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, APRIL 27, 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: FEBRUARY 23, 2017 5

Recommendation: Approve as posted.

4. COMMITTEE DISCUSSION ITEMS

A. EMERGENCY DROUGHT GRANT PROGRAM BUDGET UPDATE (PA22#2017.4) 9
Presenter: Ian Achimore
Recommendation: Receive and file.

B. CONSERVATION-BASED WATER RATES PROJECT MILESTONE AND UPDATES (PA22#2017.5) 13
Presenter: Ian Achimore
Recommendation: (1) Waive the March 31, 2017 retail water agency agreement milestone for a draft rate study to be provided to the water agencies' boards for the following entities: (a) Cucamonga Valley Water District, (b) City of Garden Grove; (2) Receive and file an update on the California Data Collaborative's Rate Comparison Tool; and, (3) Receive and file an update on the Conservation-Based Water Rates Outreach Project.

C. AERIAL MAPPING PROJECT VEGETATION CLASSIFICATION METHODOLOGY AND LESSONS LEARNED-(PA22#2017.6) 27
Presenter: Dean Unger
Recommendation: Receive and file.

D. USE OF PROJECTED SAVINGS FOR THE EMERGENCY DROUGHT GRANT PROGRAM (PA22#2017.7) 49
Presenter: Rick Whetsel
Recommendation: Authorize staff to develop a scope of work and budget and issue a Request for Proposals (RFP) for the following projects to provide additional technical support to water retailers' compliance with new State water use efficiency requirements using remaining available grant funds: (1) Develop an on-line web application and cloud services to provide water retailers access to aerial imagery and landscape measurement data; and, (2) Provide water retailers in the Santa Ana River and Upper Santa Margarita watersheds meter geocoding and North American Industry Classification System (NAICS) coding services.

E. METROPOLITAN WATER DISTRICT REGIONAL TURF REMOVAL PROGRAM (PA22#2017.8) 61
Recommendation: Receive and file.

5. FUTURE AGENDA ITEMS

6. ADJOURNMENT

PLEASE NOTE:
Americans with Disabilities Act: Meeting rooms are wheelchair accessible. If you require any special disability related accommodations to participate in this meeting, please contact (951) 354-4220 or kberry@sawpa.org. Notification at least 48 hours prior to the meeting will enable staff to make reasonable arrangements to ensure accessibility for this meeting. Requests should 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, April 20, 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.)

January 1/26/17 Regular Committee Meeting	**February** 2/23/17 Regular Committee Meeting
March ~~3/23/17 Regular Committee Meeting~~ [cancelled]	**April** 4/27/17 Regular Committee Meeting
May 5/25/17 Regular Committee Meeting	**June** 6/22/17 Regular Committee Meeting
July 7/27/17 Regular Committee Meeting	**August** 8/24/17 Regular Committee Meeting
September 9/28/17 Regular Committee Meeting	**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.

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PROJECT AGREEMENT 22 COMMITTEE
Interregional Landscape Water Demand Reduction Program
REGULAR MEETING MINUTES
February 23, 2017

COMMITTEE MEMBERS PRESENT

Joseph P. 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]

COMMITTEE MEMBERS ABSENT

John Rossi, General Manager, Western Municipal Water District

STAFF PRESENT

Larry McKenney, Mark Norton, Ian Achimore, Dean Unger, Zyanya Blancas

1. CALL TO ORDER

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

Celeste Cantú introduced Gil Navarro, the newly appointed SAWPA Alternate Commissioner representing San Bernardino Valley Municipal Water District. Mr. Navarro will be leading the Disadvantage and Tribal Communities Pillar workgroup. The Committee welcomed Commissioner Navarro.

3. APPROVAL OF MEETING MINUTES: JANUARY 26, 2017

MOVED, approve the January 26, 2017 meeting minutes.

Result:	**Adopted (Unanimously; 4-0)**
Motion/Second:	Markus/Grindstaff
Ayes	Grindstaff, Headrick, Jones, Markus
Nays:	None
Abstentions:	None
Absent:	Rossi

4. COMMITTEE DISCUSSION ITEMS

A. UPDATE ON STATE ACTION RELATED TO DROUGHT (PA22#2017.2)

Ian Achimore provided an oral progress report on the State action related to the drought. As of date, the State has not released their final *Making Water Conservation a California Way of*

Life: Implementing Executive Order B-37-16 (Report); it is expected to be released within the next couple weeks.

SAWPA staff continues positive discussion with DWR regarding possible 1 year agreement extension to the Proposition 84 IRWM Emergency Drought Grant Program agreement. The extension will allow Cucamonga Valley Water District and Chino Hills enough time to implement their rate structures.

Achimore informed the Committee that a draft cost estimate was generated for the application program interface that will allow agencies without GIS/IT departments to view and further utilizes the SAWPA 2015 aerial mapping data and imagery.

The Committee directed staff to present at a later PA22 Committee meeting a comparison between OmniEarth and SAWPA's vegetation classification capture methodologies.

B. AERIAL MAPPING PROJECT DEAD VEGETATION CLASSIFICATION (PA22#2017.3)

Dean Unger provided a PowerPoint presentation on the discovered 15 large areas of natural open space skewing with the assessment of dead vegetation. Unger requested a Task Order of $35,043 be approved with Statistical Research, Inc. (SRI) to provide dead vegetation calculation in those 15 flight areas.

SRI is expected to have the 15 flight areas identified starting in March 2017 and through April 2017. The datasets will be delivered in a priority order of the impacted agencies for updated dead vegetation counts, starting in March and completing by May.

MOVED, Approve Task Order SRI504-301-03 with Statistical Research, Inc. (SRI), in an amount not to exceed $35,043 to provide dead vegetation calculations in the 15 flight areas that have been identified with high concentrations of natural open space, bringing the new total for SRI to $245,521.

Result:	**Adopted (Unanimously; 4-0)**
Motion/Second:	Grindstaff/Markus
Ayes	Grindstaff, Headrick, Jones, Markus
Nays:	None
Abstentions:	None
Absent:	Rossi

5. FUTURE AGENDA ITEMS

- A comparison between OmniEarth and SAWPA's vegetation classification capture methodologies.

6. ADJOURNMENT

There being no further business for review, Chair Jones adjourned the meeting at 8:40 a.m.

Approved at a Regular Meeting of the Project Agreement 22 Committee on Thursday, April 27, 2017.

_____
Paul D. Jones II, Chair

Attest:

_____
Kelly Berry, CMC
Clerk of the Board

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COMMITTEE MEMORANDUM NO. 2017.4

DATE: April 27, 2017

TO: SAWPA Project Agreement 22 Committee

SUBJECT: Emergency Drought Grant Program Budget Update

PREPARED BY: Ian Achimore, Senior Watershed Manager

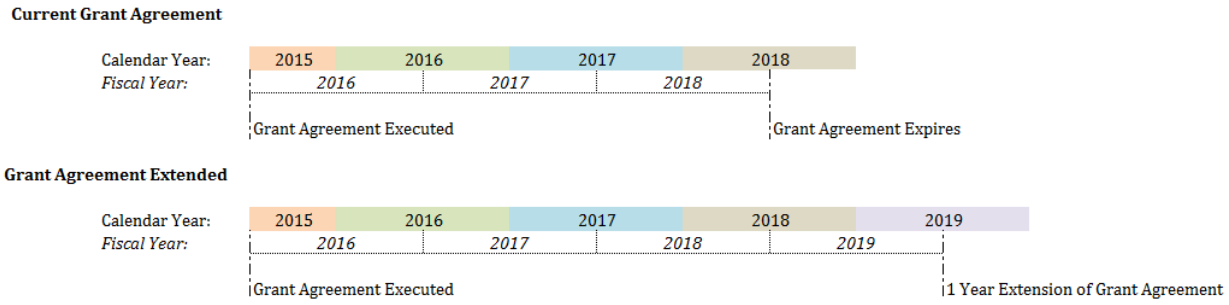
RECOMMENDATION
It is recommended that the Project Agreement (PA) 22 Committee receive and file this update on budget for the Emergency Drought Grant Program.

DISCUSSION
There are two budgets within the Emergency Drought Grant Program:

1. The Project 1 Budget includes funding for the Technology-Based Information Tool, Conservation-Based Water Rates, Aerial Mapping, and Program Management.
2. The Project 2 Budget includes pass through funding to the SAWPA member agencies, the Municipal Water District of Orange County (MWDOC) and Rancho California Water District (RCWD) for the High Visibility Turf Removal and Retrofit Project.

<u>Project 1 Budget Update</u>
The Grant Agreement includes $7,587,610 in grant funding for Project 1. As of February 28, 2017, 39% of the grant funding has been invoiced. For the October 2016 PA 22 Committee meeting, the Emergency Drought Grant Program's Project 1 was projected to have approximately $1,000,000 to $1,500,000 and approximately $30,000 respectively in cost savings in State Integrated Regional Water Management (IRWM) grant funding for the Santa Ana River Watershed and the Upper Santa Margarita Watershed (USMW) if the Program is completed in June 2018. By tracking expenses since that time through February 28, 2016, there is projected to be approximately $1,400,000 to $1,700,000 in cost savings for the Santa Ana River Watershed if the Program was completed in June 2019. The cost savings for the USMW has remained the same. This change is the result of the closing of the Technology Based Information Tool Project and updates to the projects including the actual expenses occurring from the October, 2016 PA 22 Committee meeting to February 2017, as well as extending the schedule for an additional year. The new projection includes the level of effort over the additional year to allow for a new project to assist retail water agencies with complying with Executive Order B-37-16 Making Conservation a California Way of Life, as recommended later in this agenda packet.

The projection of the surplus will need to be updated depending on the specified scope of work of the new effort and if it will take beyond June, 2019. Currently the Grant Agreement expires in June 2018.



As discussed at the December 22, 2016 Project Committee meeting, an extension of the Grant Agreement would require further management of the Emergency Drought Grant Program. This was discussed in the context of the need to further implement the Program if Cucamonga Valley Water District were to extend their contract till July 2018, but with the extension of several more rate agencies, and foreseeing need to implement this new effort for the Executive Order over a full year, it would require additional resources for administration, estimated to be $180,000. To implement the expanded Program, at some point in late 2018, excess projected funding would need to be moved from Budget Category D in the Grant Agreement with DWR to Budget Category A where there is projected to be a deficit.

Grant Agreement Architecture

Budget Category	Name		Budget
A	Project Admin	$	875,000
B	Land Purchase	$	-
C	Planning	$	50,000
D	Construction	$	6,662,610
		$	**7,587,610**

As the projected surplus of $1,400,000 to $1,700,000 is isolated to Budget Category D, there would be sufficient funding for this transfer. Since this is a transfer between Budget Categories, a formal amendment to the Grant Agreement with the Department of Water Resources' approval would be required. Budget Category A supports not only administration of the PA 22 Committee and Advisory Workgroup, but also grant administration for Project 2 the High Visibility Turf Removal and Retrofit Project.

Project 2 Budget Update

Like Project 1, Project 2 is multi-watershed in scope covering the Santa Ana River Watershed (SARW) and the USMW, which are in two different IRWM funding areas. The Grant Agreement provides $5,272,500 grant funding for the Project and includes the stipulation that $7,051,533 must be provided in funding match by the local project proponents and that 4,950,000 square feet (SF) of turf must be removed in highly visible, publicly owned or Home Owner Association (HOA) areas and replaced with drought tolerant landscaping.

Invoices from the water agencies implementing their individual projects toward the total 4,950,000 SF of turf is provided below. The values represent what has been invoiced to the SAWPA grant administrator from the eligible start date of January 1, 2010 (the date that local match can be counted) to February 28, 2017 (the date of the last invoice received by SAWPA).

	EMWD	EMWD USMW	IEUA	OCWD	SBVMWD*	WMWD	WMWD USMW	RCWD	Total
Grant Allocation	$ 906,800	$ 420,000	$ 807,564	$ 880,894	$ 828,499	$ 851,243	$ 52,500	$ 525,000	$ 5,272,500
Match Allocation	$	1,774,485	$ 1,080,050	$ 1,178,123	$ 1,108,049	$	1,208,681	$ 702,145	$ 7,051,533
SF Allocation	848,468	400,000	755,615	824,228	775,204	796,485	50,000	500,000	4,950,000
Grant Billed	$ 29,415	$ -	$ 807,564	$ 2,366	$ -	$ 464,718	$ -	$ 519,600	$ 1,823,663
Match Billed	$ 1,556,130	$ 218,355	$ 1,080,050	$ 1,178,123	$ -	$ 1,208,681	$ -	$ 702,145	$ 5,943,484
SF Removed	1,416,671	110,990	755,615	663,561	174,429	744,852	-	1,037,231	4,903,349
Water Saved (G)	62,333,524	4,883,560	33,247,060	29,196,669	7,674,876	32,773,488	-	45,638,164	215,747,341
% Grant Billed	3%	0%	100%	0.3%	0%	55%	0%	99%	35%
% Match Billed	100%		100%	100%	0%	100%		100%	84%
% SF Removed	167%	28%	100%	81%	23%	94%	0%	207%	99%
% SF Removed**	100%	28%	100%	81%	23%	94%	0%	100%	77%
SF Removed**	848,468	110,990	755,615	663,561	174,429	744,852	-	500,000	3,797,915

*SBVMWD has reported square feet of turf removed through updates to SAWPA.
**Removed >100% outliers (the agencies that have removed more than that is required in their allocation).

The above table above does not represent all the water agencies' progress to date, but rather what has been invoiced and presented to SAWPA. The water agencies are not required to invoice SAWPA on a monthly basis, but their ultimate invoice deadline is the end of the Project in December, 2017. It should be noted that SBVMWD has not formally invoiced SAWPA for grant and funding match, but they have provided updates to SAWPA staff. Unlike the other agencies, they did not submit their funding match upfront and have held off on submitting a formal invoice because of their internal record keeping. As of February 2017, 174,429 SF have been removed in the SBVMWD service area and 100% of the grant funding has been reserved, with medians as the majority reserved project. It is expected that most projects will be completed in Summer, 2017.

The majority of the water agencies have met their local match limit and are beginning to invoice for grant dollars. The DWR required that local match be provided first, so many water agencies in the Project reported their match for various projects and are now invoicing for grant dollars. For example, MWDOC launched new phase of their turf removal program in January 2017 to invoice for the $880,894 in grant funding.

BACKGROUND

SAWPA and the Department of Water Resources (DWR) executed the IRWM Grant Agreement for the Emergency Drought Grant Program on July 20, 2015. Under the Grant Agreement, $12,860,110 is provided in Proposition 84 grant funding and $10,645,000 is accounted as matching funds, for a total project cost of $23,505,110.

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 PA 22 Committee Implementation line item in the budget.

COMMITTEE MEMORANDUM NO. 2017.5

DATE: April 27, 2017

TO: SAWPA Project Agreement 22 Committee

SUBJECT: Conservation-Based Water Rates Project Milestone and Updates

PREPARED BY: Ian Achimore, Senior Watershed Manager

RECOMMENDATION

It is recommended that the Project Agreement 22 Committee:

1. Waive the March 31, 2017 retail water agency agreement milestone for a draft rate study to be provided to the water agencies' boards for the following entities:
    a. Cucamonga Valley Water District,
    b. City of Garden Grove;
2. Receive and file an update on the California Data Collaborative's Rate Comparison Tool; and
3. Receive and file an update on the Conservation-Based Water Rates Outreach Project.

DISCUSSION

Retail Water Agency Agreement Milestone

SAWPA executed agreements with Cucamonga Valley Water District and Garden Grove in April and May of 2016. As those two agencies executed agreements later than the other retail water agencies involved in the Conservation Based Water Rates Project, their milestone deadline for completing a draft rate study and providing it to their board was March 31, 2017. The other agencies involved in the Conservation Based Water Rates Project had a deadline of December 31, 2016.

SAWPA staff recommends waiving the March 31, 2017 milestone deadline, which is an option specified in the agreements with Cucamonga Valley Water District and Garden Grove. SAWPA expects that with the April 7, 2017 release of the final joint agency report for Governor Edmund Brown's Executive Order on "Making Conservation a California Way of Life," there will likely be a renewed push for implementing these rate structures.

Garden Grove has acquired a rate consultant, but has run into issues with data management as the billing information that itemizes customer accounts needs to be cleaned up and sorted by landscape measurements using the aerial imagery. In order to increase the pace of the schedule, Garden Grove is expected to sub-contract with a data management consultant to manage the customer account information needed to complete a budget-based rate study. Once this task is completed, the rate consultant will perform rate structure calculations and present a budget-based rate structure and other structure alternatives to City Council for feedback. Upon City Council approval, Garden Grove will begin making necessary billing system software modifications. To educate customers about the water rate study, the City will provide information and via water bill inserts, an informational website, and a rate study hotline. This summer, Garden Grove will be hosting a public workshop and contacting top water users, as well as users most affected to discuss the proposed rate changes.

Cucamonga Valley Water District, by their letter dated October 14, 2016, has requested an extension because of its planned evaluation of compliance with the standards contained in the

draft joint agency report and how a conservation-based rate structure would assist in meeting those standards. In early April, 2017, the district completed review of its financial model which is the foundation for the cost of service study. Both agencies are requesting that the March 31, 2017 milestone deadline be waived.

A full list of the current schedules of each of the ten agencies involved in the Conservation Based Water Rates Project is included as an attachment to this memorandum. In addition to the update previously provided to the PA 22 Committee that Cucamonga Valley Water District and Chino Hills were planning to implement their rate structures in 2018, Rialto is planning to implement their structure in January, 2018, Tustin in March, 2018 and Garden Grove in February, 2018.

California Data Collaborative's Rate Comparison Tool

SAWPA recently met with the California Data Collaborative (CaDC) as well as staff from Moulton Niguel Water District and Metropolitan Water District to learn more about the CaDC's open source Rate Comparison tool. The tool provides an upfront method to analyze the implications that a rate change or surcharge would have on a retail water agency's revenue, water usage and typical customer bills. It can assist agencies before they acquire the assistance of a rate consultant by illustrating rate impacts with their own water usage and billing data. To use the tool a retail water agency would need to input their water usage data, itemized by customer account type (customer account numbers or other identifiable information can be converted to ensure privacy), in a table format such as Excel. The table would also need to include the net charges (bills) per individual customer, which is usually identified by billing period. No time period is required, but a longer history of billing data will lead to more accurate modeling and provide the ability to evaluate different scenarios. After using the tool, retail water agencies would benefit from hiring a rate consultant to analyze the price elasticity of demand as well as draft their cost of service study.

SAWPA staff is exploring the use of this tool as an eligibility gate for receiving funding from the Santa Ana River Conservation and Conjunctive Use Program (SARCCUP), which also includes a component to support five other agencies with conservation-based rates. The gate could be formalized by requiring agencies to use the tool to answer several questions such as what is the amount of revenue an interested retail water agency would have received under budget-based rates, or what is the optimal fixed charge to maintain revenue under an extended drought. This may benefit the SARCCUP rates component because interested retail water agencies would be incentivized to make progress upfront, rather than being incentivized, through the interim milestone deadline, to finish the draft rate study as is done in the Emergency Drought Grant Program. The Emergency Drought Grant Program's milestone is later in the rate change timeline for agencies, whereas an upfront tool would occur up to six to eight months earlier in process. Due to the data inputs into the tool, it could help interested retail agency staff to understand the data management needs as well as allow their management to consider upfront critical rate policy questions with their own hard data instead of conceptually.

The CaDC fee schedule for FY 2017-18 for each agency to have their metered water use data integrated into the existing tools (of which the Rate Comparison Tool is one) is as follows:

- $17,500 for less than 15,000 metered connections
- $35,000 for between 15,000 - 150,000 metered connections
- $70,000 for more than 150,000 metered connections

There is no separate pricing structure for utilizing just the Rate Comparison Tool, but CaDC notes that the vast majority of the reason for the costs is the work needed to integrate and clean agencies' data, while deploying another tool like the CaDC efficiency explorer requires less effort. As the average number of connections of most retail water agencies in this area is approximately 20,000, the costs could be up to $175,000 for five agencies. As there is $1,214,600 in funding for the SARCCUP Rate Component, and approximately $177,000 needed for SAWPA to implement the program (as shared with the PA 23 Committee during their July 28, 2016 meeting), that would leave $862,600 for contracts with five retail water agencies ($173,920 per agency). This is a smaller value than the $215,030 for current contracts with rate agencies under the Emergency Drought Grant Program, but the support of the CaDC in upfront modeling may help reduce time and resources needed later in the individual implementation for agencies who utilize SARCCUP funding. Further funding would be needed if some of the agencies do not adopt conservation-based rates under SARCCUP, because a deliverable with DWR is to have approximately five agencies adopt the rate structure.

Conservation-Based Water Rates Outreach Project

SAWPA, Mr. Tom Ash of Inland Empire Utilities Agency and CV Strategies have been working on the Conservation-Based Water Rates Outreach Project since execution of the CV Strategies $25,000 contract in October, 2017. To date, three Frequently Asked Question (FAQ) documents have been released and distributed to the nine rate agencies partnered in the program, as well as rate consultants and the SAWPA member agencies, Rancho California Water District and the Municipal Water District of Orange County. They have also been posted to SAWPA's social media account. The topics covered include:

- Why conservation-based rates and why now?
- What is the difference between conservation-based and other rate structures?
- What are the essential components of conducting outreach to customers?

The next discrete FAQ document topics include the following:

- Legality of Budget-Based Rates: Why Are They Defensible? San Juan Capistrano?
- Fairness of Budget-Based Rates: How to Create Customized Rates That Are Fair?
- Connection Between Water and Pricing
- How to Talk About Fixed Costs
- Post Hearing – What Now? Rate Structure Implementation and Maintenance

They are scheduled to be released every three to four weeks until June 31, 2017.

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 managing the Conservation-Based Water Rates Project comes from the Proposition 84 IRWM Drought Grant shown in the Implementation line item in the budget.

Attachments:

1. Milestone Summary Table
2. Information on the CaDC Rate Comparison Tool
3. FAQ Documents

Milestone Summary Table

Retailer	Rate Study Begin Date	Rate Study Final Draft Goal	Adoption Goal	Rate Implementation Goal
East Valley WD	Jul-14	Jan-15	Jun-15	Jun-15
Hemet City	Nov-15	Jul-17	Aug-17	Oct-17
San Jacinto City	Sep-16	Apr-17	Jun-17	Dec-17
Chino Hills City	Apr-16	Jun-17	May-18	Jul-18
Chino City	Jan-16	Dec-16	Jun-17	Jul-17
Rialto City	Sep-15	Jun-17	Nov-17	Jan-18
Tustin City	Aug-16	Jun-17	Sep-17	Mar-18
Garden Grove	Sep-16	Nov-17	Nov-17	Feb-18
Cucamonga VWD	Aug-16	May-17	Feb-18	Jul-18

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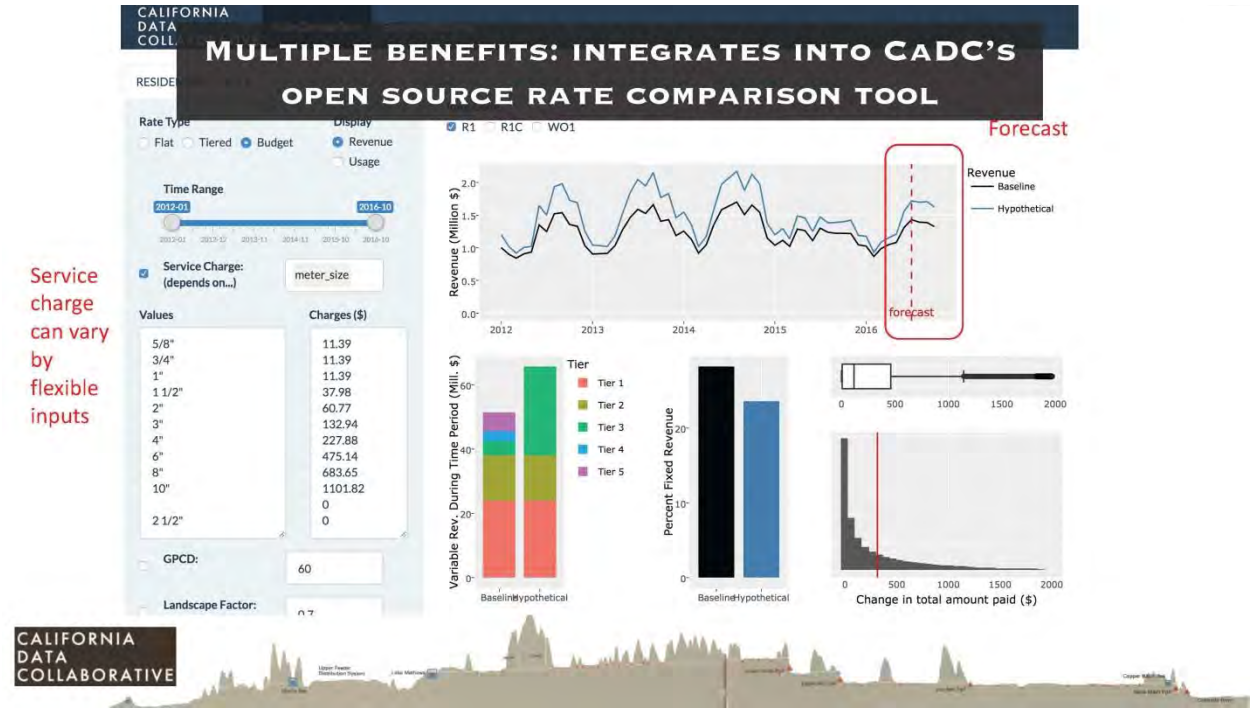
California Data Collaborative Rate Comparison Tool

The California Data Collaborative's ("CaDC") Open Source Rate Comparison Tool provides an upfront method to analyze the implications that a rate change or surcharge would have on a retail water agency's revenue, water usage and typical customer bills.



It can assist agencies by providing them with an idea of rate study outcomes before they acquire the assistance of a rate consultant by illustrating potential rate impacts from alternative rate structures based on their own water usage and billing data.

How to Use the Tool:

To use the tool a retail water agency would need to input their water usage data, itemized by customer account type (customer account numbers or other identifiable information can be converted to ensure privacy), in a table format such as Excel. The table would also need to include the net charges (bills) per individual customer, which is usually identified by billing period. No time period is required, but a longer history of billing data will lead to more accurate modeling and provide the ability to evaluate different scenarios. For best results, use **at least 3** years of data. The tool can handle as many years as an agency has available in their billing system. For an example of the data needed, please see a sample of public data from the City of Santa Monica.

Other Benefits:

The tool can also show revenues and water usage in comparison to calculated baselines. Baselines can be set by changing billing tier heights, fixed charges, and overall rate structure design such as budget-based vs. tiered. The tool is also able to perform modeling for sewer rates and show the impact of a prospective rate change on typical customer bill. CaDC staff has implemented a new open water rate

pricing standard for several SAWPA retailers (including both CaDC participant and nonparticipating agencies) to streamline deployment of the rate comparison tool.

Next Steps:

The following roadmap details how CaDC staff and data action team members at participating CaDC utilities would support participating SAWPA retailers in utilizing the rate comparison tool:

- Provide kickoff meetings/ help to SAWPA in getting retail agency participation and an overview of how the tool works (CaDC staff and rate comparison data action team members)
- Work w/ participating SAWPA retailers on data cleaning/ data ingestion (CaDC staff)
- Integrating participating SAWPA retailer data into CaDC SCUBA data infrastructure (CaDC staff)
- Deploying the rate comparison tool (CaDC staff)
- Education/ training on the tools to travel to each agency (CaDC rate comparison data action team available along with CaDC staff support)
- Additional meetings and workshops with elected officals as needed (CaDC rate comparison data action team members available along with CaDC staff support)

After using the tool, retail water agencies would benefit from acquiring a rate consulting to analyze the price elasticity of demand as well as drafting their cost of service study.

SANTA ANA WATERSHED PROJECT AUTHORITY

SAWPA

EMERGENCY DROUGHT GRANT PROGRAM:
IMPLEMENTING CONSERVATION-BASED WATER RATES

Why Conservation-Based Rates and Why Now?

By looking at what the State is requiring and at the eight water agencies in the Santa Ana River Watershed that have already adopted conservation-based water rates, this question can be answered by considering these important issues:

Financial stability: By recouping fixed costs more effectively through conservation-based rates, agencies avoid the frequent and dramatic rate increases required to recover revenue lost to reduced water demand. By avoiding revenue shortfalls, agencies can fund operations, maintenance and capital replacement programs, while maintaining healthy reserves to qualify for the lowest interest on loans.

Fairness: Conservation-based rate systems develop individualized efficiency targets that meet the unique needs of each customer. Efficiency targets consider the number of people in a household, size and type of landscaping, and weather conditions to ensure an accurate monthly water allocation. Efficient users who fall within their individualized allocation are rewarded with the lowest rates, while wasteful water users pay more.

A New Approach to an Old Problem

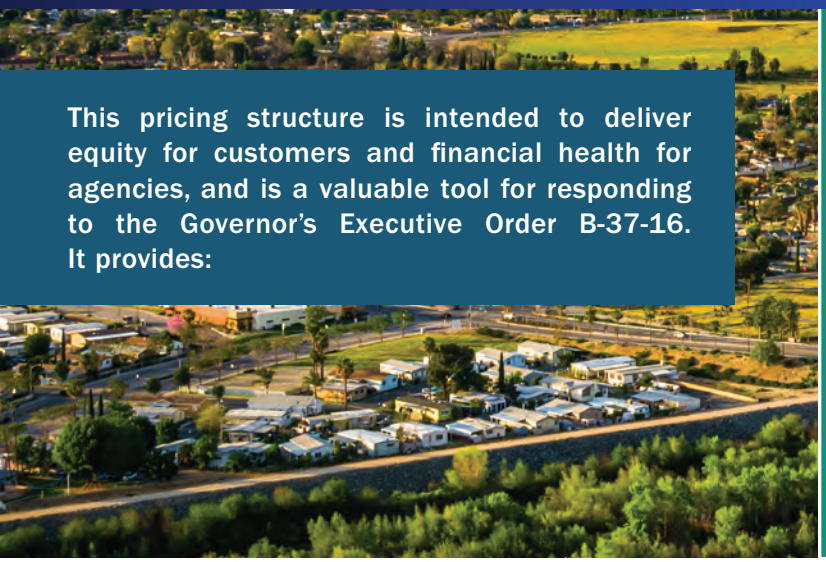
The new normal embraces the realization that efficiency is the key to managing limited supplies. State agencies are crafting a plan to implement the Governor's Executive Order B-37-16, which requires that conservation become a permanent way of life in California. Rather than using a percentage conservation reduction, the State will utilize an efficiency target allocation that is based on local climate, population and land use within each agency's service area. As part of the new approach, the State is encouraging water suppliers to adopt conservation-based rates to help manage revenue fluctuations that accompany cutbacks.

The Cost of Efficiency

Efficiency can be costly to water providers as strongly demonstrated during the current drought. According to an economic impact analysis of the Governor's Executive Order B-29-15, which imposed the first-ever mandatory water reductions in California in 2015, public agencies lost $673 million in net revenue that year.

The Emergency Drought Grant Program is financed by the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 (Proposition 84), administered by the State of California, Department of Water Resources.

CONSERVATION-BASED RATES:
TOOL OF THE FUTURE



This pricing structure is intended to deliver equity for customers and financial health for agencies, and is a valuable tool for responding to the Governor's Executive Order B-37-16. It provides:

- *Customized budgets for every customer designed to meet individual needs while encouraging efficiency*
- *Different price levels for indoor, outdoor and inefficient use*
- *Fair treatment for customers based on their need*
- *Long-term financial stability for agencies*

What's next?

This is the first in a year-long series distributed by SAWPA to agencies in the Santa Ana River Watershed. SAWPA's goal is to provide this information as an evolving roadmap addressing the questions and issues public agencies may face on the path to conservation-based rates.

For more information, or to suggest a question or topic, please contact: **Ian Achimore at 951-354-4233**.

AGENCIES IN THE SANTA ANA RIVER WATERSHED:

WHO IS ALREADY USING THESE RATES?

- Corona – "The Circle City" – Incorporated July 13, 1896 – To Cherish Our Past - To Plan Our Future
- East Valley Water District – Leadership · Partnership · Stewardship
- El Toro Water District
- emwd
- Elsinore Valley Municipal Water District
- Irvine Ranch Water District
- Monte Vista Water District
- Western Municipal Water District

WHO IS ANALYZING THESE RATES?

- Chino – Where Everything Grows
- City of Chino Hills
- Cucamonga Valley Water District – Service Beyond Expectation
- Garden Grove
- City of Hemet – Riverside County, California
- San Jacinto
- Tustin – Building Our Future Honoring Our Past
- City of Rialto, California – Incorporated Nov 17, 1911

SANTA ANA WATERSHED PROJECT AUTHORITY

A conservation-based rate structure can be designed to send a water efficiency message to customers.

CONSERVATION-BASED RATES:
WHAT MAKES THEM DIFFERENT?

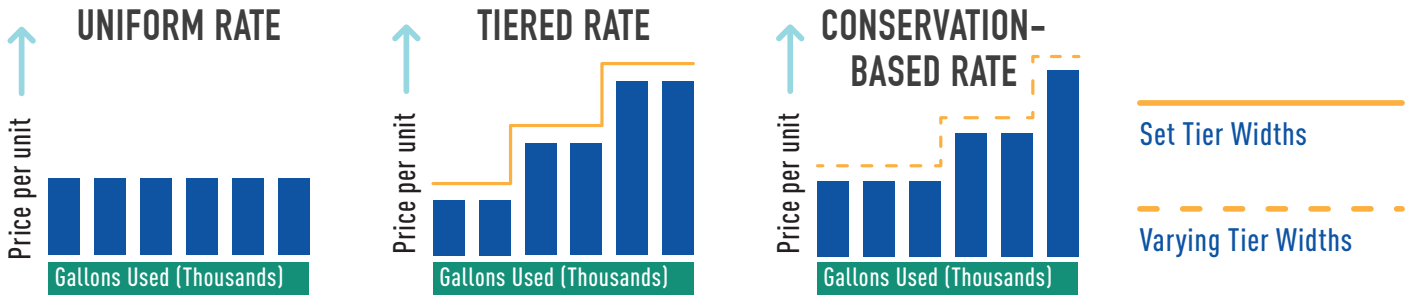
What is the Difference Between Conservation-Based and Other Rate Structures?

Uniform rates apply the same cost of water regardless of the amount used. Charging the same rate on all water is a disincentive for efficiency and is a reward for inefficient users.

Traditional tiered rates employ increasing price tiers based on consumption. Tiers are fixed allocations where the unit price of water increases as use moves into higher tiers. Traditional tier structures do not account for weather or differences in the size of household and property.

Conservation-based rates use individualized water budget allocations based on such factors as the number of residents in a household, amount of landscaped area and daily weather. Customers at or below their budget pay the lowest rates; those who exceed their allocation pay increasing rates. This structure encourages efficiency in a fair manner for customers with different needs.

Rate Structure Comparison



How do conservation-based rates support revenue stability?

- Water agencies employing conservation-based rates and sufficient fixed charges maintain more stable revenue recovery in both wet and dry periods, when less water may be sold.
- Typically, most of an agency's costs of service are fixed, for things such as maintenance, operations and debt service; those costs must be recovered regardless of how much water is sold.
- Conventional rate structures (low fixed charges + high water rates) depend on selling a certain amount of water in order to fund an agency's cost of service.
- With conservation-based rates, a sufficiently set fixed charge recovers necessary fixed costs independently of water sales, helping to stabilize revenue in both wet and drought years.
- The allocation and costs charged for efficient and inefficient water use with conservation-based rates more accurately reflects the State's efficiency-target regulation.

How Individualized Conservation-Based Tiers are Calculated

TIER 1
INDOOR BUDGET

Based on the number of people in a household and average per-person water needs

TIER 2
OUTDOOR BUDGET

Based on landscape area and daily weather

TIER 3
INEFFICIENT USE

A percentage of water used over the total indoor and outdoor budgets

TIER 4
EXCESSIVE USE

The amount of water in excess of tier 3 inefficient use; tied to more expensive water sources

WHAT ARE WATER AGENCIES SAYING ABOUT CONSERVATION-BASED RATES?

- *"It puts the responsibility and the choice in the hands of the customers."* **Joone Lopez, General Manager, Moulton Niguel Water District**
- *"It's going to be a tool that allows people to understand when they're wasting water. They understand the fairness. They can see what it means to them individually."* **John Rossi, General Manager, Western Municipal Water District**
- *"First it's educating the board members then it's educating the staff and it's educating the customers. Once the light bulb comes on and you see how effective budget-based rates can be, you end up saying, 'Why didn't we do it ten years ago?'"* **Scott Colton, board member, Moulton Niguel Water District**
- *"Going through this budget-based process made my board truly understand our operation and how the revenues and how our expenses are covered…than they ever would by doing their traditional fixed-based that we used to do."* **John Mura, General Manager, East Valley Water District**
- *"We do have a fixed monthly meter charge, and it's fairly modest, but our fixed costs are entirely covered in the fixed monthly meter charge and by tier 1 and tier 2, so we can actually talk about water use efficiency and ask our customers to cut back and not go into the board room and get worried about being able to cover our expenses. It's purposely structured that way."* **Paul Jones, General Manager, Eastern Municipal Water District**
- *"By assigning costs to the appropriate tiers and providing a clear explanation of how the rate structure works IRWD has gained wide support from customers."* **Paul A. Cook, General Manager, Irvine Ranch Water District**

To hear a discussion about conservation-based rates, visit: **https://youtu.be/mZdoL_5qdac**

The Emergency Drought Grant Program is financed by the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 (Proposition 84), administered by the State of California, Department of Water Resources.

SANTA ANA WATERSHED PROJECT AUTHORITY

Early and effective communication with customers is a key component in successful implementation of conservation-based rates.

CONSERVATION-BASED WATER RATES:
PREPARING FOR A SUCCESSFUL PUBLIC PROCESS

Smoothing the way for adoption of conservation-based rates requires purposeful outreach to address customers' budgets. Communication should focus on customer benefits such as individualized allocations based on household size and weather, and the low cost of water used efficiently.

Essential components of rate-setting outreach

- **Create** a game plan for educating customers early
- **Establish** a rate implementation date by working backward through the steps
- **Complete** a cost of service study, placing fixed costs and variable costs in context
- **Be prepared** to show the methodology behind setting budgets and charges, such as state guidelines for establishing indoor and outdoor budgets
- **Understand** how the new rate design will impact key stakeholders (bills go up, down or little change)
- **Conduct** a public hearing that presents the rate study clearly and concisely, isolating information that is important to customers

What to include in the Proposition 218 Notice

Topics to cover:

- The mission of the water provider
- Rates fund safe, reliable water service
- Factors behind any rate increases, such as rising energy prices, environmental requirements, state regulations, cost of imported water and conservation program expenses
- The new rates are designed to (1) accurately recover public agency costs, (2) establish efficiency targets and (3) be fair and equitable to all end-users
- Conservation-based rates are designed to reward efficient water use with the lowest rates and recover costs for the most expensive sources of water

Important points for public hearings

Avoid long, financial PowerPoint presentations and focus instead on the way allocations under conservation-based rates are tailored for each customer, based on need. Emphasize the simplicity of this rate structure and highlight benefits: efficient water use results in lower bills.

INTERNAL TOOLS: PREPARE STAFF & ELECTED OFFICIALS FOR THE TRANSITION

- Develop talking points and FAQs
- Conduct customer service training for staff who interact with the public
- Create a rate hearing script
- Prepare board and staff for hearing
- Prepare for the variance request process with website information and staff training

EXTERNAL TOOLS: HELP CUSTOMERS UNDERSTAND THE NEED FOR CONSERVATION-BASED RATES

- Reach out to customers through newsletters, bill inserts, website and social media posts, press releases, community workshops and the Prop 218 notice
- Conduct pre-hearing presentations for large users and other impacted groups
- Create social media posts and schedule
- Generate public presentation materials, advertising and handouts
- Create an online water budget and bill estimator tool

The Outreach Process

To hear a discussion about conservation-based rates, visit: **https://youtu.be/mZdoL_5qdac**

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PA 22 COMMITTEE MEMORANDUM NO. 2017.6

DATE: April 27, 2017

SUBJECT: Aerial Mapping Project Vegetation Classification Methodology and Lesssons Learned

PREPARED BY: Dean Unger, GIS/IS Department Manager

RECOMMENDATION

That the PA22 Committee receive and file this update.

DISCUSSION

SAWPA has been able to provide highly accurate landscape measurement data to the water retailers within the Santa Ana watershed. During this effort in capturing, analyzing and performing quality control with this data, SAWPA has used a highly accurate methodology while uncovering important information in data collection and data analysis. These lessons learned should streamline future efforts of SAWPA and of other agencies. SAWPA staff will provide a detailed presentation to the PA 22 Committee about the lessons learned.

BACKGROUND

In June of 2015, SAWPA, under the direction of the PA22 committee and the grant, began collecting data to analyze in order to provide landscape vegetation measurements for budget based rates. The data is a combination of high resolution imagery, a high accuracy land survey, and parcel data. The analysis of this data provided accurate measurements of landscape vegetation for the 1.4 million urbanized parcels within the Santa Ana River Watershed. The measurements would then be used by retail water agencies to determine an individualized outdoor water budget and be folded into an agencies effort to move to budget based rates. The methodology for the project spans the management of aerial photography flights, resolution of the imagery, the analysis of the data, and finally the delivery of the data itself.

CRITICAL SUCCESS FACTORS

Vegetation Classification data meets the following critical success factors

- Distribution of benefits from the implementation of all integrated water resources management activities across the watershed in a fair and equitable fashion. Recognition that upstream conditions affect downstream water quality and quantity.
- A strong reputation and sufficient capacity within SAWPA staff for strategic facilitation, planning, communication, leadership and community engagement.
- Data and information needed for decision-making is available to all.

RESOURCE IMPACTS

Funding for the status update and contract administration will come from the Proposition 84 IRWM Drought Grant shown in the PA 22 Committee implementation line item and the implementation administration/contract administration line item the in the budget.

Attachment: Presentation

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Emergency Drought Grant Program:

Aerial Mapping Project

Calculating the Santa Ana River Watershed's Irrigated and Irrigable Landscape

March 23, 2017

Dean Unger
GIS/IS Department Manager
Santa Ana Watershed Project Authority

Topics Covered

- SAWPA's Approach to Aerial Mapping
- Lessons Learned
- Other Methods of Aerial Mapping
- Comparison Between Methods

Question – how can SAWPA measure the per parcel (landscape) in a way with which the parcel owner will agree

- Need two pictures here. One of just color imagery of a particular Parcel and then Other a picture of same parcel with MSA

3 inch resolution 4 Band Aerial Imagery

SAWPA TOOK A PICTURE

Watershed Aerial Photography

2400 square miles

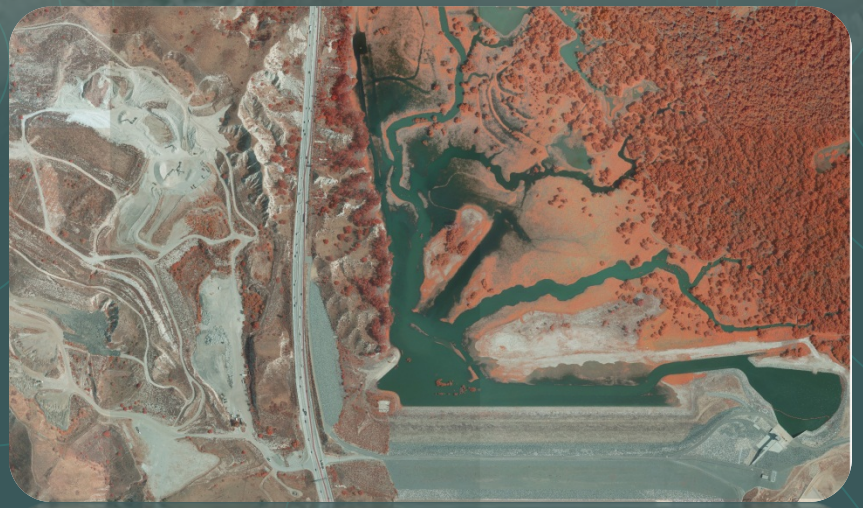
11,300 tiffs

4 terabytes of data

28 flight dates over 48 days

4 Band Imagery

3 inch resolution Aerial Imagery - Every 3 inches on the ground represents 1 pixel on the screen.



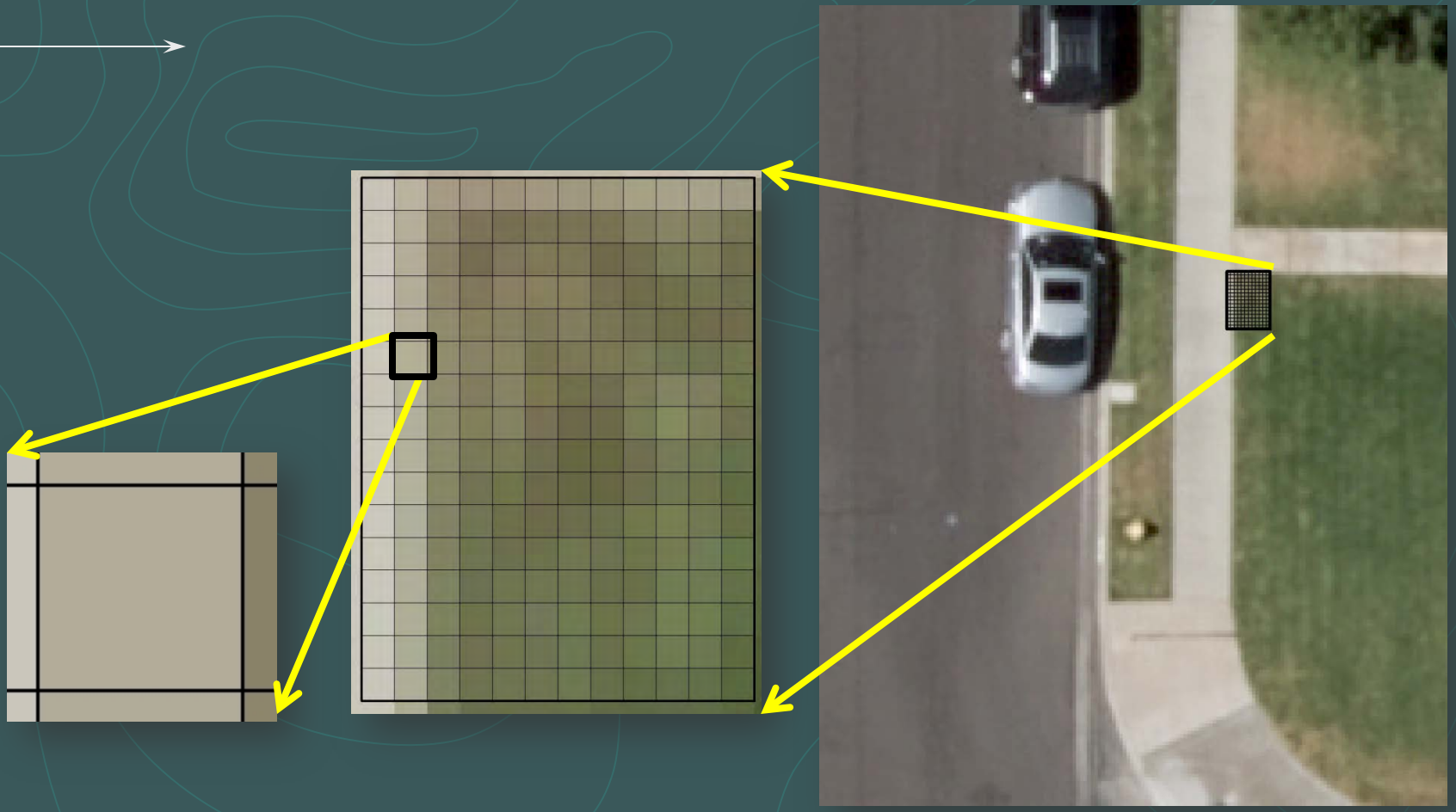
SAWPA's Aerial Mapping Lessons Learned

- Optimal time of year is region specific
  - Consider Cloud Cover, Heat, and state of Vegetation
- Manage/ Design flight Days for:
  - Gridded area per flight optimized for analysis
    - Color consistent across flight day
    - 24 hour analysis turn around - Easy redo if failure
    - Easier to seam together
    - 5 x 5 mile areas = 25 Gigabyte file at 3 inch resolution

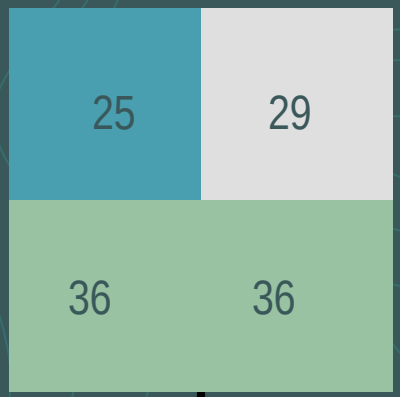
Image Analysis – Remote Sensing of Vegetation

COMPUTER SEES CELLS

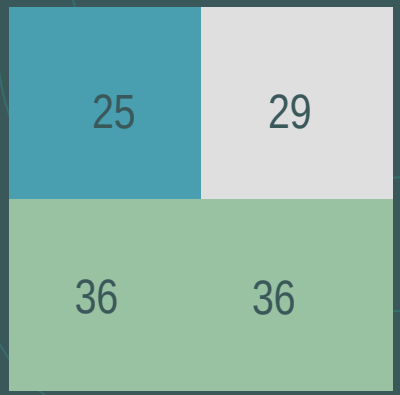
Computer sees cells



SAWPA's Imagery Analysis Method



Imagery

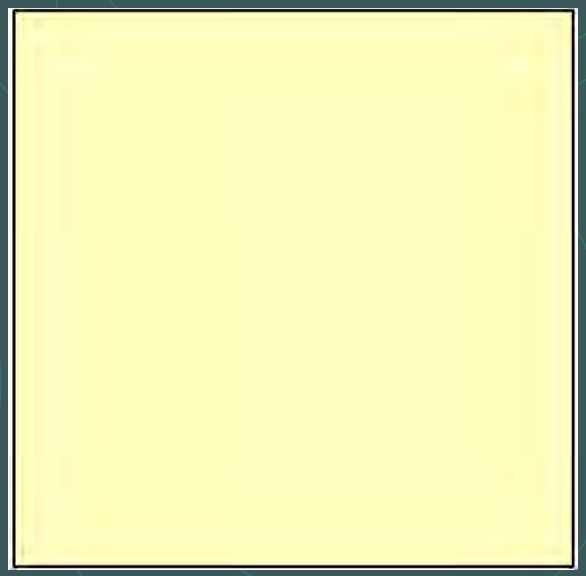


Analysis

- In this example, the 4 cells contains three distinct reference values.
- In the analysis each of the three values are represented in the 4 cells. The value 36 which may represent 80% grass gets a calculation of 80% of the area of each 3 inch cell.

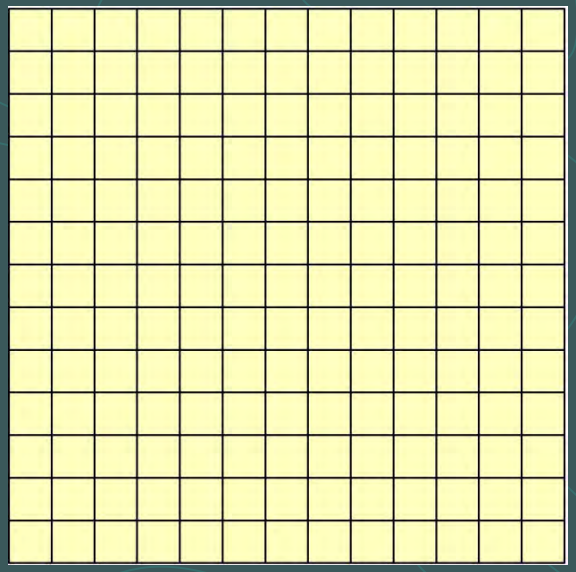
Resolution Comparison

1 meter resolution



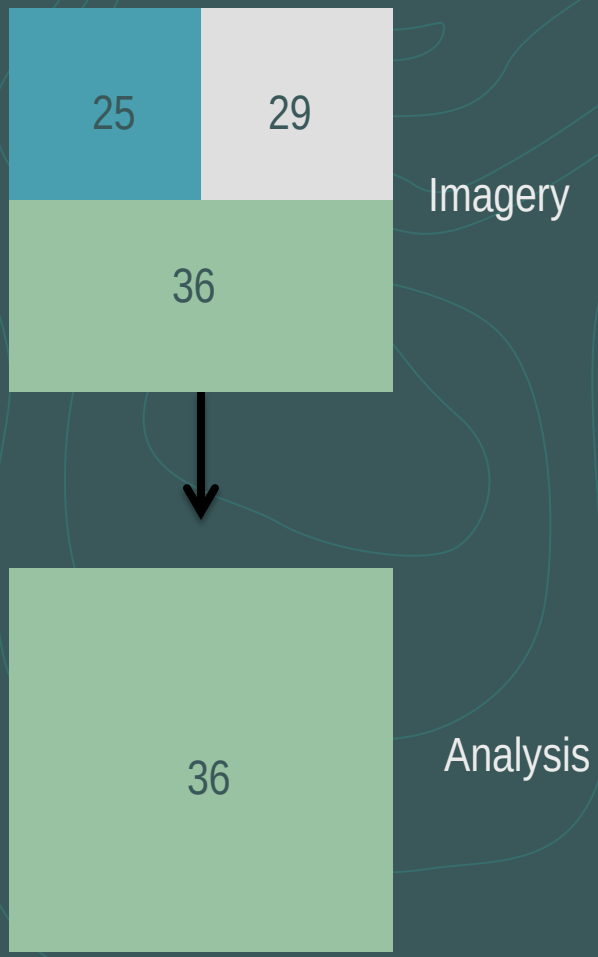
1 Data Point

3 inch resolution



169 Data Points

Other Imagery Analysis Methods



- In this example, the 4 cells contains three reference values.
- In the analysis the attribute value encompassing the largest portion of the cell becomes the value for the cell. The other two values are not represented by that cell in the analysis.

Comparison Between Methods

- SAWPA method does not assume a 100% value just for visual accuracy.
- SAWPA method used high resolution data so it increase the amount of cells(measurements) than would be present in lower resolution data but reducing the ability to re-fly the same area in a very short time.

Data Comparison Between Two Methods

- SAWPA GIS staff comparing Early 2015 Data from outside firm to June 2015 SAWPA data (Veg and Dead Veg)
- Outside firm: 1 meter resolution; did not include entire meter service area (MSA)
- SAWPA: 3 inch resolution; included MSA

Image Analysis – Veg Classification

Unsupervised/NDVI/Supervised

50-80+ classes per flight

For each class identify percent:

Turf
Trees/Shrubs
Pools

→ Irrigated Area

Other Veg – mostly aquatic
Dead Veg → Potential Irrigated Area
Non-Veg
Shadow - Uncertainty
Mapping/display category

RASTER

Table

OID	Value	Count	Red	Green	Blue	Opacity	Class_Name	VegPC	TURPC	TSHPC	POLPC	OTHPC	DEDPC	NONPC	SHAPC
0	0	28898185914	0	0	0	0	Unclassified	0	0	0	0	0	0	0	0
1	1	1510075758	0.457408	0.501234	0.500622	1	Class 01 water 20 / shadow nonveg 40 / shadow veg 40	40	20	20	0	20	0	40	80
2	2	578004220	0.577258	0.533583	0.550817	1	Class 02 shadow veg 20 / shadow nonveg 40 / nonveg 40	20	10	10	0	0	0	60	60
3	3	361366686	0.717600	0.467967	0.509235	1	Class 03 veg tree shrub 100	100	0	100	0	0	0	0	0

Add these up

Modify Parcels → Meter Service Area

Sum Veg classes by MSA → Irrigated Area

Answer – Meter Service Area Attributes

Parcel APN
Owner
Address

→ Meter → Water Bill

Meter Service Area Square Feet
Parcel Square Feet
Building Square Feet – Assessor
Pool Square Feet
Slope Correction Factor
Vegetation Square Feet – All Veg (Tree/Shrub, Turf, other)
→ Irrigated Square Feet – (Tree/Shrub, Turf + Pools)
Irrigable Square Feet – (Tree/Shrub, Turf, Pools + Dead Veg)

SHAPE FILE

Table

TustinCity_MSAVEGCLASS

FID	Shape *	MSA_APNX	TURPC_SF	TSHPC_SF	OTHPC_SF	DEDPC_SF	MSA_SF	PAR_SF	BLD_SF	POOL_SF	VEG_SF	IRRIG_SF
0	Polygon ZM		2606.84375	7463.80625	3138.6625	24867.16875	145392.500731	286.661402	0	0	13209.3125	10070.65
1	Polygon ZM	094-082-13	3532.59375	7537.790625	89.115625	729.865625	20090.203118	15999.655162	1703	0	11159.5	11070.384375
2	Polygon ZM	094-082-14	3106.525	6218.434375	113.640625	730.659375	25915.939463	15912.504487	1396	547	9440.6	9873.959375
3	Polygon ZM	094-082-15	1487.60625	3451.6375	20.815625	542.328125	19586.198676	15991.156399	3112	547	4960.059375	5486.24375

Make Answer Pretty

- Groups Raw Data into Classes ”
- Converts percentages to absolute values

Direction of Available Data

- Vendors now using “Meter Service Areas”
- Vendors now providing 3” data
- Data resolution improving with each new deployment of Satellite
- The better the resolution of the imagery, the more things you can analysis but this comes with vast increase in storage size and a needed increase in computer speed.

Resources

- https://www.fsa.usda.gov/Internet/FSA_File/fourband_infosheet_2012.pdf
- The History of the Remote Sensing of Vegetation – Matthew Shubin (SAWPA)

Emergency Drought Grant Program

The Emergency Drought Grant Program is financed by the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 (Proposition 84), administered by State of California, Department of Water Resources through a grant with SAWPA.

PA 22 COMMITTEE MEMORANDUM NO. 2017.7

DATE: April 27, 2017

TO: SAWPA Project Agreement 22 Committee

SUBJECT: Use of Projected Savings for the Emergency Drought Grant Program

PREPARED BY: Rick Whetsel, Senior Watershed Manager

RECOMMENDATION
The Conservation Advisory Workgroup and SAWPA staff recommends that the Project Agreement (PA) 22 Committee authorize staff to develop a scope of work and budget and issue a Request for Proposals (RFP) for the following projects to provide additional technical support to water retailers' compliance with new State water use efficiency requirements using remaining available grant funds:

1) Develop an on-line web application and cloud services to provide water retailers access to aerial imagery and landscape measurement data and
2) Provide water retailers in the Santa Ana River and Upper Santa Margarita watersheds meter geocoding and North American Industry Classification System (NAICS) coding services

DISCUSSION
As reported in a memorandum earlier in this meeting packet, SAWPA currently projects grants funds savings of between $1 million and $1.5 million.

To address the need for additional technical support for water retailers in the implementation of activities relating to the Prop 84 Grant and PA 22 Committee, the members of the Conservation Advisory Workgroup and SAWPA staff recommend a change order to the Proposition 84 Grant Agreement to implement the following:

1) <u>Develop an on-line web application and cloud services to provide water retailers access to aerial imagery and landscape measurement data</u>

   SAWPA recommends contracting with ESRI to develop a web application and cloud services to host and provide water retailers access to our high resolution aerial imagery and landscape vegetation measurement data.

   Cloud services hosted by ESRI will enable SAWPA to deliver up to fourteen terabytes of raster imagery in a scalable cloud computing environment made available through a custom ArcGIS Online application.

   Contracting with ESRI, SAWPA is utilizing our existing relationship and leveraging the existing ESRI license agreements of our member agencies in order to achieve a significantly (approximately 50%) lower cost for hosting and serving this immense dataset. Additionally, through the cloud services hosted by ESRI, SAWPA and its member agencies will also enjoy the benefit of access to this immense data set without tying up their agency's own computer data storage/networking services.

   The on-line web application developed by ESRI using a number of predefined tools will enable water retail agency staff to access SAWPA's aerial imagery and the results of our landscape analysis performed under the Prop 84 Emergency Drought Grant Program. Making these data available through an on-line web application provides water agencies,

particularly those lacking adequate data storage or GIS capabilities, to access this imagery and data. The on-line web application will include many of the capabilities of the original data, allowing the user to view the background imagery in three modes: Natural Color, False Color Infrared and Normalized Difference Vegetation Index (NVDI). Additionally, the user will have access to the results of SAWPA's work to analyze the watershed's landscape using aerial imagery and remote sensing analysis. The results of the landscape analysis will be able to be viewed at both the parcel level, as well as the agency level, which will include a summary of the landscape statistics by land use type.

2) Provide water retailers meter geocoding and North American Industry Classification System (NAICS) coding services

In light of the release of the State's final report entitled, Making Water Conservation a California Way of Life, Implementing Executive Order B-37-16, the Conservation Advisory Workgroup express support in providing water retailers with water meter geocoding and classification of commercial, industrial and institutional (CII) accounts using North American Industry Classification System (NAICS) coding.

SAWPA staff in coordination with the Conservation Advisory Workgroup will work to prepare and issue a Request for Proposals (RFP) to seek a qualified consultant to provide comprehensive water meter geocoding services to interested water retailers in the Santa Ana River and Upper Santa Margarita watersheds. To address the requirements of Executive Order B-37-16 for CII, the geocoding services will call out for the development of a methodology specifically designed to geocode, classify CII accounts using NAICS and identify mixed CII meters as detailed below extracted from the State's report:

Commercial, Industrial, and Institutional Performance Measures[1]

There is substantial diversity in businesses and institutions throughout California, resulting in a wide range of water use within the commercial, industrial, and institutional sector. Consequently, the EO Agencies will not establish a volumetric standard and budget for CII water use at this time. Instead, CII water suppliers will be required to implement the following three performance measures:

1. Convert all landscapes over a specified size threshold that are served by a mixed meter CII account to dedicated irrigation accounts, either through the installation of a separate landscape meter or the use of equivalent technology.
2. Classify all CII accounts using the North American Industry Classification System (or another similar classification system selected by the EO Agencies). Where feasible, CII subsector benchmarks will be developed to assist water suppliers in identifying CII accounts with the potential for water use efficiency improvements.
3. Conduct water use audits or prepare water management plans for CII accounts over a specified size, volume, or percentage threshold.

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.

[1] Page 3-9, Making Water Conservation a California Way of Life, Implementing Executive Order B-37-16, FINAL REPORT, April 2017

RESOURCE IMPACTS

Funding for these projects will come from the projected cost savings remaining from the Proposition 84 IRWM Drought Grant.

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Emergency Drought Grant Program:

Use of Projected Savings for the Emergency Drought Grant Program

Rick Whetsel
Senior Project Manager
Santa Ana Watershed Project Authority

April 27, 2017

Recommendation

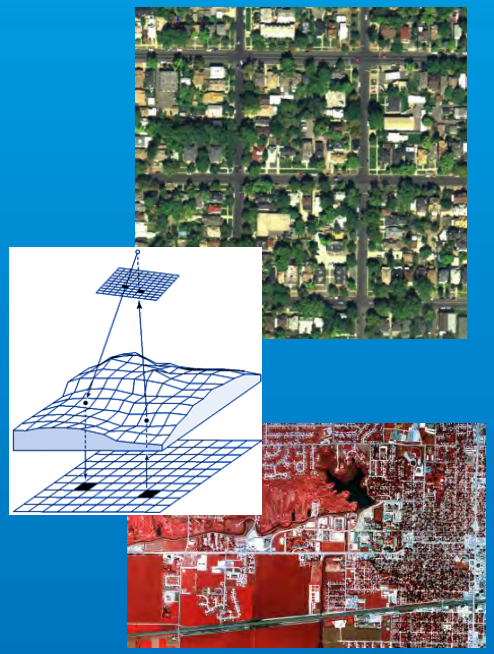
Authorize staff to develop scope of work and budget for the following projects to provide additional technical support to water retailers for an amount not-to-exceed remaining available grant funds:

- Develop an on-line web application and cloud services to provide water retailers access to aerial imagery and landscape measurement data and
- Provide water retailers in the Santa Ana River and Upper Santa Margarita watersheds meter geocoding and North American Industry Classification System (NAICS) coding services

On-line Web Application and Cloud Services Project

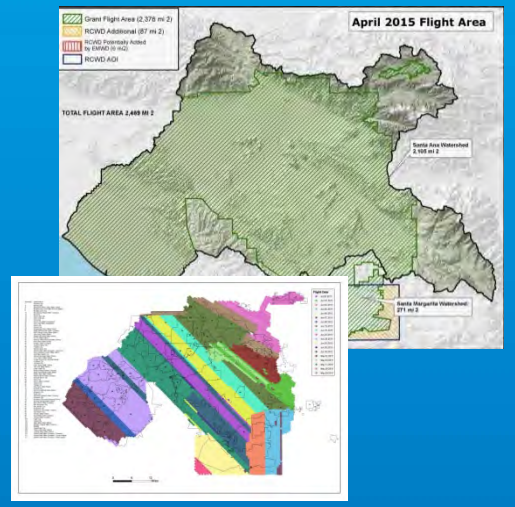
Objective:

- Create an on-line web application for the high resolution aerial imagery and outdoor landscape measurements for outdoor water budgets developed through the Prop 84 Emergency Drought Grant Program accessible to water managers.



SAWPA

On-line Web Application and Cloud Services



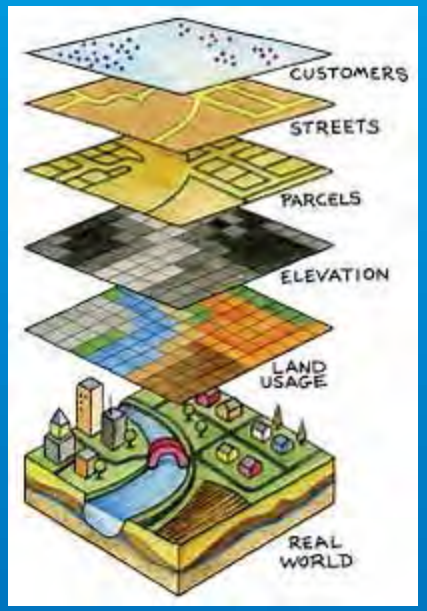
Project Highlights:

- Project entails delivering up to fourteen terabytes of raster imagery in a scalable cloud computing environment
- Employs a number of Pre-defined web tools available from ESRI
- The on-line web application will include many of the capabilities of the original data (example: 3 modes of background imagery)
- User will have access to the results of SAWPA's work to analyze the watershed's landscape using aerial imagery and remote sensing analysis.
- User will be able to view landscape analysis results at both the parcel level, as well as the agency level.
- Includes summary of the landscape statistics by land use type.

On-line Web Application and Cloud Services

Benefits of Contracting with ESRI:

- Utilizes SAWPA's existing license and leverages member agencies license agreements to achieve a significantly (approximately 50%) lower cost for hosting and serving data.
- Employs a number of pre-defined tools greatly reducing the development costs



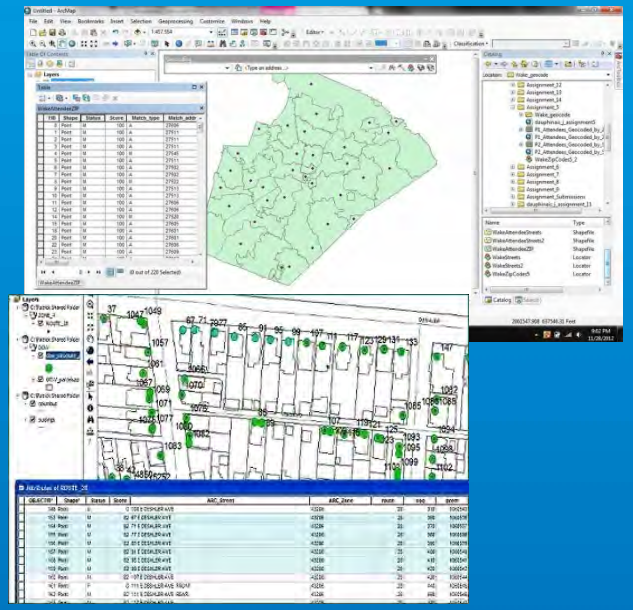
Benefits to Water Retailers:

- Serving data over the cloud reduces demand on agencies computer data storage/networking services.
- On-line web application provides water agencies, particularly those lacking adequate data storage or GIS capabilities, to access this imagery and data

Meter Geocoding and North American Industry Classification System (NAICS) Coding Services

Objective:

- Project provides support to water retailers in addressing the proposed requirements as detailed in the State's final report entitled, Making Water Conservation a California Way of Life, Implementing Executive Order B-37-16 by providing water meter geocoding and classification of commercial, industrial and institutional (CII) accounts using North American Industry Classification System (NAICS) coding.

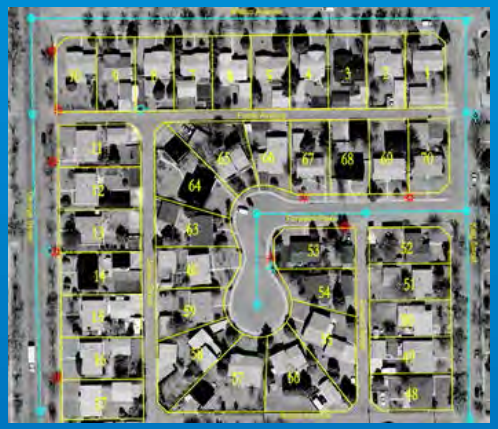


SAWPA

Meter Geocoding and North American Industry Classification System (NAICS) Coding Services

Next Steps:

- SAWPA staff in coordination with the Conservation Advisory Workgroup will work to prepare and issue a Request for Proposals (RFP) to seek a qualified consultant to provide comprehensive water meter geocoding services to interested water retailers in the Santa Ana River and Upper Santa Margarita watersheds.
- Scope of work will call out for the development of a methodology specifically designed to geocode, classify CII accounts using NAICS and identify mixed CII meters as detailed in the State's report.



Meter Geocoding and North American Industry Classification System (NAICS) Coding Services

Project Scope of Work :

- The proposed project supports water retailers in addressing two of the three performance measures as proposed by the State for Commercial, Industrial and Institutional (CII) water suppliers :
  - Classify all CII accounts using the North American Industry Classification System (or another similar classification system selected by the EO Agencies). Where feasible, CII subsector benchmarks will be developed to assist water suppliers in identifying CII accounts with the potential for water use efficiency improvements.
  - Convert all landscapes over a specified size threshold that are served by a mixed meter CII account to dedicated irrigation accounts, either through the installation of a separate landscape meter or the use of equivalent technology.

NAICS Codes

334418	Printed Circuit Assembly (Electronic Assembly) Manufacturing
334416	Electronic Coil, Transformer and other Inductor Manufacturing
334511	Search Detection, Navigation, Guidance, Aerospace
334510	Electromedical and Electrotherapeutic Apparatus Manufacturing
334513	Instruments and related products for manufacturing for measuring, displaying,controlling industrial process variables
334516	Analytical Laboratory Instrument Manufacturing
334519	Other Measuring and Controlling Device Manufacturing
33599	All Other Electrical Equipment and Component Manufacturing
335999	All Other Miscellaneous Electrical Equipment and Component Manufacturing
9271	Space Research and Technology
335931	Current-Carrying Wiring Device Manufacturing
335932	Noncurrent-Carrying Wiring Device Manufacturing
3364	Aerospace Product and Parts Manufacturing
33641	Aerospace Product and Parts Manufacturing
336411	Aircraft Manufacturing
336412	Aircraft Engine and Engine Parts Manufacturing
336413	Other Aircraft Parts and Auxiliary Equipment Manufacturing
336414	Guided Missile and Space Vehicle Manufacturing
336415	Guided Missile and Space Vehicle Propulsion Unit and Propulsion Unit Parts Manufacturing
336419	Other Guided Missile and Space Vehicle Parts and Auxiliary Equipment Manufacturing
336992	Military Armored vehicle, Tank, and Tank Component Manufacturing
3391	Medical Equipment and Supplies Manufacturing
33911	Medical Equipment and Supplies Manufacturing
339112	Surgical and Medical Instrument Manufacturing
5950	Coils and Transformers
5995	Cable, Cord, and Wire Assemblies: Communication Equipment
5963	Electronic Modules
6998	Electrical and Electronic Assemblies, Boards, Cables, and Associated Hardware
1370	Pyrotechnics
3694	Clean workstations, Controlled environment, and related equipment

SAWPA

PA 22 COMMITTEE MEMORANDUM NO. 2017.8

DATE: April 27, 2017

TO: SAWPA Project Agreement 22 Committee

SUBJECT: Metropolitan Water District Regional Turf Removal Program

RECOMMENDATION
Receive and file this update on the Metropolitan Water District of Southern California Turf Removal Program.

DISCUSSION
As the Emergency Drought Grant Program contains the High Visibility Turf Removal Component, staff has analyzed the results of a recent audit of the Metropolitan Water District of Southern California (MWDSC) Turf Removal Program. The Program is administered under an agreement with Electric Gas and Industries Association (EGIA). EGIA performs the inspection and verifications for the MWDSC Turf Removal Program.

The results of the audit were contained in a recent report to the Metropolitan Water District of Southern California board of directors. The report discussed a review of the inspection/quality control procedures.

Staff worked with the SAWPA member agencies, the Municipal Water District of Orange County and Rancho California Water District ("turf partners") during the initial months of the Emergency Drought Grant Program to understand and document their verifications procedures. Staff is using the information used in the MWDSC report to ensure quality control of those individual projects involved in the Emergency Drought Grant Program meet the program's qualification requirements.

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

- Administration of the OWOW process and plan in a highly efficient and cost-effective manner.

RESOURCE IMPACTS
Funding for managing the grant administration comes from the Proposition 84 IRWM Drought Grant Program as contained in the SAWPA Commission's two year budget for Fiscal Years Ending 2016 and 2017.