325	\$371,980
 Orange County Coastkeeper Invoice	\$7,808	\$6,246	\$14,054
 Agency Allocation (four agencies)	\$51,664	\$41,331	\$92,995

Sub-Grantee Agreement



- Defines two year schedule
- Defines scope and qualifications for OCCK training and outreach personnel
- Task list and their specific costs
- Deliverables
- Process for reporting to SAWPA and the four member agencies

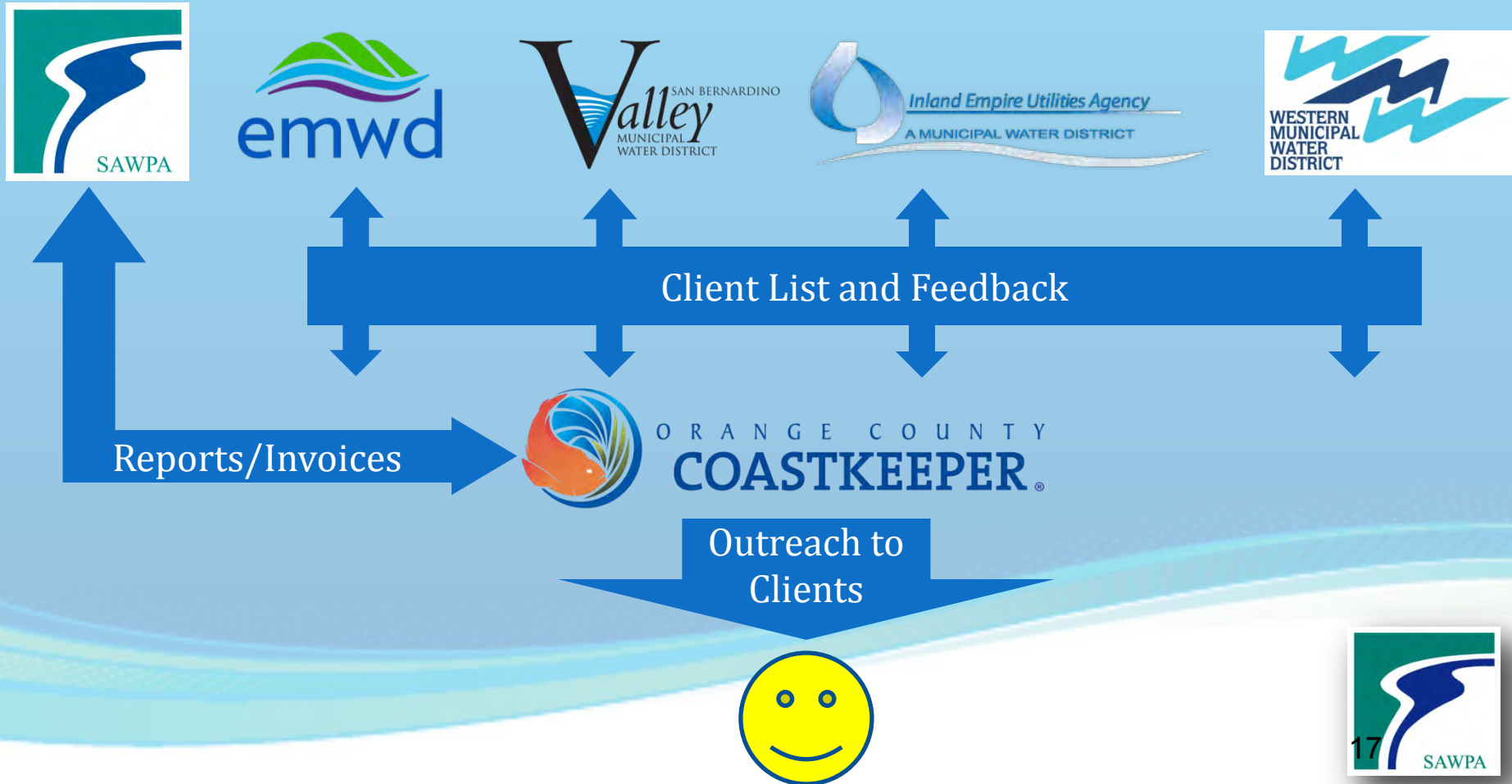
Roles & Responsibilities

Memo



- Codifies the duties of SAWPA and the four SAWPA member agencies
- SAWPA manages project by collecting required grant documents
- SAWPA member agencies manage project by collecting
 - Detailed tracking list,
 - Documentation of tasks performed, and
 - Draft deliverables such as Smartscape outreach materials for comment/review

Roles and Responsibilities



Recommendation

- Execute the Sub-Grantee Agreement with Orange County Coastkeeper and approve the Roles and Responsibilities Memorandum.
- Authorize payment of pre-contract preparation expenses, \$14,054, incurred between Jan. to Aug. 2017 by Orange County Coastkeeper in negotiating the scope of work and agreements for the Smartscape program under SARCCUP.



PROPOSITION 84 INTEGRATED REGIONAL WATER MANAGEMENT 2015 ROUND
IMPLEMENTATION GRANT FUNDING CONTRACT
BETWEEN THE

SANTA ANA WATERSHED PROJECT AUTHORITY

AND

ORANGE COUNTY COASTKEEPER

This Proposition 84 Integrated Regional Water Management Program ("IRWMP") Implementation Grant Funding Contract ("Contract") is made between Santa Ana Watershed Project Authority ("SAWPA") and Orange County Coastkeeper (the "Sub-Grantee"). SAWPA and the Sub-Grantee may be individually referred to as "Party", and collectively referred to as the "Parties".

WHEREAS, Section 79560 et seq. of the Water Code establishes the IRWMP providing approximately \$900 million for local assistance grants to be allocated to projects to protect from drought, improve water quality and improve water security by reducing dependence on imported water; and

WHEREAS, on November 1, 2016, the California Department of Water Resources ("DWR") and SAWPA entered into a Proposition 84 IRWMP Implementation Grant Agreement No. 4600011515 ("Grant Agreement"), shown as Attachment "A", providing that SAWPA would serve as the program manager for the \$64,267,686 in IRWMP grant funds to be disbursed to Sub-Grantees, consistent with IRWMP and California Environmental Quality Act ("CEQA") requirements, and ensuring that the maximum benefit of such funds are realized in the Santa Ana River Watershed; and

WHEREAS, consistent with the Grant Agreement between DWR and SAWPA, SAWPA intends to disburse to the Sub-Grantee a portion of the \$55,000,000 in IRWMP grant funds for the Santa Ana River Conservation and Conjunctive Use Program, specifically for its portion of the Smartscape Project ("Project") by way of this Contract with the Sub-Grantee.

WHEREAS, Eastern Municipal Water District, Inland Empire Utilities Agency, San Bernardino Valley Municipal Water District and Western Municipal Water District are serving as project partners ("Project Partners") and providing local cost share for the Project.

WHEREAS, Sub-Grantee is listed in the Grant Agreement as a "SARCCUP partner" under the SARCCUP Water Use Efficiency component (Task 12.6.2 – Smartscape).

THEREFORE, based on the foregoing incorporated recitals and in consideration of the mutual covenants and conditions set forth in this Contract, the Parties hereby agree to the following:

SECTION 1. PROJECT DESCRIPTION

As the Project is described in the Grant Agreement work plan for the Santa Ana River Conservation and Conjunctive Use Program's Sub-Task 12.6.2, the Project will provide education and outreach services about drought tolerant landscaping design, installation and maintenance directed at water users in the Santa Ana River Watershed ("clients"). The Sub-Grantee shall implement the Project in partnership with SAWPA and the Project Partners. The Sub-Grantee shall be available to implement the education and outreach services on weekends and after the close of normal business hours. When implementing the outreach tasks, the Sub-Grantee shall be knowledgeable of the client's water purveyor, such as eligible rebates and other conservation programs available from the water purveyor or other organizations. The

Sub-Grantee shall also be knowledgeable of water resource issues in the Santa Ana River Watershed such as drought and the basic hydrology of the region.

When executing the Project’s education and outreach tasks, the Sub-Grantee shall be knowledgeable and share information related to:

- a) Landscape planning
- b) Landscape maintenance
- c) Landscape water demands based on factors such as plant species type and hydrozone
- d) Landscape benefits to natural communities
- e) Proper turf removal
- f) Rain capture
- g) Water runoff
- h) Soil types
- i) Irrigation
- j) California native plant species

The Project shall include the following education and outreach tasks to be implemented by the Sub-Grantee. Table A below, describes the tasks and how they shall be implemented, as well as the costs at which they shall be performed at. The tasks shall be implemented upon request by the Project Partners and in coordination with SAWPA. The Sub-Grantee shall complete the Project within two years from the date of the first implemented task.

Table A
Task List and Costs

Task	Scope of Task	Costs	Cost Assumptions
A	Conduct site visits and introductory and follow up phone calls.	a) \$250 for residential b) \$250 per hour for commercial, industrial or institutional	Multi Family is commercial.
B	Develop brief written material with graphics and photographs	a) \$3,500 per 2000 brochures b) \$1,200 per 3000 flyers	Includes development, design, printing and distribution. A brochure is a folded product a flyer is onepage unfolded
C	Develop brief educational videos	\$3,000 to \$5,000	Costs in range will depend on length, venue and editing.
D	Develop and distribute training manuals	Price based on design/content. Printing only- \$10 each based on a run of 250 copies	N/A
E	Develop landscape design documents such as drawings, plans and specifications	a) \$1,000 for residential b) \$1,000 per 1,200 square feet for commercial, industrial and institutional	a. Includes simple custom designs based on existing Sub-Grantee themes. Assumes landscape size of equal to or less than 1,200 square feet b. Both residential and commercial services
F	Develop signage with graphics and photographs	Varies by sign size and material.	Metal yard signs are approximately \$100 each (including design and manufacture).

Task	Scope of Task	Costs	Cost Assumptions
G	Lead, plan and execute workshops and outreach	a) \$1,000 for community outreach events b) \$1,500 to \$3,500 for residential-focused workshops c) \$500 to \$2,000 for presentations at conferences d) \$3,500 for landscape professionals workshops	a) Includes staffing, booth and supplies. b) Includes planning, promotion, venue, speakers, supplies and giveaways. c) Costs in range depend on conference fee, travel and lodging. d) Includes planning, promotion, venue, speakers, supplies and giveaways.
H)	Develop and edit articles in local print media.	\$250 per article	Includes development of written materials, editing and coordination with media.
I)	Social media post development	\$150 per post	Includes development of written materials, graphics and photos, editing and coordination with entity posting material.
J)	Outreach to local schools through assemblies or field trips.	\$3,000 per event	Includes coordination time, transportation and venue costs and materials.

Assumption for all tasks: The cost of project management, including reporting and invoicing, is included in the costs for each task. Per the Grant Agreement, travel costs are not eligible for reimbursement.

In order to ensure quality assurance for the Project, the Project Partners and SAWPA will provide feedback on draft materials produced through the implementation of the outreach tasks. The Sub-Grantee shall provide final versions of the materials promptly after receiving feedback from SAWPA and the Project Partners.

SECTION 2. SUB-GRANTEE DELIVERABLES

In order to track the Tasks completed by the Sub-Grantee, the Sub-Grantee shall provide the following deliverables to SAWPA:

- (1) Documentation of clients receiving outreach from the Sub-Grantee such as release forms provided by Project Partners or sign-in sheets on a monthly basis coordinated with the Project Partners.
- (2) Tracking reports, in the format shown as Attachment B, coordinated with the Project Partners on a monthly basis.
- (3) Quarterly Progress Reports per Section 16 of this Contract.
- (4) Invoices per Section 15 of this Contract

SECTION 3. CONTRACT DOCUMENTS; ORDER OF PRECEDENCE; SUB-GRANTEE GENERAL COMMITMENT

This Contract incorporates and includes as part of its terms and conditions the Grant Agreement.

In the event of any inconsistency between this Contract and the Grant Agreement, except as otherwise specifically provided, the inconsistency shall be resolved by giving precedence to the Grant Agreement.

The Sub-Grantee shall comply with all terms, provisions, conditions, and commitments of this Contract and the Grant Agreement. Such compliance shall include providing SAWPA with all deliverables, budget detail, reports and all other documents required by the Grant Agreement.

On behalf of and for the benefit of SAWPA, Sub-Grantee shall comply with all of the obligations and requirements of the Grant Agreement as if the Sub-Grantee were the “Grantee” under the terms of the Grant Agreement. Such compliance shall be to the fullest extent necessary and as may be required by SAWPA in order to enable SAWPA to comply with the Grant Agreement as “Grantee.”

SECTION 4. SUB-GRANTEE ESTIMATED ELIGIBLE PROJECT COSTS; GRANT AMOUNT

The estimated reasonable cost of the Project at the time of SAWPA's and DWR's approval of the Project is **three hundred eighty six thousand thirty four dollars** (\$386,034). Subject to all of the terms, provisions, and conditions of this Contract, and subject to the availability of the grant funds, SAWPA shall disburse such grant funds in a sum not to exceed \$386,034 to the Sub-Grantee. Work performed after **January 17, 2014**, is eligible for grant reimbursement. Per **Exhibit D** of the Grant Agreement, the DWR shall withhold retention. SAWPA's actual grant disbursements to the Sub-Grantee under this Contract shall not exceed payments received from DWR. If actual Project costs exceed the Project's estimated reasonable cost, SAWPA shall have no obligation to provide grant funds for such exceedance.

SECTION 5. SCOPE OF WORK; TASKS

If the Sub-Grantee proceeds to implement the Project, the final grant amount will be determined in accordance with the provisions of this Contract. If the Sub-Grantee fails or refuses to proceed with or complete the Project, SAWPA shall consider such failure or refusal to be a material violation and breach of this Contract. SAWPA shall have all rights and remedies as are otherwise available to it for breach of this Contract by the Sub-Grantee.

Eligible Project costs include the reasonable costs of studies, engineering, design, land and easement acquisition, legal fees, preparation of environmental documentation, environmental mitigations, monitoring, and Project construction. Costs that are not eligible for reimbursement or eligible to be counted as Cost Share and Additional Cost Share are described in Paragraph ten (10) of the Grant Agreement.

Reasonable administrative expenses may be included as eligible project costs, Cost Share or Additional Cost Share and will depend on the complexity of the project preparation, planning, coordination, construction, acquisitions, implementation, and maintenance. Reasonable administrative expenses are the necessary costs incidentally but directly related to the Project including the portion of overhead and administrative expenses that are directly related to the Project.

SECTION 6. DISBURSEMENT

Grant funds will be disbursed in accordance with the disbursement provisions of the Grant Agreement. Retention is stipulated in **Exhibit D** of the Grant Agreement.

SECTION 7. FISCAL MANAGEMENT SYSTEMS AND ACCOUNTING STANDARDS

The Sub-Grantee agrees that, at a minimum, its fiscal control and accounting procedures shall be sufficient to permit tracking of grant funds to a level of expenditure adequate to establish that such funds have not been used in violation of State law or this Contract. The Sub-Grantee shall maintain accounts in accordance with generally accepted government accounting standards and the conditions outlined in Exhibit D.

SECTION 8. TERM

This Contract shall not be effective until it has been executed by SAWPA. The Term of this Contract shall be the same as the Term of the Grant Agreement, unless sooner terminated pursuant to the provisions of this Contract or the Grant Agreement.

SECTION 9. ASSIGNMENT

Neither this Contract, nor any duties or obligations under this Contract shall be assigned by any Party without the prior written consent of the other Party.

Should an assignment or transfer occur, whenever SAWPA or the Sub-Grantee are named or referred to herein, such reference shall be deemed to include the successor to the powers, duties and functions that are presently vested in SAWPA and the Sub-Grantee, and all Contract and covenants required hereby to be performed by or on behalf of SAWPA and/or the Sub-Grantee shall bind and inure to the benefit of the respective successors thereof whether so expressed or not.

SECTION 10. COMPLIANCE WITH LAWS AND REGULATIONS

The Sub-Grantee agrees that it shall, at all times, comply with and require its contractors and subcontractors to comply with all applicable federal and state laws, rules, regulations and guidelines. The Sub-Grantee shall comply with, implement, and fulfill all environmental mitigation measures applicable to the Project, and which may otherwise be required by this Contract and the Grant Agreement, CEQA, and the State CEQA Guidelines.

SECTION 11. ACKNOWLEDGEMENT OF CREDIT/SIGNAGE REQUIREMENTS

The Sub-Grantee shall include appropriate acknowledgement of credit to the State, SAWPA and to all cost-sharing partners for their support when promoting the Project or using any data and/or information developed under this Contract and/or the Grant Agreement. The outreach and educational material produced as part of this Project, shall include the language required in **Exhibit D, section 2 of of the Grant Agreement**.

SECTION 12. PROJECT ACTIVITIES AND NOTIFICATION

The Sub-Grantee shall immediately notify SAWPA in writing of:

- (1) Any substantial change in the scope, budget, or work performed of the Project. The Sub-Grantee agrees that no substantial change in the scope of the Project may be undertaken until written notice of the proposed change has been provided to SAWPA, and SAWPA and DWR have given written approval for such a change;

- (2) Any public or media event publicizing the accomplishments and/or results of this Grant Agreement and provide the opportunity for attendance and participation. Sub-Grantee must notify SAWPA at least 20 calendar days prior to the event.
- (3) Unscheduled cessation of all work on the Project where such cessation of work is expected to or does continue for a period of 30 calendar days or more;
- (4) Any circumstance, combination of circumstances, or condition which is expected to delay project completion for a period of 90 calendar days or more beyond the initial estimated date of completion of the Project previously provided to SAWPA;

SECTION 13. PAYMENT OF PROJECT COSTS

The Sub-Grantee shall provide for and make payment for all Project costs. All costs and payments for the Project shall be paid by the Sub-Grantee promptly and in compliance with all applicable laws. All grant disbursements will be reimbursements.

SECTION 14. WITHHOLDING OF GRANT DISBURSEMENTS

SAWPA may withhold all or any portion of the grant funds provided for by this Contract in the event that:

- (1) The Sub-Grantee has violated, or threatens to violate, any term, provision, condition, or commitment of this Contract;
 - (2) The Sub-Grantee fails to maintain reasonable progress toward completion of the Project;
- or
- (3) DWR directs SAWPA to withhold any such grant funds.

SECTION 15. INVOICING

- (A) Invoices shall be completed on a SAWPA-provided invoice form, shown as Attachment “C” of this Contract, and shall meet the following format requirements:
 - (1) Invoices must contain the date of the invoice, the time period covered by the invoice, and the total amount due.
 - (2) Invoices must be itemized. The amount claimed for salaries/wages/consultant fees must include a calculation formula (i.e. hours or days worked times the hourly or daily rate = the total amount claimed). Refer to the Personnel Hours Summary, shown as **Attachment “D”** of this Contract.
 - (3) Each invoice shall clearly delineate those costs claimed for reimbursement from the State’s grant amount (“Grant Amount”) and those costs that represent the Cost Share as applicable. State funding cannot be used for Cost Share. In each invoice, sufficient evidence (i.e. receipts, copies of checks, timesheets) must be provided for all costs reflective of the Grant Amount and Cost Share.
 - (4) The total Grant Amount and Cost Share to be documented through invoicing is provided in the **Attachment C**. Additional Cost Shares as provided in **Attachment C** do not need to be included in invoicing.

(B) Invoices also shall include the following information:

- (1) Costs incurred for work performed in implementing the Project during the period identified in the particular invoice.
- (2) Costs incurred for any interests in real property (land or easements) that have been necessarily acquired for a project during the period identified in the particular invoice for the construction, operation, or maintenance of a project.
- (3) Appropriate receipts and documentation that show the total outlays for the Grant Amount and Cost Share. Receipts and documentation do not need to be provided for Additional Cost Share.

SECTION 16. QUARTERLY PROGRESS REPORTS

Quarterly Progress Reports shall be completed using the templates provided as shown in **Attachment ‘E’** of this Contract. Quarterly Progress Reports shall provide a brief description of the work performed under all funding categories (Grant Amount, Cost Share and Additional Cost Share), activities, milestones achieved, any accomplishments as well as any problems encountered in the performance of the work. The first Quarterly Progress Report shall cover the period between January 1, 2011, and March 31, 2017, and be submitted no later than May 31, 2017 to SAWPA, with future Quarterly Progress Reports covering three month reporting periods. Each Quarterly Progress Report shall be delivered to SAWPA within **sixty (60) calendar days** after the close of the reporting period. Quarterly Progress Reports are required until the sub-grantee’s assigned scope of work is complete.

SECTION 17. RECORDS AND REPORTS

- (A) Without limitation on the requirement that Project accounts be maintained in accordance with generally accepted government accounting standards, the Sub-Grantee shall comply with the records and reporting requirements imposed by the Grant Agreement, and shall also:
- (1) Establish an official Project file that documents all significant actions relative to the Project;
 - (2) Establish separate accounts that adequately and accurately itemizes and describes all amounts received and expended on the Project, including but not limited to all grant funds received under this Contract;
 - (3) Establish separate accounts that adequately and accurately itemizes and describes all income received which is attributable to the Project, specifically including any income attributable to grant funds disbursed under this Contract;
 - (4) Establish an accounting system that adequately and accurately itemizes and describes final total costs of the Project, including both direct and indirect costs;
 - (5) Establish such accounts and maintain such records as may be necessary for the State, DWR and SAWPA to fulfill federal reporting requirements, including any and all reporting requirements under federal tax statutes or regulations; and

- (B) The Sub-Grantee shall require all Project contractors and subcontractors to maintain books, records, and other material relative to the Project in accordance with generally accepted accounting standards, and to require that such contractors and subcontractors retain such books, records, and other material for a minimum of ten (10) years after Project completion. The Sub-Grantee shall require that such books, records, and other material shall be subject, at all reasonable times, to inspection, copying, and audit by SAWPA, DWR or its authorized representatives.
- (C) The Sub-Grantee shall maintain its books, records and other material concerning the Project in accordance with generally accepted government accounting standards and as required by the Grant Agreement.
- (D) All documents required or requested to be provided to SAWPA shall be submitted electronically in both the native format (e.g. Microsoft Word, Microsoft Excel, etc) and PDF. All documents shall be public domain or the property of SAWPA once submitted.
- (E) The Sub-Grantee agrees to expeditiously provide, during work on the Project and for three years after the projection completion, such reports, data, information and certifications as may be reasonably required by SAWPA or DWR. Such documents and information shall be provided in electronic format.

SECTION 18. PROJECT REVIEW AND EVALUATION; FINAL REPORTS AND AUDIT

- (A) SAWPA may perform a Project review or otherwise evaluate the Project to determine compliance with the contract documents at any time or if questions about the proper use or management of the funds arise. SAWPA may review or evaluate the contractor or vendor for compliance with the terms and conditions of the contract document. The Project review and evaluation may be performed by SAWPA or may be contracted to a responsible third party. Any findings and recommendations of the Project review and evaluation shall be addressed by the Sub-Grantee within **sixty (60) calendar days** of the date such findings and recommendations are provided to the Sub-Grantee and before the next invoice is paid by SAWPA.
- (B) At least **fifteen (15) calendar days** prior to submission of the final Project invoice, Sub-Grantee shall provide SAWPA the Disposition of Equipment per **Exhibit D** of the Grant Agreement.
- (C) In addition to the documents and deliverables required to be provided by the Grant Agreement, within **seventy five (75) calendar days** after completion of the Project the Sub-Grantee shall provide to SAWPA, a final **Project Completion Report**. The final Project Completion Report shall include, at a minimum, the information required in **Exhibit G** of the Grant Agreement.

The final Project Completion Report shall be accompanied by such other financial information as may be required by SAWPA or DWR to verify Sub-Grantee entitlement to grant funds, to assure program integrity, and to comply with any federal or state requirements. A duly authorized representative of the Sub-Grantee shall certify the Project Completion Report as correct.

- (D) SAWPA may call for an audit of financial information relative to the Project, where SAWPA determines that an audit is desirable to assure program integrity or where such an audit becomes necessary because of federal or state requirements. Where such an audit is called for, the audit shall be performed by a Certified Public Accountant independent of the Sub-Grantee and at the cost of the Sub-Grantee. The audit shall be in the form required by SAWPA.

SECTION 19. PROJECT CLOSEOUT DOCUMENTATION

To ensure that that the Project is closed out in a manner that provides an auditable file for SAWPA, Sub-Grantee shall follow a close-out procedure that includes payment of all subcontracts and any other requirements for the completion of the scope of work. Such close-out procedures shall include those procedures contained in the Grant Agreement or otherwise required by SAWPA and DWR.

SECTION 20. TERMINATION; IMMEDIATE REPAYMENT; INTEREST

- (A) SAWPA may terminate this Contract at any time prior to completion of the Project for Sub-Grantee's violation of any provision of this Contract upon written notice by SAWPA if the violation and failure of Sub-Grantee to come into compliance within a reasonable time as established by SAWPA.
- (B) In the event of such termination, the Sub-Grantee agrees, upon demand, to immediately repay to SAWPA an amount equal to the amount of grant funds disbursed to the Sub-Grantee prior to such termination. In the event of termination, prejudgment interest shall accrue on all amounts due from the date that notice of termination is mailed to the Sub-Grantee to the date of full repayment by the Sub-Grantee.
- (C) SAWPA may terminate this Contract should DWR terminate SAWPA as program manager, or terminate funding for this Contract or the Project or should DWR terminate its standard agreement with SAWPA on this Project. Upon such DWR-caused termination, SAWPA shall not be liable to Sub-Grantee for any damages, costs or expenses resulting from such termination.

SECTION 21. DAMAGES FOR BREACH AFFECTING TAX EXEMPT STATUS

In the event that any breach of any of the provisions of this Contract or other action by the Sub-Grantee shall result in the loss of tax exempt status for any bonds, or if such breach shall result in an obligation on the part of the SAWPA to reimburse the federal government by reason of any arbitrage profits, the Sub-Grantee shall immediately reimburse SAWPA and/or DWR in an amount equal to any damages paid by or loss incurred by the State due to such breach.

SECTION 22. ARBITRATION

Any dispute which may arise under this Contract by and between SAWPA and the Sub-Grantee, including the Sub-Grantee's subcontractors, laborers, and suppliers, shall be submitted to binding arbitration. The arbitrator shall decide each and every dispute in accordance with the laws of the State of California, and all other applicable laws. Unless the Parties stipulate in writing to the contrary, prior to the appointment of the arbitrator, all disputes shall first be submitted to non-binding mediation.

SECTION 23. COSTS AND ATTORNEY FEES

In the event of arbitration or litigation between the parties hereto arising from this Contract, it is agreed that the prevailing party shall be entitled to recover reasonable costs and attorney fees.

SECTION 24. WAIVER

Any waiver of any rights or obligations under this Contract or the Grant Agreement shall be in writing and signed by the Party making such waiver, and approved by SAWPA and the DWR.

SECTION 25. AMENDMENT

This Contract may be amended at any time by mutual written agreement of the Parties.

SECTION 26. SAWPA REVIEWS; SUB-GRANTEE AS INDEPENDENT CONTRACTOR

- (A) The Parties agree that review or approval of the Project plans and specifications by SAWPA is for administrative and eligibility purposes only and does not relieve the Sub-Grantee of its responsibility to properly plan, design, construct, operate, and maintain the Project. As between SAWPA and the Sub-Grantee, the Sub-Grantee agrees that it has sole responsibility for proper planning, design, construction, operation, and maintenance of the Project.
- (B) The Sub-Grantee is an independent contractor exclusively responsible for the design, construction, operation and maintenance of the specific project funded by this Contract and that the Sub-Grantee is not acting as SAWPA's agent, nor is SAWPA acting as an agent of the Sub-Grantee.

SECTION 27. INDEMNIFICATION

- (A) Sub-Grantee shall defend, indemnify and hold harmless SAWPA, DWR, and their respective directors, commissioners, officers, employees, agents, and assigns (collectively, the "Indemnified Parties") from and against any claims, losses, damages, attorneys' fees and expenses arising from any and all contracts, contractors, subcontractors, suppliers, laborers, and any other person, entity or corporation furnishing or supplying such services, materials or supplies in connection with the Project funded, in part, by this Contract. Sub-Grantee shall indemnify and save Indemnified Parties harmless from any and all claims, losses, damages, attorneys' fees and expenses that may arise from any breach or default by Sub-Grantee in the performance of its obligations under this Contract, or any act of negligence by the Sub-Grantee or any of its agents, contractors, subcontractors, servants, employees or licensees concerning the subject matter of this Contract or the Project. No indemnification is required under this Section for claims, losses or damages arising out of the sole and exclusive misconduct or negligence under this Contract by SAWPA. Sub Grantee shall require its contractors or subcontractors to name the SAWPA, DWR, and their officers, agents and employees as additional insureds on their liability insurance for activities undertaken pursuant to this Agreement.
- (B) The Sub-Grantee understands and agrees that it has complied and will comply any CEQA determinations by SAWPA or the lead agency for the Project which is the subject matter of this Contract. The Sub-Grantee hereby agrees to indemnify, defend and hold harmless SAWPA and the DWR from any and all claims or actions related to this Project that may be made by any third party or public agency alleging, among other things, violations of CEQA or the State CEQA Guidelines.
- (C) In addition to complying with the insurance requirements contained in the Grant Agreement, including **Exhibit D** of the Grant Agreement, the Sub-Grantee shall ensure that adequate insurance coverage is provided by Sub-Grantee and/or its contractors and subcontractors on the Project funded, in part, by this Contract. Such insurance shall include adequate coverage for comprehensive commercial general liability, business auto liability, workers compensation liability.

SECTION 28. PROJECT AND INFORMATION ACCESS

The Sub-Grantee agrees to ensure that SAWPA, DWR, or any authorized representative thereof, shall have reasonable access to the Project materials and Project-related events at all reasonable times during the Project.

SECTION 29. OPINIONS AND DETERMINATIONS

Where the terms of this contract provide for action to be based upon the opinion, judgment, approval, review, or determination of either party hereto, such terms are not intended to be and shall never be construed as permitting such opinion, judgment, approval, review, or determination to be arbitrary and capricious.

IN WITNESS THEREOF, the parties have executed this Contract on the later date set forth below.

SANTA ANA WATERSHED PROJECT
AUTHORITY

Dated: _____

By: _____
Richard E. Haller, P.E.
General Manager

ORANGE COUNTY COASTKEEPER
Sub-Grantee

Dated: _____

By: _____

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SAWPA MEMORANDUM



To: Eastern Municipal Water District, Inland Empire Utilities Agency, San Bernardino Valley Municipal Water District and Western Municipal Water District

From: Santa Ana Watershed Project Authority (SAWPA)

Date: Submitted to the SAWPA Project Agreement 22 Committee for Approval on November 16, 2017

RE: Roles and Responsibilities for Implementation of the Santa Ana River Conservation and Conjunctive Use Program’s Smartscape Project

Overview:

The SAWPA member agencies submitted a Proposition 84 grant application to the Department of Water Resources (DWR) to fund the Santa Ana River Conservation and Conjunctive Use Program (SARCCUP) within the Santa Ana River Watershed. SAWPA executed Grant Agreement No. 4600011515 with DWR on November 1, 2016 to fund SARCCUP and implement the SARCCUP Smartscape Project (Project). SAWPA executed a Sub-Grantee Agreement with Orange County Coastkeeper (OCCK) on November 16, 2017 to implement the Project. OCCK was identified in the grant application that was approved by DWR as the “Non-Governmental Organization (NGO) Project Partner.”

This memorandum identifies the roles and responsibilities for SAWPA as the contracting agency as well as for the “Water District Project Partners” The Water District Project Partners include:

- Eastern Municipal Water District (EMWD)
- Inland Empire Utilities Agency (IEUA)
- San Bernardino Valley Municipal Water District (SBVMWD)
- Western Municipal Water District (WMWD)

SAWPA Role and Responsibilities:

SAWPA serves as the contracting agency. The Sub-Grantee Agreement serves as the contract that binds OCCK, the NGO Project Partner, to perform the Project’s scope of work, provide deliverables to SAWPA and the Water District Project Partners, allows payment for services to OCCK, and ensures that SAWPA and DWR Grant Agreement requirements are adopted by OCCK.

SAWPA has drafted the Sub-Grantee Agreement with review performed by the Water District Project Partners to ensure the Project’s scope of work and deliverables are in line with the Grant Agreement and include Project tasks the Water District Project Partners need performed in their service areas within the Santa Ana River Watershed. SAWPA has provided a \$92,995 budget allocation to each Water

District Project Partner for OCCK to implement the Project in each of their service areas in the Santa Ana River Watershed.

During implementation of the Project, SAWPA will collect the following from OCCK:

- (1) Documentation of Project tasks performed by OCCK (such as sign-in sheets) on a monthly basis.*
- (2) Tracking Reports that index each of the Sub-Grantee Agreement's Project tasks on a monthly basis or upon request by the Water District Project Partners.*
- (3) Progress Reports that provide an overview of the Project tasks performed by OCCK on a quarterly basis.
- (4) Invoices documenting OCCK costs on a quarterly basis.

Water District Project Partners Roles and Responsibilities:

The Project Partners served as the grant applicants prior to execution of the Grant Agreement and have provided their input to the Grant Agreement and Sub-Grantee Agreement between SAWPA and OCCK.

During implementation of the Project, the Water District Project Partners will submit to OCCK, and copy SAWPA, the Tracking Report, which will include the list of Project tasks each Water District Project Partner is requesting for its service area in the Santa Ana River Watershed. The Water District Project Partners will develop their own list of clients and provide them in the Tracking Report. By completing the Tracking Report, the Water District Project Partners are directing OCCK to perform outreach to clients indexed in the Tracking Report. As some of the costs of the Project tasks have a range in costs, the Water District Project Partners will work with OCCK to finalize the costs on a case-by-case basis when the specifics of the requested task are known.

The Water District Project Partners will ensure that the total costs of the tasks requested and the tasks executed do not exceed each Water District Project Partner's \$92,995 allocation. They will also ensure that their allocations will be expended over a two-year time frame. The Water District Project Partners will not request Project tasks other than by documenting them in the Tracking Report.

In order to provide quality control for the Project tasks provided by OCCK, the Water District Project Partners will provide feedback on Project deliverables, such as draft copies of written material or videos, and by submitting feedback to OCCK and copying SAWPA.

If Water District Project Partners receive feedback from clients in their service areas, they will coordinate that feedback with OCCK and copy SAWPA.

*SAWPA will be copied when these deliverables are provided by OCCK to the Water District Project Partners.

SANTA ANA RIVER CONSERVATION AND CONJUNCTIVE USE PROGRAM (SARCCUP): FUNDING BY TASK

Lead Agency (Budget Category in Parenthesis)	Budget Category/Task Description	(a)	(b)	(b total)	(b1)	(b2)	(c)	(d)
		Requested Grant Amount*	Total Local Match: Non-State Fund Source ¹	Total Local Match: Columns b1 + b2	Reported Local Match (Through DWR invoices)	Additional Local Match (To retain for possible audit)	Total Cost	SAWPA Member Agencies Equal Split Providing Local Match
(a) Project Administration (Program Mgr Consultant - RMC)		\$ 1,000,000.00	\$ 1,000,000.00	\$ 1,000,000.00	\$ -	\$ 1,000,000.00	\$ 2,000,000.00	\$ 200,000.00
SAWPA/Consultant	1 - Project Management	\$ 950,000.00	\$ 1,000,000.00	\$ 1,000,000.00	\$ -	\$ 1,000,000.00	\$ 1,950,000.00	\$ 200,000.00
SAWPA/Consultant	2 - Labor Compliance Program ²	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	N/A
SAWPA/Consultant	3 - Reporting	\$ 50,000.00	\$ -	\$ -	\$ -	\$ -	\$ 50,000.00	N/A
(b) Land Purchase/Easement		\$ 839,000.00	\$ 200,000.00	\$ 200,000.00	\$ -	\$ 200,000.00	\$ 1,039,000.00	\$ -
EMWD, SBVMWD, WMWD	4 - Land Purchase	\$ 839,000.00	\$ 200,000.00	\$ 200,000.00	\$ -	\$ 200,000.00	\$ 1,039,000.00	\$ -
(c) Planning/Design/Engineering/ Environmental Doc		\$ 5,274,405.00	\$ 5,367,685.00	\$ 5,367,685.00	\$ -	\$ 5,367,685.00	\$ 10,642,090.00	\$ 229,170.20
SAWPA Member Agencies	5 - SARCCUP Master Plan (a.k.a. "Feasibility Study")	\$ -	\$ 1,000,000.00	\$ 1,000,000.00	\$ -	\$ 1,000,000.00	\$ 1,000,000.00	\$ 200,000.00
SAWPA Member Agencies	6 - CEQA	\$ 476,517.00	\$ 357,245.00	\$ 357,245.00	\$ -	\$ 357,245.00	\$ 833,762.00	N/A
SAWPA Member Agencies	6.1 Programmatic CEQA	\$ 194,547.00	\$ 145,851.00	\$ 145,851.00	\$ -	\$ 145,851.00	\$ 340,398.00	\$ 29,170.20
SBVMWD	6.2 SBVMWD CEQA	\$ 140,985.00	\$ 105,697.00	\$ 105,697.00	\$ -	\$ 105,697.00	\$ 246,682.00	N/A
EMWD	6.3 EMWD CEQA	\$ 140,985.00	\$ 105,697.00	\$ 105,697.00	\$ -	\$ 105,697.00	\$ 246,682.00	N/A
OCWD, SBVMWD	7 - Permitting	\$ 7,928.00	\$ 122,519.00	\$ 122,519.00	\$ -	\$ 122,519.00	\$ 130,447.00	N/A
OCWD	7.1 OCWD Permitting	\$ 845.00	\$ 13,053.00	\$ 13,053.00	\$ -	\$ 13,053.00	\$ 13,898.00	N/A
SBVMWD	7.2 SBVMWD Permitting	\$ 7,083.00	\$ 109,466.00	\$ 109,466.00	\$ -	\$ 109,466.00	\$ 116,549.00	N/A
Upper Watershed	8.1 - 8.3 Conjunctive Use Design	\$ 4,288,651.00	\$ 3,215,211.00	\$ 3,215,211.00	\$ -	\$ 2,983,834.95	\$ 7,503,862.00	N/A
IEUA	8.1 Design: Chino Basin Conjunctive Use Program							
IEUA	8.1.1 Baseline Feeder Extension	\$ 1,129,268.00	\$ 846,615.00	\$ 846,615.00	\$ -	\$ 846,615.00	\$ 1,975,883.00	N/A
IEUA	8.1.2 Municipal Interties on Baseline Feeder Extension	\$ 64,676.00	\$ 48,488.00	\$ 48,488.00	\$ -	\$ 48,488.00	\$ 113,164.00	N/A
IEUA	8.1.3 Turnout on Baseline Feeder to San Sevain Creek	\$ 128,326.00	\$ 96,206.00	\$ 96,206.00	\$ -	\$ 96,206.00	\$ 224,532.00	N/A
IEUA	8.1.4 Diversion on San Sevaine Creek to Recharge Basin	\$ 71,863.00	\$ 53,875.00	\$ 53,875.00	\$ -	\$ 53,875.00	\$ 125,738.00	N/A
IEUA	8.1.5 Turnout on Devil Canyon-Azusa Pipeline	\$ 128,326.00	\$ 96,206.00	\$ 96,206.00	\$ -	\$ 96,206.00	\$ 224,532.00	N/A
IEUA	8.1.6 Production Wells in Chino/IEUA South Zone	\$ 51,330.00	\$ 38,483.00	\$ 38,483.00	\$ -	\$ 38,483.00	\$ 89,813.00	N/A
EMWD	8.2 Design: San Jacinto Conjunctive Use Program							
EMWD	8.2.1 Phase 1: Basin Development, Amenities	\$ 443,904.00	\$ 332,796.00	\$ 332,796.00	\$ -	\$ 332,796.00	\$ 776,700.00	N/A
EMWD	8.2.2 Phase 1: Extraction Wells and Associated Pipelines	\$ 702,119.00	\$ 526,381.00	\$ 526,381.00	\$ -	\$ 526,381.00	\$ 1,228,500.00	N/A
SBVMWD	8.3 Design: San Bernardino Basin Conjunctive Use Program							
SBVMWD	8.3.1 Production Wells and Transmission Pipelines	\$ 951,591.00	\$ 713,409.00	\$ 713,409.00	\$ -	\$ 713,409.00	\$ 1,665,000.00	N/A
SBVMWD	8.3.2 Expand Redlands Pump Stations	\$ 308,624.00	\$ 231,376.00	\$ 231,376.00	\$ -	\$ 231,376.00	\$ 540,000.00	N/A
WMWD	8.4 Design: Elsinore Conjunctive Use Program	\$ 308,624.00	\$ 231,376.00	\$ 231,376.00	\$ -	\$ 231,376.00	\$ 540,000.00	N/A
OCWD/SBVMWD	8.5 Habitat Design	\$ 501,309.00	\$ 672,710.00	\$ 672,710.00	\$ -	\$ 672,710.00	\$ 1,174,019.00	N/A
OCWD	8.5.1 Design: Arundo Removal	\$ 135,000.00	\$ 225,000.00	\$ 225,000.00	\$ -	\$ 225,000.00	\$ 360,000.00	N/A
SBVMWD	8.5.2.1 Design: Sucker Habitat - Anza Drain	\$ 108,407.00	\$ 132,497.00	\$ 132,497.00	\$ -	\$ 132,497.00	\$ 240,904.00	N/A
SBVMWD	8.5.2.2 Design: Sucker Habitat - Old Farm Road	\$ 128,805.00	\$ 157,429.00	\$ 157,429.00	\$ -	\$ 157,429.00	\$ 286,234.00	N/A
SBVMWD	8.5.2.3 Design: Sucker Habitat - Lower Hole Creek	\$ 44,853.00	\$ 54,820.00	\$ 54,820.00	\$ -	\$ 54,820.00	\$ 99,673.00	N/A
SBVMWD	8.5.3.4 Design: Sucker Habitat - Hidden Valley Wetlands	\$ 84,244.00	\$ 102,964.00	\$ 102,964.00	\$ -	\$ 102,964.00	\$ 187,208.00	N/A
All	9 Project Management Plan ²							
(d) Construction/Implementation		\$ 47,886,595.00	\$ 39,705,214.00	\$ 39,705,214.00	\$ 30,500,000.00	\$ 9,205,214.00	\$ 87,591,809.00	\$ 165,200.00
SAWPA Member Agencies	10 Construction Contracting ²							
SAWPA Member Agencies	11 Construction Administration ²							
Upper Watershed	12 - Conjunctive Use Construction	\$ 42,047,511.00	\$ 32,152,108.00	\$ 32,152,108.00	\$ 26,169,138.00	\$ 5,982,970.00	\$ 74,199,619.00	N/A
IEUA	12.1 Chino Basin Conjunctive Use Program							
IEUA	12.1.1 Baseline Feeder Extension	\$ 11,292,680.00	\$ 8,466,147.00	\$ 8,466,147.00	\$ 8,466,147.00	\$ -	\$ 19,758,827.00	N/A
IEUA	12.1.2 Municipal Interties on Baseline Feeder Extension	\$ 646,763.00	\$ 484,879.00	\$ 484,879.00	\$ 484,879.00	\$ -	\$ 1,131,642.00	N/A
IEUA	12.1.3 Turnout on Baseline Feeder to San Sevaine Creek	\$ 1,283,259.00	\$ 962,062.00	\$ 962,062.00	\$ 962,062.00	\$ -	\$ 2,245,321.00	N/A
IEUA	12.1.4 Diversion on San Sevaine Creek to Recharge Basin	\$ 718,625.00	\$ 538,755.00	\$ 538,755.00	\$ -	\$ 538,755.00	\$ 1,257,380.00	N/A
IEUA	12.1.5 Turnout on Devil Canyon-Azusa Pipeline	\$ 1,283,259.00	\$ 962,062.00	\$ 962,062.00	\$ -	\$ 962,062.00	\$ 2,245,321.00	N/A
IEUA	12.1.6 Production Wells in Chino/IEUA South Zone	\$ 513,304.00	\$ 384,824.00	\$ 384,824.00	\$ -	\$ 384,824.00	\$ 898,128.00	N/A
EMWD	12.2 San Jacinto Conjunctive Use Program							
EMWD	12.2.1 Phase 1: Recharge Basin Development, Amenities	\$ 4,439,041.00	\$ 3,327,959.00	\$ 3,327,959.00	\$ 2,327,959.00	\$ 1,000,000.00	\$ 7,767,000.00	N/A
EMWD	12.2.2 Phase 1: Extraction Wells and Associated Pipelines	\$ 6,611,195.00	\$ 5,263,805.00	\$ 5,263,805.00	\$ 4,793,996.00	\$ 469,809.00	\$ 11,875,000.00	N/A
SBVMWD	12.3 - San Bernardino Basin Conjunctive Use Program							
SBVMWD	12.3.1 Production Wells and Transmission Pipelines	\$ 9,086,905.00	\$ 7,134,095.00	\$ 7,134,095.00	\$ 7,134,095.00	\$ -	\$ 16,221,000.00	N/A
SBVMWD	12.3.2 Expand Redlands Pump Station	\$ 3,086,240.00	\$ 2,313,760.00	\$ 2,313,760.00	\$ -	\$ 2,313,760.00	\$ 5,400,000.00	N/A
WMWD	12.4 - Elsinore Conjunctive Use Program	\$ 3,086,240.00	\$ 2,313,760.00	\$ 2,313,760.00	\$ 2,000,000.00	\$ 313,760.00	\$ 5,400,000.00	N/A
OCWD/SBVMWD	12.5 - Habitat Implementation	\$ 5,013,084.00	\$ 6,727,106.00	\$ 6,727,106.00	\$ 3,699,262.00	\$ 3,027,844.00	\$ 11,740,190.00	N/A
OCWD	12.5.1 - Arundo Donax Removal	\$ 1,350,000.00	\$ 2,250,000.00	\$ 2,250,000.00	\$ 800,000.00	\$ 1,450,000.00	\$ 3,600,000.00	N/A
SBVMWD	12.5.2.1 Anza Drain	\$ 1,084,070.00	\$ 1,324,975.00	\$ 1,324,975.00	\$ 1,324,975.00	\$ -	\$ 2,409,045.00	N/A
SBVMWD	12.5.2.2 Old Farm Road	\$ 1,288,050.00	\$ 1,574,287.00	\$ 1,574,287.00	\$ 1,574,287.00	\$ -	\$ 2,862,337.00	N/A
SBVMWD	12.5.2.3 Lower Hole Creek	\$ 448,529.00	\$ 548,201.00	\$ 548,201.00	\$ -	\$ 548,201.00	\$ 996,730.00	N/A
SBVMWD	12.5.2.4 Hidden Valley Wetlands	\$ 842,435.00	\$ 1,029,643.00	\$ 1,029,643.00	\$ -	\$ 1,029,643.00	\$ 1,872,078.00	N/A
SAWPA	12.6 - Water Use Efficiency Implementation	\$ 826,000.00	\$ 826,000.00	\$ 826,000.00	\$ 631,600.00	\$ 194,400.00	\$ 1,652,000.00	\$ 165,200.00
SAWPA	12.6.1 Conservation-Based Water Rates	\$ 583,000.00	\$ 631,600.00	\$ 631,600.00	\$ 631,600.00	\$ -	\$ 1,214,600.00	^b
SAWPA	12.6.2 Smartscape	\$ 243,000.00	\$ 194,400.00	\$ 194,400.00	\$ -	\$ 194,400.00	\$ 437,400.00	^b
All	Grand Total	\$ 55,000,000.00	\$ 46,272,899.00	\$ 46,272,899.00	\$ 30,500,000.00	\$ 15,772,899.00	\$ 101,272,899.00	\$ 594,370.20

* For most Tasks, the Grant Amount in column (a) was determined by multiplying three percentage values by the individual Tasks' Total Costs in column (c). The percentage values used depended on the type of Task. Tasks that were Conjunctive Use related used a 57% multiplier, Habitat Creation related used a 45% multiplier and Arundo Donax related used a 37% multiplier.
 1 Funding match will be provided by the five Santa Ana Watershed Project Authority (SAWPA) member agencies: Eastern Municipal Water District (EMWD), Inland Empire Utilities Agency (IEUA), Orange County Water District (OCWD), San Bernardino Valley Municipal Water District (SBVMWD) and Western Municipal Water District (WMWD).
 2 All Tasks 1-12 reflect the State's Work Plan. Tasks marked with "2" footnote do not have a specific funding line item. Those tasks will be completed using funds accounted in the other task line items.
 a Task 4 Land Purchase will be split amongst three agencies with EMWD receiving \$410,000 in grant funding, SBVMWD receiving \$429,000 in grant funding, and WMWD providing \$200,000 in local match.
 b OCWD's local cost share funding originally intended for Smartscape Task 12.6.2 was added to Conservation-Based Water Rates Task 12.6.1.

SARCCUP: FUNDING BY AGENCY

Lead Agency	Color	(a)	(b)	(b total)	(b1)	(b2)	(c)	(e)	(f)
		Requested Grant Amount	Total Local Match: Non-State Fund Source*	Total Local Match: Columns b1 + b2 **	Reported Local Match	Additional Local Match	Total Cost	Total Local Match Equally Shared By Agency	Receive or Pass a Portion of Local Match***
EMWD		\$ 12,786,153.40	\$ 10,151,008.20	\$ 9,785,808.20	\$ 7,121,955.00	\$ 2,663,853.20	\$ 22,937,161.60	\$ 9,254,579.80	\$ 896,428.40
IEUA		\$ 17,350,588.40	\$ 13,572,972.20	\$ 13,207,772.20	\$ 9,913,088.00	\$ 3,294,684.20	\$ 30,923,560.60	\$ 9,254,579.80	\$ 4,318,392.40
OCWD		\$ 1,524,754.40	\$ 3,082,423.20	\$ 2,717,223.20	\$ 800,000.00	\$ 1,917,223.20	\$ 4,607,177.60	\$ 9,254,579.80	\$ (6,172,156.60)
SBVMWD		\$ 18,078,730.40	\$ 16,126,989.20	\$ 15,761,789.20	\$ 10,033,357.00	\$ 5,728,432.20	\$ 34,205,719.60	\$ 9,254,579.80	\$ 6,872,409.40
WMWD		\$ 3,433,773.40	\$ 3,339,506.20	\$ 2,974,306.20	\$ 2,000,000.00	\$ 974,306.20	\$ 6,773,279.60	\$ 9,254,579.80	\$ (5,915,073.60)
SAWPA/Consultant		\$ 1,826,000.00	\$ -	\$ 1,826,000.00	\$ 631,600.00	\$ 1,194,400.00	\$ 1,826,000.00	\$ -	\$ -
Grand Total		\$ 55,000,000.00	\$ 46,272,899.00	\$ 46,272,899.00	\$ 30,500,000.00	\$ 15,772,899.00	\$ 101,272,899.00	\$ 46,272,899.00	\$ (0.00)

*Represents the funding to be provided by agency to implement their tasks as well as the shared obligation to implement Task 1 Project Management, Task 5 SARCCUP Master Plan, Task 6.1 Programmatic CEQA, and Task 12.6 Water Use Efficiency Implementation. Column (b) is not the same as (b total) because (b) shows that SAWPA is not providing local match for SARCCUP implementation; columns (b total) and (b1) are reflecting the reporting obligation to DWR.
 **Represents the local match funding to be reported to DWR and the non-reported additional local match. Columns (b) and (b total) are not the same because SAWPA is receiving the (b1) and (b2) SAWPA/Consultant line item funding amounts from the SAWPA member agencies.
 ***No agency will give local match beyond the equal share of the Total Local Match shown in column (b), but as some tasks have more expenses associated with them than others, those agencies implementing tasks with smaller budgets will pass through a portion of the local match to the agencies implementing the larger budgeted tasks.

SARCCUP SUB-GRANTEE CONTRACT AMOUNTS

Lead Agency ¹	Color	(a)	(g)	(h)
		Requested Grant Amount	Total Local Match for Contract ²	Total Contract Amount
EMWD		\$ 12,786,153.40	\$ 10,119,965.20	\$ 22,906,118.60
IEUA		\$ 17,350,588.40	\$ 13,541,929.20	\$ 30,892,517.60
OCWD		\$ 1,524,754.40	\$ 3,051,380.20	\$ 4,576,134.60
SBVMWD		\$ 18,078,730.40	\$ 16,095,946.20	\$ 34,174,676.60
WMWD		\$ 3,433,773.40	\$ 3,308,463.20	\$ 6,742,236.60
SAWPA/RMC		\$ 1,826,000.00	\$ -	\$ 1,826,000.00
Contract Total		\$ 55,000,000.00	\$ 46,117,684.00	\$ 101,117,684.00
Letter Agreement For RMC Consultant - Contributions Per Agency		\$ -	\$ 31,043.00	\$ 31,043.00
Letter Agreement for RMC Consultant - Total Contributions		\$ -	\$ 155,215.00	\$ 155,215.00
Grand Total		\$ 55,000,000.00	\$ 46,272,899.00	\$ 101,272,899.00

1 All agencies are Sub-Grantees, except SAWPA which is the Grantee.
 2 Represents the Total Local Match shown in column (b) less the Letter Agreement Amount.

SARCCUP SUB-GRANTEE INVOICE AMOUNTS

Funding Basis	Description	Period Covered by Funding	Funding Type	(i) Funding Level
Total Cost	RMC Contract Total	FYE 2016 - FYE 2021	Grant and Match	\$ 1,284,488.00
Total Cost	RMC Cost Share Phase 1 - Letter Agreement	Half of FYE 2017	Match	\$ 155,215.00
Total Grant	Grant Funding for RMC	FYE 2017	Grant	\$ 284,488.00
Total Match for Task	Task 12.6 Cost Share Needed	FYE 2016 - FYE 2021	Match	\$ 826,000.00
Calculation				

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Orange County Coastkeeper SmartScape



¿Qué son SmartScapes, y por qué son importantes?

SmartScapes son jardines que son tolerantes a la sequía. Son importantes porque estamos en la peor sequía en la historia recordada y cada gota de agua cuenta. Coastkeeper ofrece asistencia a propietarios, contratistas de jardinería, residentes y las empresas que desean convertir sus jardines a obras de arte que son conscientes del medio ambiente, y que ahorran agua.

Aprender

Son cordialmente invitados al Jardín de Coastkeeper donde habrán talleres informativos sobre el diseño e instalación de los SmartScapes.



Salvar

SmartScapes ahorran agua y dinero. Le ayudaremos a identificar los incentivos financieros para que pueda maximizar sus rebajas.



Crecer

Se necesitan dos años antes de que su nuevo jardín tolerante a la sequía se estabilice. Nosotros les ayudaremos con el mantenimiento mientras el jardín sea estable.



Beneficios de la transformación de césped a SmartScapes

- Conservar agua
- Eliminar el desarrollo del agua en tiempos de sequía
- Embellecer su jardín
- Reducir gastos financieros del mantenimiento
- Reducir las emisiones de carbono
- Crece jardines comestibles

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Example Social media: WECAN Project SmartScape Workshops

Facebook:

Looking for ways to save money on your water and energy bills? Our SmartScape landscape plan can help you do just that! Join us for a FREE workshop on (WORKSHOP DATE/LOCATION/)
<http://www.coastkeeper.org/calendar> **Attach Flyer**

Did you know that you may be eligible for a free drought tolerant landscape and indoor water saving system? To find out more about this amazing opportunity stop by our next SmartScape workshop at (WORKSHOP LOCATION/DATE) <http://www.coastkeeper.org/calendar> **Attach Flyer**

We have some exciting news! Coastkeeper has joined the Water Energy Community Action Network (@WECAN). Together we are hosting workshops across Orange County to show you how easy it is to save money and turn your landscape into a SmartScape. <http://www.coastkeeper.org/calendar> **Attach Flyer**

Help us continue to outsmart the drought by transforming your landscape into a SmartScape. Our SmartScape Program features cutting-edge technology and beautiful resource efficient plant designs. Join us at our next workshop to learn more! **Attach Flyer**

Spring is here and it is a great time to rethink your landscaping before the hot summer months! Our SmartScape Program will help you transform your lawn to a beautiful drought friendly landscape. Join us at our FREE workshop to learn more! **Attach Flyer**

Twitter:

Looking for ways to save money on your water and energy bills? Come check out our FREE SmartScape workshop to learn how you can save! #droughtfriendly #landscaping #nativeplants

With the hot summer months right around the corner there's no better time to transform your landscape to a beautiful #droughtfriendly lawn with our SmartScape program. #landscaping #CA

Join us at our (@CITY NAME) SmartScape workshop to learn how you can transform your open space into a #droughttolerant paradise.

Calling all property owners and landscaping contractors. Looking for ways to transform your landscape into a drought-tolerant paradise? Join us at our next FREE SmartScape workshop. www.coastkeeper.org/smartscape

We have partnered with @WECAN to hosting workshops across #OC to show you how easy it is to save money and turn your landscape into a SmartScape. <http://www.coastkeeper.org/calendar> **Attach Flyer**

Help us continue to #outsmart the #OCdrought by transforming your landscape into a SmartScape. Join us at our next workshop to learn more! <http://www.coastkeeper.org/calendar> **Attach Flyer**

Did you know that you may be eligible for a FREE #droughttolerant landscape and indoor water saving system? To find out more at our next SmartScape workshop. <http://www.coastkeeper.org/calendar> **Attach Flyer**

WATER ENERGY COMMUNITY ACTION NETWORK PROGRAM (WECAN)

PRESENTS

**Orange County Coastkeeper
&
Inland Empire Waterkeeper**

SMARTSCAPE TRAINING MANUAL

El Programa de la Red de Acción Comunitaria del Agua / Energía (WECAN por sus siglas en inglés) Presenta Coastkeeper del Condado de Orange y Waterkeeper del Área de Inland Empire Manual de Capacitación en SmartScape

Este manual fue elaborado con financiación del Departamento de Recursos Hidráulicos del Estado de California a través de un programa de subvención de Agua y Energía financiado por el Fondo para la Reducción de Gases de Efecto Invernadero del Estado. El manual es una parte integrante del Programa de la Red de Acción Comunitaria del Agua y Energía (WECAN por sus siglas en inglés) para ayudar a la gente de California a adaptarse al cambio climático y mitigar sus emisiones de carbono. Este esfuerzo en las cuencas del Río Santa Ana es administrado por la Autoridad de la Cuenca del Río Santa Ana. Este programa apoya a las comunidades de bajos ingresos a medida que buscan el ahorro de agua y energía. Está bien documentado que las comunidades de bajos ingresos son más vulnerables a los impactos del cambio climático, y aunque a menudo ya son muy eficientes con los recursos, también son menos capaces de adaptarse a las condiciones cambiantes.

El Programa Coastkeeper del Condado de Orange ha estado promoviendo jardinería eficiente con los recursos con que cuenta, con un diseño que incluye plantas resistentes a la sequía, tecnología de vanguardia y prácticas de gestión sostenible del paisajismo. Durante los últimos diez años en el Programa Coastkeeper del Condado de Orange hemos perfeccionado nuestras habilidades a través de la realización de proyectos de transformación del paisajismo residencial, comercial y público. Esto nos ha dado experiencia en la promoción, construcción y gestión de paisajes con eficiencia de recursos que utilizan una combinación de plantas tolerantes a la sequía, las tecnologías de riego inteligentes, y Diseño de Bajo Impacto.

Queremos reconocer al arquitecto paisajista Guy Stivers por su ayuda, junto con los recursos en los nuevos libros “The New Sunset Western Garden Book” y “The Care & Maintenance of Southern California Native Plant Gardens.”



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This manual was produced with funding from the State of California Department of Water Resources through a Water/Energy Grant program funded by the State Greenhouse Gas reduction Fund. The manual is an integral part of the Water-Energy Community Action Network (WE CAN) program to help the people of California adapt to climate change, and mitigate their carbon emissions. This effort in the Santa Ana River Watershed is administered by the Santa Ana River Watershed Authority. This program supports low-income communities as they seek water and energy savings. It is well documented that low-income communities are most vulnerable to climate change impacts, and though often already very efficient with resources, are also least able to adapt to the changing conditions.

Orange County Coastkeeper has been promoting resource-efficient landscaping that features drought-tolerant plant design, cutting-edge technology, and sustainable landscape management practices. Over the last ten years Orange County Coastkeeper has honed our skills through the completion of residential, commercial, and public landscape transformation projects. This has given us experience in promoting, constructing, and managing resource efficient landscapes that use a combination of drought tolerant plants, smart irrigation technologies, and Low Impact Design.

We want acknowledge landscape architect Guy Stivers for his assistance along with the resources in the “The New Sunset Western Garden Book” and “The Care & Maintenance of Southern California Native Plant Gardens.”



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MANUAL DE CAPACITACIÓN EN SMARTSCAPE

En asociación con
el Programa de la Red de Acción Comunitaria
del Agua y Energía (WECAN)



SMARTSCAPE TRAINING MANUAL

In partnership with
Water Energy Community Action Network Program (WECAN)



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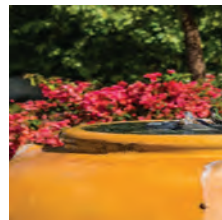
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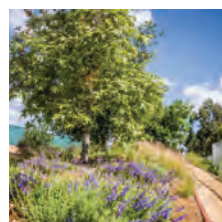
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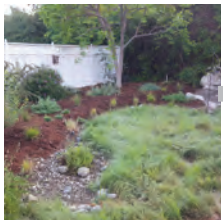
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INTRODUCCIÓN A SMARTSCAPE

¡Bienvenidos a SmartScape, el futuro del paisajismo en el sur de California! Estos paisajes de vanguardia son coloridos, fragantes, y de larga duración cuando se instalan y gestionan correctamente. De más importancia, los paisajes SmartScapes reducen el agua, el uso de energía, y la escorrentía urbana.

La escorrentía urbana no es sólo el petróleo y el polvo de frenos que se desliza a las alcantarillas de tormenta después de la primera lluvia. Es también la escorrentía que se ve todos los días alrededor de su vecindario que fluye por las calzadas, aceras, bordillos en la que lleva niveles tóxicos de pesticidas, fertilizantes y herbicidas. SmartScape soluciona este problema mediante el uso de irrigación eficiente de agua y materiales orgánicos para crear paisajes de agua limpia con cero escorrentías.

Si tienes una temática mediterránea o nativa, o una mezcla de los dos, (llamado California Friendly Landscape o Paisaje Ambiental Californiano) todos estos tienen técnicas de gestión muy similares. Este manual te guía en la creación y gestión de su paisaje SmartScape. Con este conocimiento, tú estarás listo para una experiencia feliz y agradable de jardinería.

SMARTSCAPE INTRODUCTION



W

elcome to SmartScape, the future of Southern California Landscapes! These cutting edge landscapes are colorful, fragrant, and long-lasting when properly installed and managed. Most importantly, SmartScapes reduce water, energy use, and urban runoff.

Urban runoff isn't just the oil and brake dust washing into the storm drains after the first rain. It is also the runoff you see everyday around your neighborhood flowing down driveways, sidewalks, and over the curbs carrying toxic levels of pesticides, fertilizers, and herbicides. SmartScape addresses this issue by using organic materials and water efficient irrigation to create zero runoff, clean water landscapes.

Whether you have a Native or a Mediterranean theme, or a mixture of the two, (called a California Friendly Landscape) they all have very similar management techniques. This manual guides you in creating and managing your SmartScape. With this knowledge, you will be off to a happy and enjoyable gardening experience.



ORANGE COUNTY
COASTKEEPER®

TIERRA VIVIENTE

El primer paso hacia el objetivo de un paisaje sostenible es determinar las características de tu tierra. Entonces, tú puedes alimentar un ambiente de tierra saludable y elegir las plantas adecuadas para su ubicación.

A. Tierra Viviente

1. La tierra sana está llena de vida! Contiene millones de organismos incluyendo nematodos, gusanos, artrópodos, hongos, bacterias y protozoos.
2. La tierra viva tiene estructura, procesos químicos, una matriz compleja de las raíces y los hilos de hongos, minerales y moléculas orgánicas que están siendo constantemente renovadas por las actividades de sus componentes vivos.
3. La comprensión de las características de la tierra de tu sitio y gestionarlas correctamente, dará lugar a plantas más saludables y felices.
4. **NO USES PESTICIDAS EN O CERCA DE TIERRA VIVIENTE.**

B. Tipo de Tierra

1. Textura de Tierra: se refiere al tamaño de las partículas individuales de tierra y que tan bien la tierra se drena. Esto está determinado por las proporciones de arena, limo, y barro.
 - a) Cómo determinar la textura de su tierra.
 - (1) Toma un puñado de tierra húmeda en tu mano.
 - (2) Frota la tierra entre tus dedos índice y pulgar.
 - (3) Toma en cuenta como la sientes. Escoge la mejor descripción de la textura.

Textura Fina	Barrosa
<ul style="list-style-type: none">● Consiste generalmente de partículas finas de barro● Se siente suave y resbaloso y pegajoso cuando se moja● Es la tierra de drenaje más lento	
Textura Mediana	Limosa - Franca
<ul style="list-style-type: none">● Contiene partículas diferentes de tamaño medio● A menudo contiene una buena cantidad de materia orgánica● Buen drenaje● Retiene la humedad	
Textura Gruesa	Arenosa
<ul style="list-style-type: none">● Esta tierra contiene algo de gravilla como papel arenado o medio grueso● Puede consistir de arena y grava pequeña● Muy porosa, muy rápido drenaje● Muy poca retención de agua	

- b) Química de Tierra (opcional): Presenta una muestra de tu tierra a un laboratorio agronómico de tierras para determinar la fertilidad de la tierra, pH, salinidad, así como otros elementos macro o micro esenciales para el crecimiento saludable de las plantas. Pide recomendaciones para enmiendas o acondicionadores de tierra que utilicen solo fertilizantes orgánicos.

Aquí se listan un par de laboratorios agronómicos:

Soil and Plant Laboratory Inc., www.soilandplantlaboratory.com

Wallace Laboratories, us.wlabs.com

- c) Conocer tu tipo de tierra te ayudará a seleccionar las plantas que crecen mejor en ese tipo de tierra. Si quieres crecer plantas que no coincidan con el tipo de suelo, tú sabrás cómo modificar el suelo para satisfacer las necesidades de las plantas que deseas crecer.

The first step toward the goal of a sustainable landscape is to determine the characteristics of your soil. Then, you can nurture a healthy soil environment and choose the right plants for your location.

A. Living Soil

1. Healthy soil is filled with life! It contains millions of organisms including nematodes, earthworms, arthropods, fungi, bacteria and protozoa.
2. Living soil has structure, chemical processes, a complex matrix of roots and fungal threads, minerals, and organic molecules that are constantly being renewed by the activities of its living components.
3. Understanding soil characteristics of the site and managing them correctly will result in healthier, happier plants.
4. **DO NOT USE PESTICIDES ON OR NEAR LIVING SOILS.**

B. Soil Type

1. Soil Texture: refers to the size of the individual soil particles and how well the soil will drain. It is determined by the proportions of sand, silt, and clay.
 - a) How to determine soil texture.
 - (1) Take a moist handful of the soil in your hand.
 - (2) Rub the soil between your thumb and forefinger.
 - (3) Take note how it feels. Choose the best description of texture.

Fine Texture	Clay	<ul style="list-style-type: none">● Consists of fine particles usually clay based soil● Feels smooth, slick, and sticky when wet● The slowest draining soil
Rough Texture	Loam	<ul style="list-style-type: none">● Has different medium sized particles● Often has good amount of organic material as well● Good drainage● Retains moisture
Course Texture	Sandy	<ul style="list-style-type: none">● This soil has some grit to it like sand paper and rougher● Can consist of sand and small gravel● Very porous, fast draining● Very little water retention

- b) Soil Chemistry (optional): Submit your soil to an agronomic soils lab to determine soil fertility, pH, salinity, and any macro or micro elements essential for healthy plant growth. Ask for soil amendment recommendations using only organic fertilizers.
Here's a couple of agronomic laboratories:
Soil and Plant Laboratory Inc., www.soilandplantlaboratory.com
Wallace Laboratories, us.wlabs.com
- c) Knowing your soil type will help you select plants that grow best in that type of soil. If you want to grow plants that do not match your soil type, you will know how to modify the soil to meet the requirements of the plants you want to grow.

CLIMA Y MEDIO AMBIENTE



Presta mucha atención a tu clima y medio ambiente para determinar la ubicación de tus plantas. ¡Al elegir plantas que crecen en tu zona, ya has tenido un buen comienzo!

A. Clima

EL LIBRO DE REFERENCIA MÁS AMPLIO ES “THE NEW SUNSET WESTERN GARDEN BOOK”.

1. Dos buenas fuentes de información climática y de zona son el Mapa de USDA Plant Hardiness Zone (<http://planthardiness.ars.usda.gov/PHZMWeb/>) y el Sunset Garden Book (<http://www.sunset.com/garden/climate-zones/climate-zones-intro-us-map>).

El mapa USDA Plant Hardiness Zone Map es el estándar por el cual los jardineros y cultivadores pueden determinar qué plantas tienen más probabilidades de prosperar en una ubicación específica. La zona de resistencia en la mayoría de etiquetas de viveros se basa en el mapa USDA Zone Map.

El libro Sunset Garden Book Climate Zone Map ofrece información detallada acerca de un clima específico incluyendo la temporada de desarrollo, lluvia, temperatura, viento y humedad.

B. Sol y Viento

1. Vientos Santa Ana ocasionales desde el norte y el noreste, junto con humedad extremadamente baja pueden ser devastadores.
 - a) Denle a sus plantas un riego profundo cuando se pronostican vientos Santa Ana.
2. Cuando escojas tus plantas, toma en cuenta cuáles son los requerimientos de sol y sombra para cada planta y su ubicación en su paisaje. Recuerda de escoger la, “Planta Correcta para la Ubicación Correcta”.

C. Tráfico Peatonal y de Mascotas

1. El tráfico sobre los atajos directos puede causar estragos en tu paisaje. Si ves un lugar en el que tú o tu mascota, u otras personas comienzan a pasar, considera la adición de peldaños o una vía de granito descompuesto (D. G.) de 3” de profundidad. Lo mejor es prevenir la compactación de tus tierras al caminar a través de tu paisaje; el mantillo también es útil para reducir la compactación de la tierra.



NO plantes especies nativas tales como ceanothus (*Ceanothus spp.*), manzanita (*Arctostaphylos spp.*), pino (*Pinus spp.*), roble (*Quercus spp.*), o Toyón (*Heteromeles arbutifolia*) en la primavera. Estas plantas y otras especies nativas se desarrollan mejor cuando se plantan durante el otoño y de esa manera tienen una temporada larga de frío y lluvia para desarrollar su masa de raíces antes de su primer verano caliente.

D. Selección y Ubicación de Plantas

1. La mayoría de plantas se pueden cultivar con un mantenimiento mínimo si se siembran a la distancia apropiada de las pasarelas, edificios y entre ellas mismas. Asegúrate de prestar mucha atención a las etiquetas del vivero y del Sunset Western Garden Book para su espaciado y colocación. Recuerda que debes tener en cuenta lo grande que será la planta cuando esté completamente madura, alrededor de 7 años de crecimiento.
2. Al elegir la planta adecuada para el lugar correcto, la poda puede minimizarse, aunque no eliminará la necesidad de poda “correctiva”.
3. Siembra entre el otoño y la primavera (octubre - marzo) cuando la temperatura ambiental haya enfriado y las plantas jóvenes puedan aprovechar las lluvias de invierno para conseguir que sus raíces se establezcan.

CLIMATE & ENVIRONMENT



Pay close attention to your climate and environment to determine the placement of your plants. By choosing plants that thrive in your zone, you are off to a good start!

A. Climate

THE MOST COMPREHENSIVE REFERENCE IS “THE NEW SUNSET WESTERN GARDEN BOOK”.

1. Two good sources of climate and zone information are the USDA Plant Hardiness Zone Map (<http://planthardiness.ars.usda.gov/PHZMWeb/>) and the Sunset Garden Book (<http://www.sunset.com/garden/climate-zones/climate-zones-intro-us-map>).

The USDA Plant Hardiness Zone Map is the standard by which gardeners and growers can determine which plants are most likely to thrive in a specific location. The zone hardiness on most nursery labels is based on the USDA Zone Map.

The Sunset Garden Book Climate Zone Map provides detailed information on a specific climate including the growing season, rainfall, temperature, wind and humidity.

B. Sun & Wind

1. Occasional Santa Ana winds from the north and northeast coupled with extremely low humidity can be devastating.
 - a) Give plants a deep watering when Santa Ana winds are forecasted.
2. When selecting plants, take into account what the sun or shade requirements are for each plant and its location in the landscape. Remember to choose the, “Right Plant for the Right Place”.

C. Pet & Pedestrian Foot Traffic

1. Traffic from shortcuts can cause havoc on your landscape. If you see a place where you, your pet, or other people start to traffic, consider adding stepping stones or a 3” deep decomposed granite (D.G.) pathway. You want to refrain from compacting your soils by walking through the landscape; mulch is also helpful in reducing soil compaction.

D. Plant Selection & Placement

1. Most plants can be grown with minimal maintenance if they are placed the right distance from walkways, structures, and each other. Make sure to pay close attention to the nursery labels and the Sunset Western Garden Book for spacing and placement. Remember to keep in mind how big the plant will be when it is fully matured, around 7 years of growth.
2. By choosing the right plant for the right place, pruning can be minimized, although it won't eliminate the need for “corrective” pruning.
3. Plant between fall and spring (October - March) when temperatures have cooled down and young plants can take advantage of winter rains to get their roots established.



DO NOT plant natives such as ceanothus (*Ceanothus spp.*), manzanita (*Arctostaphylos spp.*), pine (*Pinus spp.*), oak (*Quercus spp.*), or Toyon (*Heteromeles arbutifolia*) in spring. These plants and other natives do best when planted in the fall so they have a long cool rainy season to develop their root mass before their first hot summer.

IRRIGACIÓN (RIEGO)

El agua es un recurso muy valioso y caro en el sur de California. ¡Esta es probablemente la razón que has tomado la decisión inteligente para convertir tu jardín a un SmartScape!

Un sistema eficiente de riego es el sistema de apoyo vital para tu SmartScape. Habiendo dicho esto, no hay nada tan bueno como el riego a mano para pasar tiempo de calidad con tus plantas. Desafortunadamente, no siempre tenemos el tiempo para hacerlo y es cuando entra la necesidad de los sistemas de riego, los cuales vienen en muchas formas. No importa cómo decidas regar, asegúrate de regar lenta y profundamente.

El riego eficiente comienza en la tierra y se vuelve hasta tu controlador. El riego eficiente es un componente clave de tu plan SmartScape. Cuanta más atención des a la irrigación ahora, más saludable y más feliz será tu SmartScape. Mientras planificas tu SmartScape en papel, asegúrate de planificar donde necesitarás la irrigación y dónde instalar un rotador, goteo, micro aspersor o una combinación de estos emisores.

A. Hydrozonar (sembrar juntas las plantas con requerimientos de agua similares para tratar de regar más eficientemente)

1. Siembra juntas las plantas con necesidades de agua similares. Puedes hacer esto plantándolas por zona o por válvula y estar consciente de las necesidades de agua de estas plantas.
2. Asegúrate de investigar bien las necesidades particulares de cada planta antes de agruparlas.
3. Pon atención especial a las necesidades específicas de agua, listadas en las etiquetas de las plantas que compres. Esto será útil también cuando programes los controladores de riego.

B. Instalación

1. Colabora con tu contratista para asegurar que tienes bastantes válvulas que controlen las zonas específicas de tu jardín.
2. Se recomienda usar tubería de policloruro de vinilo (PVC por sus siglas en inglés) #40. Esta información está impresa en la tubería y se refiere al grosor de las paredes de la tubería.
3. Asegúrate de escarbar zanjas de por lo menos 12 pulgadas de profundidad para la tubería.

IRRIGATION

Water is a precious and expensive resource in Southern California. This is probably why you have made the smart decision to convert your landscape to a SmartScape!

An efficient irrigation system is the life support system for your SmartScape. That said, nothing is as good as watering by hand and spending quality time with your plants. Unfortunately we don't always have the time, so irrigation systems are necessary and come in many forms. No matter how you decide to water, make sure to water deeply and slowly.

Efficient irrigation starts in the ground and works up to your controller. Efficient irrigation is a key component of your SmartScape plan. The more attention you give to irrigation now, the healthier and happier your SmartScape will be. While planning a SmartScape on paper, be sure to plan where you will need irrigation and where to install a rotator, drip, micro spray, or combination of these emitters.

A. Hydrozoning (clustering together plants with similar water requirements in an effort to irrigate more efficiently)

1. Group plants with similar water needs together. You can do this by grouping them in zones or by valve and being aware of their water needs.
2. Be sure to research the unique needs of each plant before you group them together.
3. Pay attention to specific water needs on the labels of the plants you purchase. This is also useful when programming the irrigation controller.

B. Installation

1. Work with your contractor to make sure you have plenty of valves, which control specific zones of your garden.
2. It is recommended to use schedule 40 pvc pipe. This information is printed on the pipe and refers to the thickness of the pipe walls.
3. Make sure to dig the trench for the pipe to at least 12 inches deep.

C. Escoge tus emisores

 <p>RIEGO DE GOTEO Esta es tubería instalada a no más de 2" de la superficie de la tierra y espaciada entre 12 y 18 pulgadas El emisor tiene una distribución pareja graduada de 1 o menos galones por hora por emisor</p>	 <p>MICRO ASPERSOR Emite un fino rocío entre 6 a 8 pulgadas por encima del suelo El consumo de agua varía entre 1 y 20 galones por hora dependiendo en el volumen de flujo y el patrón de dispersión que tú escojas</p>	 <p>ROTADORES POP-UP (DE SALTO) Emite gotas de agua en un patrón más directo El consumo de agua varía entre 9 y 52 galones por hora dependiendo en el volumen de flujo y el patrón de dispersión que tú escojas</p>
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Los tres más eficientes emisores de riego

D. Controlador

1. Elige uno que sea más fácil de operar — no conviertas esto en ciencia de cohetes espaciales.
2. Los sensores en la tierra que miden la humedad funcionan bien por un tiempo pero tienden a averiarse. Estos se pueden comprar en las ferreterías y algunas ciudades ofrecen reembolsos por ellos.
3. Usa tu dedo para verificar físicamente la humedad de la tierra o compra un medidor de humedad en tu tienda local de jardinería. Asegúrate de revisar la raíz y la tierra alrededor. Si encuentras tierra demasiado seca o demasiado húmeda, debes hacer ajustes a tu sistema de riego. Esto podría implicar ajustar el tiempo que el controlador opera en esa zona o cambiar físicamente el emisor.
4. Asegúrate de reprogramar las estaciones durante cada temporada y tomar en cuenta la edad de tu SmartScape.
 - a) Es muy importante recordar de no regar plantas tales como el Flannel Bush (*Fremontodendron*), California Lilac (*Ceanothus*), y el Coffeeberry (*Fragula californica*) demasiado durante el verano, ya que se vuelven muy susceptibles a la pudrición de la raíz y la corona. Un riego profundo mensualmente es bastante.
 - b) Los SmartScapes nuevos toman entre 3-5 años para establecerse completamente.
 - c) Riega más seguido durante este período de establecimiento y durante el invierno compensa la falta de agua debido a la sequía.
5. No riegues durante el día. Las temperaturas cálidas pueden facilitar las enfermedades y los patógenos. Programa tu controlador para regar temprano, durante la mañana o durante el atardecer, cuando la temperatura es más fresca.
 - a) Riega cuando está fresco para que las plantas tengan tiempo de absorber el agua por sus raíces y que el agua tenga tiempo de penetrar hasta las raíces profundas.
 - b) Trata de regar cuando estés en casa o despierto para que puedas escuchar y detectar fugas rápidamente cuando estas ocurran.
6. Asegúrate de apagar tu sistema durante los períodos de lluvia, o cambia la modalidad de tu controlador de riego a una de retraso por lluvia.

E. Detección de Fugas

1. Si encuentras un área húmeda después de una semana sin lluvia, probablemente tienes una fuga.
2. Camina alrededor mientras está prendido tu sistema de riego; observa y escucha para detectar las fugas.
 - a) Mira a tu alrededor para detectar áreas húmedas y lugares erosionados en el mantillo o la tierra (a causa de tubería rota o un hoyo en la tubería de goteo).
 - b) Escucha para detectar agua escapando a alta presión (esto ocurre seguido cuando una herramienta de jardín hace un hoyo en una tubería de goteo).
 - c) Busca áreas húmedas grandes que parecen nunca secarse (podría ser señal de una fuga subterránea).
3. Puede ser que tengas que escarbar un poco para encontrar la fuga.
4. Si detectas cualquiera de las situaciones anteriores, apaga tu controlador de riego.

C. Choose your emitters

The infographic consists of three blue rounded rectangular panels, each containing a circular image of an emitter type and descriptive text. A large grey double-headed arrow at the bottom spans all three panels, with the text 'Top three water efficient emitters' centered on it.

- DRIP IRRIGATION**
Tubing installed in the top 2” of soil spaced from 12” to 18” inches apart
Emitter has an even distribution measured by 1 or less gallons per hour per emitter
- MICRO SPRAY**
Sprays a fine spray 6”-8” above ground
Water consumption varies between 1-20 gallons per hour depending on flow rate and the pattern you choose
- POP UP ROTATORS**
Shoot beads of water in more direct pattern than spray
Water consumption varies between 9-52 gallons per hour depending on flow rate and the pattern you choose

Top three water efficient emitters

D. Controller

1. Select one that is easy to operate — don't make this rocket science.
2. Ground sensors that measure soil moisture work for a while but they tend to wear out. They can be purchased at hardware stores and some cities offer rebates for them.
3. Use your finger to physically check the soil for moisture or purchase a moisture meter at your local garden supply. Be sure to check the root ball and surrounding soils. If you find extremely wet or dry soil, you need to make some adjustments to your irrigation system. This could entail adjusting how long your controller runs that zone or physically changing an emitter.
4. Make sure you reprogram the stations for each season and take into account the age of your SmartScape.
 - a) It is very important to remember not to water plants such as Flannel Bush (*Fremontodendron*), California Lilac (*Ceanothus*), and Coffeeberry (*Frangula californica*) very much in the summer, as they become susceptible to root rot and crown rot. Once a month, deep watering should be adequate.
 - b) New SmartScapes take 3-5 years to become fully established.
 - c) Water more during the establishment period, and in the winter to make up for lack of rainfall due to drought.

5. Do not water during the day. The warm temperatures can facilitate diseases and pathogens. Program your controller to water in the early morning or late evening when it is cooler.
 - a) Water when it's cool so that plants have time to absorb water through their roots and so the water has time to soak down to the deep roots.
 - b) Try to water at a time you are home or awake so you can listen and detect leaks quickly when they occur.
6. Be sure to turn off your system during rain periods, or switch to rain delay mode on your irrigation controller.

E. Leak Detection

1. If an area is still wet after a week of no rain, chances are you have a leak.
2. Walk around and check while your irrigation is running; look and listen for leaks.
 - a) Look for wet areas and erosion in mulch and soil (caused by a broken pipe or a puncture in a drip tube).
 - b) Listen for water spraying at high pressure (this often happens when a garden tool pokes a hole in a drip pipe).
 - c) Look for large damp areas that don't seem to ever dry (could be a sign of an underground leak).
3. You may have to do some digging to find the leak.
4. If you find you have any of the above situations turn off your irrigation controller.

CÓMO PLANTAR TU SMARTSCAPE

¡La siembra es la parte física más difícil pero también la más divertida! Planta en el otoño, cuando las temperaturas se hayan enfriado y las plantas jóvenes puedan aprovechar las lluvias de invierno para conseguir que sus raíces se establezcan. Escarba igual de hondo que la tierra en las macetas y lo doble de ancho. Siembra un poco alta; conforme la planta se asienta a través del tiempo, no quieres que se asiente demasiado bajo. Algunas plantas se asientan hasta una pulgada.

Cuando escarbes tus hoyos para plantar deberás dejar dos o tres pulgadas extra de profundidad para la aplicación del mantillo. Escarba el hoyo tan profundo como la raíz menos el grosor del mantillo. La anchura del hoyo para plantar debe ser el doble de ancho de la raíz. Si siembras la planta muy hondo, desarrollará pudrición de la corona a causa del agua que se acumule alrededor de la planta.



1. Escoge un área con bastante espacio.
2. Escarba el hoyo lo doble de ancho de la planta que vas a sembrar.
3. Cuidadosamente retira el contenedor de la planta no la planta del contenedor. Aprieta los lados del contenedor (completamente alrededor) para separar la raíz del contenedor; pon el contenedor de lado; agarra la planta desde la base del tronco; entonces jala suavemente y retira el contenedor de la planta.
4. Llena el espacio que queda alrededor de la raíz con tierra enmendada. Comprime la tierra ligeramente a mano para sacar las bolsas de aire. Asegúrate de no compactar la tierra. La tierra puede ser enmendada según la recomendación del informe de tierra. La tierra enmendada debe ser una mezcla de 85% de tierra nativa y no más del 15% de enmiendas orgánicas. Se puede comprar humus de lombriz en cualquier vivero y debe agregarse a esta mezcla. Son un gran acondicionador para la tierra, agregan micronutrientes y ayudan a impulsar la biología de la tierra (Tierra Viviente). El yeso es otra enmienda que suaviza lentamente la tierra dura y barrosa y ayuda a crear un mejor drenaje en la tierra.
5. Limpia y aplana la tierra alrededor de las plantas antes de agregar mantillo. Asegúrate que la raíz está completamente cubierta y no está sembrado demasiado hondo.

PLANTING YOUR SMARTSCAPE

Planting is the hardest physical part but also the most fun! Plant in the fall when temperatures have cooled down and young plants can take advantage of winter rains to get their roots established. Dig as deep as the soil in the pots and double the width. Plant a little high; as the plant settles in over time you don't want it to sink too low. Some plants can sink up to 1 inch.

When digging your planting holes, you will need to allow an extra two to three inches for the application of mulch. Make the planting hole as deep as the root ball minus the depth of your mulch. The width of your planting hole needs to be twice as wide as the rootball. If you plant too low the plant will develop crown rot due to drainage collecting around the base of the plant.



1. Pick an area with enough space.
2. Dig a hole twice as wide as the plant to be planted.
3. Carefully remove the container from the plant, not the plant from the container. Squeeze the sides of the container (completely around) to separate the rootball from the container; turn the container on its side; grab the base of the plant at the stem; then gently pull the container away from the plant.
4. Fill the remaining space around the rootball with amended soil. Compress the soil lightly by hand to squeeze out air pockets. Be sure not to compact the soil. The soils can be amended per the soil report's recommendation. The amended soil should be a mix of 85% native soil and no more than 15% organic soil amendment. Worm castings can be bought at any nursery or landscape center and should be added to this mix. They're a great soil conditioner, providing micronutrients, and help to kick-start the soil biology (Living Soil). Gypsum is another amendment that slowly softens hard clay soil over time and will help to create better soil drainage.
5. Clean and smooth out the soil around the plants before you mulch. Make sure the roots are covered and not buried too low.



MANTILLO / ABONO

Aplicar mantillo es la fase final de un SmartScape. Es una señal segura de que ya casi terminas y que pronto disfrutarás de los frutos de tu trabajo. Hay dos tipos de mantillo. El primero es mantillo orgánico compostado de desechos de jardín. El segundo es mantillo de grava o rocas. El mantillo de rocas es mucho menos deseable pero debe usarse en áreas de vientos fuertes. No uses mantillo de virutas teñidas de madera, hule o plástico ya que estos contienen muchos químicos (cobre y arsénico) para reducir su descomposición. No importa qué tipo de mantillo uses, debes completar los mismos pasos antes de esparcirlo sobre tu SmartScape.



A. Limpieza Final de la capa de tierra fértil.

1. El primer paso es rebajar el nivel de la tierra de 2 a 3 pulgadas, todo alrededor de las banquetas y espacios del patio para que el mantillo no se sople con el viento o deslave con el riego o la lluvia hacia tus banquetas o tu patio.
2. Puedes remover tierra para obtener el desnivel correcto o para rebajar lomas; también puedes agregar tierra a las partes bajas que puedas encontrar.
3. Usa un rastrillo fino para hojas para remover los terrones grandes que no puedas desbaratar.
4. Asegúrate que tus tuberías de goteo estén completamente cubiertas, o si no las vas a cubrir, por lo menos que estén afianzadas al suelo.
5. Prueba tu sistema de riego para asegurar que no hay fugas que necesiten reparación.
 - a) Asegúrate que todas tus plantas están recibiendo la cantidad correcta de agua.

B. Selecciona tu mantillo.

1. Orgánico
 - a) Medio molido – este tipo es recomendado si quieres crear una tierra viviente saludable.
 - b) Molido Grueso – este es más como virutas de madera pero también es bueno para la tierra viviente.
 - c) El mantillo teñido es de larga duración pero muy caro y puede tener preservativos y tintes con base de arsénico. Cuando quieras saber por qué algunas de tus plantas se están muriendo, tal vez sea a causa de un mantillo caro pero tóxico – ¡no desperdices tu buen dinero! El mantillo bueno es barato, alrededor de \$40 por yarda cúbica que es bastante para llenar la caja de tu pickup.
2. Inorgánico
 - a) Roca / Grava ó mantillo de grava de “hasta 1” de tamaño. Puedes usar rocas más grandes de hasta 4 a 6 pulgadas para agregar textura. Puedes comprarlas lisas o desquebrajadas y las hay en una variedad de colores.

MULCHING



Mulching is the final step in a SmartScape. It is a tell-tale sign that you are almost done, and will soon enjoy the fruits of your labor. There are two types of mulch. The first is organic composted greenwaste mulch. The second is gravel or rock mulch. Rock mulch is much less desirable but should be used in areas with high winds. Don't use dyed wood chips, rubber, or plastic mulches. Dyed wood chips tend to have lots of chemicals (copper and arsenic) to reduce decomposition. No matter what kind of mulch you use, you have to complete the same steps before spreading across your SmartScape.

A. Final cleaning of top soil.

1. The first step is to go around the edge along all sidewalks and patio spaces and dig soil level down 2-3 inches so the mulch doesn't blow or wash out onto your sidewalk or patio.
2. You can remove dirt to get the proper slope, add any extra dirt to one of the mounds or any low spots that you can see.
3. Use a fine leaf rake and move away any big clumps of dirt that you can't break up.
4. Make sure your drip lines are completely covered, or if you're not going to bury them at least make sure they are pinned flat to the ground.
5. Test your irrigation to ensure you don't have any leaks that need repair.
 - a) Make sure all plants are getting the correct amount of water.

B. Choose your mulch.

1. Organic
 - a) Medium grind- this is recommended if you want to create a healthy living soil.
 - b) Rough grind – this is more of a wood chip, also good for living soil.
 - c) Colored long lasting mulch is very expensive and may use preservatives and dyes that are arsenic based. When you're trying to figure out why some of your plants are dying, it might be from overpriced toxic mulch – don't waste your money!. Good mulch is cheap, around \$40 for a cubic yard which is enough to fill a pickup truck bed.
2. Inorganic
 - a) Rock/Gravel ½” up to 1” size rock for gravel mulch. You can also use larger rocks up to 4-6 inch rock to add texture. You can purchase them in either smooth or chip and they come in array of colors.



C. Comienza a esparcir tu mantillo preferido alrededor de tus plantas asegurando que:

1. NO CUBRAS ninguna corona de raíces y dejes un círculo grande alrededor de tus plantas.
2. Esparce una capa de 2" a 3" alrededor de todas las plantas y sobre cualquier área de tierra descubierta en tu propiedad.
3. Reemplaza el mantillo tan seguido como sea necesario para mantener esa capa de 2 a 3 pulgadas. El color se desvanecerá rápidamente; si revuelves el mantillo de vez en cuando, agrega un poco de mantillo fresco para no permitir que las hierbas logren establecerse.
4. Rocía el mantillo y toda la vegetación cuando termines.



C. Start spreading your chosen mulch around your plants making sure that you:

1. DO NOT COVER any root crowns with mulch and leave a large ring around your plants.
2. Spread a 2"-3" layer around all the plants and on any exposed dirt around your property.
3. Replace mulch as often as needed to maintain that 2-3 inch layer. The color will fade quickly, if you turn the mulch once in awhile and add a little fresh mulch it won't allow weeds a chance get a foot hold.
4. Hose down mulch and all vegetation when finished.

HIERBAS

¿Qué es una hierba?

Es solo “una planta equivocada en el lugar equivocado”.

Una hierba es una planta creciendo en una ubicación no deseable. Algunas plantas pueden considerarse ser invasivas y dominan tu paisaje, compiten por los nutrientes de la tierra con las plantas que tú compraste. Estas son las que tienes que remover. Algunas veces nos sonrío la suerte y alguna ave o algún viento nos trae una semilla de una planta increíble que jamás hubiéramos pensado plantar donde cayó. Tal vez esto te inspire a cambiar algún área de tu paisaje. Por esta razón decimos que los “SmartScapes nunca se terminan” – solamente siguen evolucionando.

A. Identifica las hierbas

1. Una manera sencilla es de revisar minuciosamente la forma de la hoja, el color y la textura. Mira si coincide con alguna planta existente en tu SmartScape.
2. Estudia la lista de especies invasivas en la siguiente página.
3. Una vez que sepas que es, hazte esta pregunta: “¿Quiero esto en mi jardín, donde está, o no la quiero en absoluto?”

B. Toma acción

1. Si quieres mantener esta planta donde está, limpia todo lo que le inhiba el desarrollo y asegúrate que tu sistema de riego la cubre. ¡Entonces, mírala crecer!
2. Si decides que estaría mejor en otra parte de tu SmartScape entonces sácala, escarbando la tierra entre 8 a 12 pulgadas alrededor de la planta, o lo ancho que sea necesario para no molestar las raíces. Entonces sigue los pasos para sembrar que se encuentran en este manual.
3. Si identificas que la planta es demasiado invasiva, cuidadosamente sácala manualmente.
4. Algunas plantas son esparcidas por semilla y generalmente se identifican mirando si hay una gran masa de semilla, tal como la hierba de pampa. Debes cubrir cuidadosamente la vaina de la semilla y cortarla para evitar esparcir las semillas por todo tu SmartScape. Sella la bolsa bien y ponla en tu contenedor de basura, no en el contenedor de desechos de jardín.
5. Si encuentras que la planta se esparce por medio de rizomas o corredoras es posible que quieras considerar el uso de herbicidas. Esta condición se encuentra en plantas tales como la Rosa Silvestre de California (California Wild Rose). Rocía las hojas de la planta con un herbicida mezclado de acuerdo con las instrucciones del envase. Deja que el químico haga su trabajo por tres días y entonces regresa y saca lo que quede de la planta para asegurar que no regresará. Esta es la única situación en que debes usar un herbicida.
6. Mantente alerta en caso de que nazcan más de estas plantas y repite estos pasos según sea necesario.

C. Mantillo

1. Mantén siempre una capa de mantillo a un grosor saludable de 2 a 3 pulgadas para suprimir el desarrollo de hierbas nuevas. Esto también facilita sacar las hierbas existentes porque aun no han desarrollado sus raíces en la tierra.
2. El mantillo no garantiza que no crecerán hierbas pero si detiene la mayor parte de las semillas en la tierra debajo del mantillo. Además, aísla la tierra, lo que ayuda a retener la humedad.
3. ¡¡ASEGÚRATE DE NO CUBRIR LA CORONA DE LA RAÍZ DE TUS PLANTAS CON EL MANTILLO!!



What is a weed? It's just “the wrong plant in the wrong place”.

A weed is a plant growing in an undesirable location. Some plants may be considered to be invasive and take over your landscape, competing with the plants you purchased for the nutrients in your soil. These are the ones you want to remove. Sometimes we get lucky and a bird or the wind will drop a seed of an awesome plant we would have never thought to put there. Perhaps it will inspire you to change an area of your landscape. This is why we say “SmartScapes are never Done”– they just keep evolving.

A. Identify weeds

1. A simple way to check is to look closely at the leaf shape, color, and texture. Try to match it to an existing plant in your SmartScape.
2. Check the invasive species list on the next page.
3. Once you know what it is, ask yourself: “Do I want this in my garden where it is, somewhere else, or not at all”.

B. Take action

1. If you want to keep this plant where it is, clear away anything that will inhibit growth and make sure your irrigation covers it. Then watch it grow!
2. If you decide that it would be a good fit elsewhere in your SmartScape then dig up the soil 8”-12” inches around the plant or as large as necessary so that you don't disturb the root mass. Then follow the steps in the planting section of this manual.
3. If you identify the plant to be invasive, carefully remove it by hand.
4. Some plants spread by seed and are usually identifiable by looking to see if there is a large seed mass, such as on pampas grass. You will need to carefully put a trash bag over it and cut off the seed pod into the bag. This will reduce the chances of spreading the seed even further throughout your SmartScape. Seal the bag and place it in the trash not in the greenwaste.
5. If you find the plant spreads by rhizome or runners you may want to consider the use of herbicide. This is found in plants like California Wild Rose. Spray foliage of plant with herbicide mixed in accordance with directions on the bottle. Let the chemical do its job for three days then go back and remove all the remains of the plant to ensure it does not return. This is the only time you should ever use an herbicide.
6. Keep a close look out for any more of these plants in the future and repeat as necessary.

C. Mulch

1. Always maintain a healthy 2-3 inches of mulch to suppress new weeds. Also, it makes established weeds a lot easier to remove because they have not yet grown their roots into your soil.
2. Mulch does not guarantee that weeds won't grow but it stops most of the seedbank in the soils underneath. It also insulates the ground, helping to retain moisture.
3. **MAKE SURE YOU DO NOT COVER THE ROOT CROWN OF YOUR PLANTS WITH MULCH!!**



LAS ESPECIES INVASIVAS MÁS COMUNES DE SMARTSCAPE

Green Fountain Grass
Pennisetum setaceum



Pampas Grass
Cortaderia selloana



Yellow Flag Iris
Iris pseudacorus



Ice Plant
Carpobrotus edulis



Periwinkle
Vinca major



Mexican Feather Grass
Nassella



Water Hyacinth
Eichhornia crassipes



Black Mustard
Brassica nigra

MOST COMMON SMARTSCAPE INVASIVE SPECIES

Green Fountain Grass
Pennisetum setaceum



Periwinkle
Vinca major

Pampas Grass
Cortaderia selloana



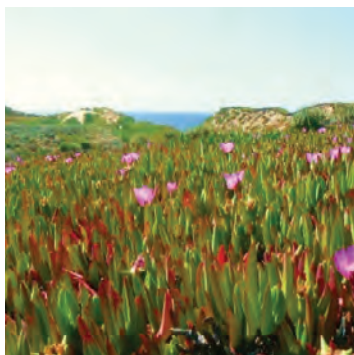
Mexican Feather Grass
Nassella

Yellow Flag Iris
Iris pseudacorus



Water Hyacinth
Eichhornia crassipes

Ice Plant
Carpobrotus edulis



Black Mustard
Brassica nigra

PLAGAS

¿Qué es una plaga (o alimaña)?

Una plaga es un animal o insecto que es una molestia para los seres humanos. ¡Y para tus SmartScapes también! Los conejos y las ardillas son muy bonitas, pequeñas criaturas lanosas de la naturaleza, pero puede que te sientas un poco diferente si después de pasar todo el día plantando, regresas para descubrir que los bichos han convertido tu nuevo jardín en una barra de ensaladas. No te desanimes, ya que hay numerosas formas para manejar las plagas. La naturaleza tiene curación para todo, si se necesita curar. Solo tenemos que encontrar esa curación.



Las Aves, Abejas y Mariposas todas se llevan bien en el ojo de agua, quizás tú también puedas. Se toma un poco más de trabajo pero si no le agregas cloro a tu agua, entonces los locales pueden tomar un sorbo o darse un baño durante el calor. Solo tendrás que darle una restregada de vez en cuando.

A. Cómo hacer frente las plagas lanudas

1. Si tu plaga es del tipo lanudo, puedes intentar sembrar plantas que no les gusta comer, tales como chiles, ajo ornamental, lantana y varias otras. Compra un repelente orgánico que contenga harina de sangre o pimienta de cayena, polvo de ajo o cebolla. Ten cuidado donde aplicas estos, si tienes niños o mascotas.
2. También puedes atrapar y reubicar (revisa las leyes locales).

B. Cómo hacer frente a los insectos

1. Todos los insectos tienen su lugar en la naturaleza, algunos son buenos, algunos son malos. Es probable que, si haces un poco de investigación, encontrarás que la naturaleza tiene un balance para casi todo. Por ejemplo, si tienes una infestación de áfidos, puedes comprar una caja de mariquitas en tu vivero local o algún granero, y las sueltas cercas de la planta infestada. Después de unos días, tu problema con los áfidos se habrá terminado y tendrás muchas mariquitas interesantes para observar (sólo haz esto al aire libre).
2. Trata de abstenerse de usar pesticidas ya que estos matan a los insectos buenos que se encuentran en tu tierra y tu SmartScape.
3. ¡Siempre busca una solución orgánica para tu problema antes de una solución química!
4. Los caracoles son malos – cierra los ojos y aplástalos contra el suelo.
5. Una población sana de lagartijas ayuda a mantener la población de insectos bajo control. Para fomentar su presencia, proporcionales algunas buenas rocas para que tomen el sol o un falso riachuelo en tu SmartScape.



What is a pest?

A pest is an animal or insect that is a nuisance to humans, and to SmartScapes too! Rabbits and squirrels are cute, fuzzy little creatures of nature, but after you spend all day planting and come back to discover critters have turned your new landscape into a salad bar, you may feel a little different. Don't be discouraged as there are a number of humane ways to handle pests. Nature has a cure for everything if it needs to be cured. We just need to find it.

A. Dealing with Furry Pests

1. If your pest is of the furry kind you can try growing plants they don't like to eat, such as peppers, landscape garlic, lantana, and several others. Buy an organic repellent that contains blood meal or cayenne pepper, garlic or onion powder. Be cautious where you use this if you have children or pets.
2. You can trap and relocate (check local laws).

B. Dealing with insects

1. All insects have a place in nature, some good, some bad. Chances are, if you do a little research, you will find out that nature has a balance to most everything. For instance, if you have an Aphid infestation you can buy a box of lady bugs at your local farm supply or nursery and release them near the infested plants. After a few days, your aphid problem will be cleared up and you'll have some interesting lady bugs to watch (only do this outdoors).
2. Try to refrain from using pesticides as they kill the good insects that are in your soil and your SmartScape.
3. Always look for an organic solution before chemical!
4. Snails are bad – close your eyes and crunch them into the soil.
5. A healthy lizard population helps to keep the insect population under control. To encourage their presence, provide them some good sunning rocks or a faux creek bed.

The Birds, Bees, and Butterflies all get along at the water hole, and hopefully you can too. It takes a little more work but if you don't put chlorine in your water feature, the locals can get a sip or a bath in the heat. You'll just have to give it a little scrub once in awhile.



GESTIÓN DE SU SMARTSCAPE

Estos paisajes de vanguardia requieren un estilo de mantenimiento que llamamos gestión. No hay necesidad de tocar cada planta con alguna herramienta cada mes. En vez de podar, recortar, o mantener el borde tal vez solo tengas que sacar un par de hierbas o agregar un poco de mantillo.

A. Observaciones Diarias

1. Siempre revisa las acumulaciones de hojas y tierra alrededor de las coronas de raíces de las plantas y árboles. Asegúrate de mantenerlas limpias siempre que sea necesario para que la corona de raíz pueda respirar. La sofocación y el sobre riego son las mayores causas de la pudrición de raíces y coronas.
2. Busca señas de erosión o áreas lodosas alrededor de tu paisaje. Estas podrían ser señas de una fuga del sistema de riego de goteo o evidencia de una fuga mayor de algún tubo subterráneo roto. Revisa la sección de riego de este manual.
3. Busca señas de plaga o enfermedad.
4. Busca y saca las hierbas pequeñas en cuanto las encuentres.
5. Disfruta tu paisaje SmartScape.

B. Controla la Vegetación

1. Podar / Recortar
 - a) Elimina no más del 10% al 25% de follaje vivo a la vez.
 - b) Poda los árboles jóvenes sólo para darles buena forma.
2. Buenas Técnicas de poda
 - a) Asegúrate que es la temporada correcta para podar la planta o el árbol, con la excepción de poda correctiva.
 - b) Siempre utiliza la herramienta correcta.
 - c) Afila y esteriliza tu equipo con una solución de agua con cloro.
 - d) Todos los cortes deben hacerse limpios sin orillas dispares o roturas.
 - e) Recorta las ramas grandes hasta el cuello del tronco sin dejar cabos.
 - f) Recorta los brotes más pequeños lo más cerca que puedas a la rama o al tronco.
 - g) Nunca cortes la parte superior de un árbol, ya que estos árboles se vuelven muy peligrosos debido al desarrollo vigoroso de brazos pobremente sujetos.
 - h) La poda o recorte malo o incorrecto puede causar más problemas que simplemente dejándolo solo.



MANAGING YOUR SMARTSCAPE

These cutting edge landscapes require a different style maintenance that we call managing. There is no need to touch every plant with a tool every month. Instead of trimming, mowing, and edging you might pull a couple weeds and add some mulch.

A. Daily Observations

1. Always check for a buildup of dirt and leaves around the crowns of all plants and trees. Be sure to clear this as often as needed so that the root crown can breathe. Suffocation and over watering are the leading causes of root and crown rot.
2. Look for signs of water erosion or muddy areas all around your landscape. These could be a sign of a leak from a drip irrigation system or evidence of a larger underground pipe break. Refer back to the Irrigation section of this manual.
3. Look for signs of pests and disease.
4. Look for and pull small weeds as soon as you see them.
5. Enjoy your SmartScape.

B. Managing Vegetation

1. Pruning/Trimming
 - a) Remove no more than 10% to 25% of live foliage at one time.
 - b) Only prune young trees for good structure.
2. Good Pruning Techniques
 - a) Make sure it's the right season to prune the plant or tree, except for corrective pruning.
 - b) Always use the right tool.
 - c) Sharpen and sterilize equipment with a water/chlorine solution.
 - d) All cuts should be made cleanly with no tears or rough edges.
 - e) Cut larger branches back at the collar on the trunk, do not leave stubs.
 - f) Cut as close to the branch or trunk as possible on smaller stems.
 - g) Never "top" a tree, topped trees become more dangerous, causing the growth of poorly attached, vigorously growing limbs.
 - h) Poor/incorrect pruning can cause more problems than simply leaving it alone.



TIPOS DE PODAS

Flores Secas (Dead-heading)

Esta técnica se usa para prolongar la temporada de floración o para mejorar la apariencia de la planta. Se deben cumplir dos condiciones para fomentar más floración 1) la planta debe ser podada de las flores secas antes de que se produzcan las semillas 2) la planta debe ser capaz de producir más flores. La mayoría de los árboles y arbustos no pueden producir flores adicionales sin antes pasar por una temporada de latencia o reposo.

Orillar (recortar las orillas)

Recorta las ramas más largas que sobrepasen la orilla de la acera o pasarela hacia la parte principal de la planta. Usa esta técnica para las plantas algo leñosas. NO recortes todas las ramas hasta el mismo punto. Esto le dará una apariencia natural a tu jardín en lugar de una apariencia formal.

Ralear (Poda Selectiva)

Este es el proceso de eliminar ramas y brazos completos para darle más luz y espacio para crecimiento al resto de la planta o para acentuar el hábito de desarrollo de la planta. Casi todas las plantas pueden ser raleadas efectivamente.

Pellizcar (Puntear)

Esta técnica se usa en las plantas perenes jóvenes. Pellizca el desarrollo nuevo y elimina la parte principal para fomentar el crecimiento, algo que le dará a la planta una apariencia llena y densa; NO elimines los brotes minúsculos de flores y tallos en el proceso.

Desmochar

Esta técnica puede ser "ligera" al podar solo las puntas de cada vástago, o "severa" al podar los vástagos mucho más atrás (casi hasta la base de la planta). La mayoría de arbustos nativos pueden ser desmochados ligeramente, y algunos pocos pueden ser desmochados severamente. Ten en cuenta la forma y hábito de crecimiento de la planta ya que un desarrollo nuevo de vástagos y ramas puede surgir por debajo de donde la planta fue desmochada.

Podar

Podar todos los brotes hasta el mismo punto cada año normalmente se hace para árboles caducifolios. Los California Sycamore y Velvet Ash son los únicos árboles nativos que pueden beneficiar de esta técnica de poda.

Esquilar

La poda de una planta para darle una apariencia formal como un seto.

Poda Correctiva

La poda que se ocupa de los problemas estructurales de arbustos y árboles más grandes. Esto se realiza tan pronto como se detecta el problema (estos problemas incluyen ramas cruzadas o que rozan, demasiadas guías, brotes y retoños). Los árboles estresados a menudo producen ramitas y retoños cortos por todo el tronco así es que debes removerlos inmediatamente y determinar y eliminar la causa del estrés.

TYPES OF PRUNING

Dead-heading

Used to create a longer season of bloom or to improve the plant's appearance. Two conditions must be met to create further bloom 1) the plant must be dead-headed before seeds have been produced 2) the plant must be capable of producing more flowers. Most trees and shrubs can't produce additional flowers without going through a dormant or resting season.

Edging

Thin back the longest stems beyond the edge of the path and into the main body of the plant. Use this technique for slightly woody plants. DO NOT cut all the branches back at the same point. This will give the ground cover's edge a natural appearance rather than a clipped formal look.

Thinning (Selective Pruning)

The process of removing entire stems and branches to give more light and room for remaining plant growth, or to accentuate the plant's growth habit. Nearly all plants may be effectively thinned.

Pinching (Tipping)

Used on young plants and perennials. Pinch young growth removing main stem to encourage growth, which will give the plant a full and dense appearance; DO NOT remove tiny flower buds and stems in the process.

Heading Back

Can be "light" by pruning the tips of each stem or "hard" by pruning the stems back much further (even to near the base of the plant). Most native shrubs can be lightly headed back, and a few headed back hard. Keep in mind the plant's shape and growth habit when heading back because new stem and branch growth will emerge from below where the plant was headed back.

Pollarding

The pruning back of all shoots to the same point every year, typically done to deciduous Trees. California Sycamore and Velvet Ash are the only natives likely to use pollarding.

Shearing

The pruning of a plant into a formal hedge-like shape.

Corrective Pruning

Pruning that takes care of structural problems for larger shrubs and trees. This is done as soon as the problem is observed (problems include crossing or rubbing branches, multiple leaders, and waterspouts). Stressed trees often produce short twigs and branches all along their trunks so you need to remove the shoots when they arise immediately and then determine and eliminate the cause of the stress.

EJEMPLOS DE GAMA DE PLANTAS

NOMBRE DE PLANA (COMÚN)

NOMBRE DE PLANTA (BOTÁNICO)



Blue Oat Grass
 Dwarf Weeping Bottle Brush
 Berkeley Sedge
 California Lilac 'Concha'
 California Lilac 'Yankee Point'
 Palo Verde 'Desert Museum'
 Rockrose
 Orchid Rock Rose
 Crape Myrtle
 Echeverias
 Festuca
 Red Yucca
 Alumroot Plant
 Island Bush Snapdragon
 Torch Lily or Red Hot Poker
 Tas Red Flax Lily
 New Gold Lantana
 Spreading Sunset Lantana
 White Trailing Lantana
 Wild Rye Selection
 Dwarf Mat Rush
 Foothill Penstemon
 Huntington Carpet' Rosemary
 Salvia Aromas
 N/A
 Mexican Bush Sage
 Senecio Serpens
 Verbena

N/A
Callistemon 'Little John'
Carex Tumulicola 'Divulsa'
Ceanothus 'Concha'
Ceanothus 'Yankee Point'
Cercidium x 'Desert Museum'
Cistus Ladanifer
Cistus Purpureus
Lagerstroemia
 N/A
 N/A
Hesperaloe Parviflora
Heuchera
Galvezia Speciosa
Kniphofia Uvaria
La Tasmanica Tasred
 N/A
Lantana Spreading Sunset
Lantana Montevidensis 'White'
Leymus Condensatus 'Canyon Prince'
Lomandra Breeze
Penstemon heterophyllus 'Margarita bop'
Rosmarinus Huntington Carpet
Salvia Clevelandii & Salvia Leucophylla
Salvia Greggii
Salvia Leucantha
Blue Chalk Sticks
Verbena



EXAMPLE PLANT PALETTE

PLANT NAME (COMMON)

PLANT NAME (BOTANICAL)



Blue Oat Grass
 Callistemon 'Little John'
 Carex Tumulicola 'Divulsa'
 Ceanothus 'Concha'
 Ceanothus 'Yankee Point'
 Cercidium x 'Desert Museum'
 Cistus Ladanifer
 Cistus Purpureus
 Crape Myrtle
 Echeverias
 Festuca
 Hesperaloe Parviflora
 Heuchera
 Island Bush Snapdragon
 Kniphofia Uvaria
 La Tasmanica Tasred
 Lantana New Gold
 Lantana Spreading Sunset
 Lantana Montevidensis 'White'
 Leymus Condensatus 'Canyon Prince'
 Lomandra Breeze
 Penstemon heterophyllus 'Margarita bop'
 Rosmarinus Huntington Carpet
 Salvia Clevelandii & Salvia Leucophylla
 Salvia Greggii
 Salvia Leucantha
 Senecio Serpens
 Verbena

N/A
 Dwarf Weeping Bottle Brush
 Berkeley Sedge
 California Lilac 'Concha'
 California Lilac 'Yankee Point'
 Palo Verde 'Desert Museum'
 Rockrose
 Orchid Rock Rose
 Lagerstroemia
 N/A
 N/A
 Red Yucca
 Alumroot Plant
 Galvezia Speciosa
 Torch Lily or Red Hot Poker
 Tas Red Flax Lily
 N/A
 Spreading Sunset Lantana
 White Trailing Lantana
 Wild Rye Selection
 Dwarf Mat Rush
 Foothill Penstemon
 Huntington Carpet' Rosemary
 Saliva Aromas
 N/A
 Mexican Bush Sage
 Blue Chalk Sticks
 N/A



GLOSARIO

Emendar (o acondicionar): El proceso de agregar materia orgánica a tus tierras.

California Friendly® landscape (Paisaje ambiental Californiano): California Friendly® es un término registrado por el Distrito Metropolitano de Agua del Sur de California, que describe un paisaje con mezclas del 40% de vegetación nativa y el 60% de vegetación Mediterránea para crear una plataforma de carga de plantas.

Controlador: Un controlador es un temporizador electrónico que envía una señal de baja tensión a la válvula que hace que esta se encienda y apague en momentos predeterminados.

Emisor: Un emisor es un dispositivo que distribuye uniformemente el agua a las plantas.

Follaje: Las hojas y los brotes de la planta.

Deshecho verde (de jardín): Los recortes de tu SmartScape. Dado que este es el ingrediente principal en el compost debes estar seguro de no mezclar tierra o basura en él.

Herbicida: Los herbicidas vienen en forma líquida y gránulos finos, y se elaboran de químicos tóxicos. Existen diferentes tipos que matan plantas individuales si cubres el follaje. Los herbicidas pre-emergentes matan las plantas conforme emergen (brotan). Nada crecerá durante un año en tierra que ha sido tratada con estos productos químicos tóxicos.

Inorgánico: Productos que son creados de fuentes no vivientes. Estas son cosas como rocas, grava, granito descompuesto y losas.

Paisaje Mediterráneo: Estos paisajes derivan su paleta vegetal de las plantas indígenas de todas las partes del planeta que comparten un clima con la cuenca mediterránea, entre ellos Sudáfrica, el sur y oeste de Australia, partes de Chile y California.

Paisaje Nativo: Un paisaje nativo deriva su plataforma de carga de plantas de la vegetación nativa al área local, indígena a California. Dicho esto, California es muy grande, y las plantas locales del Norte de California seguramente necesitan más agua que las del sur de California.

Pesticida: Los pesticidas son venenos que matan insectos u otras plagas dentro de tu paisaje y alrededor de tu casa. Estos vienen en muchas variedades, más comúnmente en forma líquida o en polvo. Recuerda que estos pesticidas no son selectivos y matarán a los insectos y animales beneficiosos también. El uso de productos químicos es altamente NO recomendado para tu SmartScape a menos que sea el último recurso.

Orgánico: A medida que las plantas crecen, viven y mueren, los nutrientes y minerales de la planta, derivados de la tierra durante el curso de su vida, se devuelven al mismo suelo, para nutrir la próxima planta para crezca en su lugar.

Paisaje Sostenible: Un paisaje sostenible sobrevive desde 20 a más de 50 años con un mantenimiento mínimo. Esto se hace a través de la plantación de vegetación que utiliza muy poca agua y pueden sobrevivir largos periodos sin agua.



GLOSSARY

Amendment: The process of adding organic matter to your soils.

California Friendly landscape: California Friendly is a term trademarked by Metropolitan Water District of Southern California that describes a landscape that mixes 40% native vegetation and 60% mediterranean vegetation to create a plant pallet.

Controller: A controller is the electronic timer that sends a low voltage signal to the valve that makes it turn on and off at predetermined times.

Emitter: An emitter is a device that evenly distributes water to the plants.

Foliage: The leaves and shoots of a plant.

Green waste: The trimmings from your SmartScape. Since this is the main ingredient in compost you want to be sure not to mix dirt or trash into it.

Herbicide: Comes in liquid and fine granules, and are made from toxic chemicals. There are different kinds that kill individual plants if you coat the foliage. Pre-emergent herbicide kills plants as they emerge. Nothing will be able to grow in soil that has been treated with these toxic chemicals for over a year.

Inorganic: Products that are created from nonliving sources. These are things like rocks, gravel, decomposed granite and pavers.

Mediterranean landscape: These landscapes derive their plant pallet from the indigenous plants from all the parts of the plant that share a climate with the mediterranean basin, including South Africa, south and west Australia, parts of Chile, and California.

Native landscape: A native Landscape derives its pallet from plants native to the local area, indigenous to California. That said, California is pretty big, and plants local to Northern California likely need more water than those from Southern California.

Pesticide: Poison that kills insects or other pests in your landscape and around your house. It comes in many varieties, most commonly liquid or powder. Remember that these are not selective and will kill your beneficial insects and animals as well. Using chemicals is highly discouraged on your SmartScape unless it is the last resort.

Organic: As plants grow, live, and die the nutrients and minerals the plant derived from the soil through their life is returned to the same soil, sustaining the next plant to grow in its place.

Sustainable landscape: A sustainable landscape survives 20 - 50+ years with minimal input. This is done through planting vegetation that uses very little water and can survive long periods without water.





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FOR Sarrcup

Description	Amount
SARCCUP Billing – January to August 2017	\$14,054.00
RE: Payroll/Benefits	
Garry Brown - 44.0 hrs @ \$120 = \$5,280	
Raymond Heimstra – 82.0 hrs @ 75 = 6,150	
Marianne Hugo - 25.50 hrs @ 60 = 1,530	
Ellen Orange-Brown - 13.0 hrs @ 60 = 780	
Megan Brousseau - 4.0 hrs @ 60 = 240	
Supplies – Software - \$74 (see attached)	
Federal ID# 33-0847892	
Total	\$14,054.00

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Payment is due within 30 days.
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JANUARY TO AUGUST 2017**

		<i>PAYROLL HOURS - SARCCUP PROJECT</i>																	
NAME	Hourly Wage	Jan Hours	Total \$ Amt	Feb Hours	Total \$ Amt	Mar Hours	Total \$ Amt	April Hours	Total \$ Amt	May Hours	Total \$ Amt	June Hours	Total \$ Amt	July Hours	Total \$ Amt	August Hours	Total \$ Amt	TOTAL HRS	Totals Amt Due
Garry Brown	120	27.5	3,300.00		-	3.0	360.00	4.0	480.00	4.75	570.00		-		-	4.75	570.00	44.0	5,280
Raymond Heimstra	75	18.5	1,387.50	10.5	787.50	13.0	975.00	17.0	1,275.00	8.5	637.50	4.25	318.75	5.25	393.75	5.0	375.00	82.0	6,150
Mariann Hugo	60		-	1.0	60.00	1.0	60.00		-	2.0	120.00	8.0	480.00	13.5	810.00		-	25.5	1,530
Ellen Orange-Brown	60	1	60.00		-	1.75	105.00	0.75	45.00	5.0	300.00	4.50	270.00		-		-	13.0	780
Megan Brousseau	60		-		-	4.0	240.00		-		-		-		-		-	4.0	240
TOTALS		47.0	4,747.50	11.5	847.50	18.8	1,500.00	25.8	2,040.00	20.3	1,627.50	16.8	1,068.75	18.8	1,203.75	9.75	945.00	168.5	\$ 13,980



Ellen Brown <ellen@coastkeeper.org>

Your Order #573602 with Creation Engine

Marianne Hugo <marianne@coastkeeper.org>
To: Ellen Brown <ellen@coastkeeper.org>

Thu, Jul 20, 2017 at 3:55 PM

Hi Ellen,

This is what they sent me as a receipt. Will this work?

Hello Marianne,

This is an automatic reply to your order #573602 at Creation Engine.

SketchUp Pro 2017 - surplus software

Your order number is 573602.

ADDRESS

Marianne Hugo
16485 Tropez Lane
Huntington Beach, CA 92649
USA

EMAIL

marianne@coastkeeper.org

ITEM(S) ORDERED

1 unit, SketchUp Pro 2017 Nonprofit 1-year license (download version, for sale to nonprofits only) Mac/Windows \$39.00 each, part #GGD00007

1 unit, SketchUpTrainer.com Tutorials 6-month Access Education \$35.00 each, part #S5D43235

Shipping: \$0.00

TOTAL: \$74.00

(Sales Tax is only applied to physical orders shipping within California)

To check the status of your order, please visit: <http://www.creationengine.com/orderstatus>

Please make sure to check your junk or spam folder for our future emails.

Sincerely,
Creation Engine

Orders Department
Creation Engine, Inc.
425 North Whisman Road, Suite 300, Mountain View, CA 94043
800.431.8713 phone 650.934.3234 fax
orders@creationengine.com

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PA 22 COMMITTEE MEMORANDUM NO. 2017.24

DATE: November 16, 2017
TO: SAWPA Project Agreement 22 Committee
SUBJECT: Emergency Drought Grant Program Schedule and Budget Update
PREPARED BY: Ian Achimore, Senior Watershed Manager

RECOMMENDATION

Receive and file.

DISCUSSION

Per the Project Agreement 22 Committee's request at the October 26, 2017 Committee meeting, the following information provides a high level overview of the scheduled completion dates of each of the Emergency Drought Grant Program's components, and the status of Program's spending in comparison to the overall budget.

Schedule Completion Dates by Component:

Project 1 Conservation Based Reporting Tools and Rate Structure Implementation

- Aerial Mapping: (Completed) July 2017
- Conservation Based Rates: January 2019
- Meter Geocoding & Business Classification: December 2018
- Technology Based Information Tool: June 2018

Project 2: High Visibility Turf Removal and Retrofit

- Turf Removal: December 2018

Note that dates above that are beyond December 2017 assume the Department of Water Resources approves the amendment request provided to them in August 2017.

Status of Program Spending (As of September 2017):

Grant Amount	Required Funding Match	Additional Cost Share	Total Project Costs	Percent Grant Billed
\$ 12,860,110	\$ 7,051,533	\$ 3,593,467	\$ 23,505,110	43%

CRITICAL SUCCESS FACTORS

The following OWOW critical success factors are addressed by this action:

1. Administration of the OWOW process and plan in a highly efficient and cost-effective manner.
2. Data and information needed for decision-making is available to all.

RESOURCE IMPACTS

Funding for the Project Agreement 22 updates will come from the Proposition 84 IRWM Drought Grant shown in the labor categories within the FYE 2018 fiscal year in the Committee's two year budget.

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PA 22 COMMITTEE MEMORANDUM NO. 2017.25

DATE: November 16, 2017
TO: SAWPA Project Agreement 22 Committee
SUBJECT: Proposition 84 Integrated Regional Water Management Drought Grant Amendment Update
PREPARED BY: Ian Achimore, Senior Watershed Manager

RECOMMENDATION

Receive and file this update.

DISCUSSION

After approval of the Proposition 84 Integrated Regional Water Management Drought Grant amendment on August 24 by the PA 22 Committee, SAWPA staff submitted the request to the Department of Water Resources (DWR). At the time of the writing of this memorandum, the DWR has not executed the grant agreement amendment. SAWPA staff met with two grant managers the week prior to submitting the amendment, and they indicated support for the amendment. Staff followed up with DWR staff after the October 26, 2017 PA 22 Committee meeting and they indicated they could provide written approval of the requested schedule extension soon.

BACKGROUND

As approved by the PA 22 Committee, the grant amendment moves funding between Budget Categories and Projects as shown in the table below. It also lengthens the schedule from June 30, 2018 to June 30, 2019. SAWPA staff has subsequently requested the schedule to be extended even further to December 31, 2019, six months beyond the initial request but DWR staff has not indicated their support of that additional request at the time of drafting this memorandum.

Before and After Proposed Amendment			
Budget Category*	Project 1 Current Budget	Project 1 Amended Budget	Delta
A	\$875,000	\$1,194,852	+\$319,853
B	\$0	0	0
C	\$50,000	\$50,000	0
D	\$6,662,610	\$5,190,824	-\$1,471,786
Total	\$7,587,610	\$6,435,676	-\$1,151,934
Budget Category*	Project 2 Current Budget	Project 2 Amended Budget	Delta
A	\$0	\$0	\$0
B	\$0	\$0	\$0
C	\$0	\$0	\$0
D	\$5,272,500	\$6,424,434	+\$1,151,934
Total	\$5,272,500	\$6,424,434	+\$1,151,934
Grant Authority (Total Project 1 + Total Project 2)	\$12,860,110	\$12,860,110	\$0

*Category Names: A – Project Administration, B – Land Purchase, C – Planning, and D – Construction.

Project 1 is the Conservation Based Reporting Tools and Rate Structure Implementation Project and Project 2 is the High Visibility Turf Removal and Retrofit Project.

CRITICAL SUCCESS FACTORS

The following OWOW critical success factors are addressed by this action:

1. Administration of the OWOW process and plan in a highly efficient and cost-effective manner.
2. Data and information needed for decision-making is available to all.

RESOURCE IMPACTS

Funding for the budget amendment preparation task will come from the Proposition 84 IRWM Drought Grant shown in the labor categories within the FYE 2018 fiscal year in the Committee's two year budget.