

# Earth Day 2017 General Services Agency



## SPECIAL SERVICES, HOUSEKEEPING AND GROUNDS

*The Earth Still Needs Us  
It's up to us to save our planet*



*For an electronic copy go to:*

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On this Earth Day, The General Services Agency, Housekeeping and Grounds and Special Services Departments celebrate the wonders the earth provides. It is the only planet in this solar system that supports life. Its surface produces plants and trees which provides oxygen, food and shade. The atmosphere protects us from outer space and contains the air we breathe, the rain provides life essential water. That water provides a home for aquatic creatures and water for us to drink. Because it does so much for us, we should be respect its laws. We should preserve and protect it.

The General Services Agency, Housekeeping and Grounds and Special Services Departments are committed to the preservation and protection of the earth in everything that we do. It has gone beyond our culture into our professional DNA.

The following pages provide information on what we are doing to nurture and show kindness to the earth.

Rosalind Harris

Facility Manager

*B.S. Engineering, M.S. Acquisitions and Contract Management*

*American Board of Homeland Security Accredited*

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# **SECTION 1**

## **SECURITY/SPECIAL SERVICES**

### **Paper Reduction**



## GSA is Going Green, Green, Green in Everything

The County of Ventura, General Services Agency has made it our goal to do all we can to protect the environment by continuously examining our current processes and procedures to ***Reduce, Recycle or Reuse*** where ever possible.

The Security & Special Services Department has taken several steps towards better serving our clients while focusing on the Green Initiatives adopted by the Board of Supervisors.

The first step that was taken was to *Reduce* or eliminate the use of paper in our office processes. This small effort has made a huge impact on the amount of paper that is faxed, copied, mailed and distributed. The processes that are now paperless are as follows:

- Room Reservations/Equipment Request
- Carpool Parking Permits
- Vehicle Parking Permits
- Temporary Parking Permits
- Bike Locker Request Forms
- ID Badge Billing
- Room Reservation/Equipment Billing
- Work Order Request
- Security Reports
- Contracted Security Time Reporting
- Security Inspection/Patrol Reports
- Security Incident Reports



The second step completed in July 2008 was the conversion of the paper application to a Microsoft Excel form that can be completed, submitted, and stored online. This form is used for every conference room reservation or equipment request averaging 800 to 1,000 annually. The reduction of paper used in this process is saving more than 1900 sheets of paper annually.

The third step completed in August 2008 was the removal of faxed forms submitted daily from the Security Control Center to the Security Operations Managers Office. There is a reduction of over 3,800 forms annually in the Reserve Parking, Carpool Parking Permit, and the Security reports process alone.



In 2011, GSA Special Services began a concerted effort to transfer all of the forms to e-forms. To date the Vehicle Parking Permit, Carpool Permit and Bike Locker Permit forms have been added to DocuShare. This created a large savings in paper and ink usage.

Other forms that have not yet been converted and are currently being used are scanned by the client and then submitted electronically. Hard copies of these forms are no longer stored in our warehouse or in our file cabinets. Electronic data files have been established in shared folders where necessary and are maintained for 2 years.

A total of over 6,700 sheets per year of paper used in our department have been eliminated from the process so far.



The next step is to evolve technically by capitalizing on our technology with the use of computer programs that provide security to our information while supporting our business needs. Once this is accomplished, many of these forms will become

obsolete. This step is currently in process and is expected to be completed by the end of this year.

The cost savings associated with the reduction of paper and the elimination of faxes calculates in the thousands of dollars; 127,000 sheets of paper and hundreds of trees. Time and material savings are only part of the rewards associated with this small change in the way we do our daily business. We are doing our part to save the trees in our forests that are so precious to our environment.

It pays to reduce, recycle and reuse especially in today's economy. Do your part too and you'll see for yourself the benefits of it.



## **Room Reservation Program – Billing Process Improvement**

GSA Special Services has been busy making process improvements to the Room Reservation Program. The reservation program began as a manual program requiring the customer to submit a paper form to request conference rooms for meetings located in the Hall of Justice and the Hall of Administration. Additional forms were required to reserve equipment or to arrange setup. The forms were then faxed to the service building guard to manually input and distribute to maintenance personnel. The following changes have been made to improve customer satisfaction and functionality of the program.

- ❖ Purchased event planning software that can be used via the internet by all authorized users, eliminating the paper form and expanding the program base.
- ❖ Purchased upgrades to the event planning program to provide meetings listed on an E-Kiosk automatically, eliminating staff to provide data entry. Directional maps are also available at the E-kiosk to assist customers with finding their way to the conference rooms.
- ❖ Streamlined the process through a Kaizen to leverage technology by eliminating redundancies of effort and implementing tablets that can be used out in the field. This process also eliminated daily setup worksheets printed and distributed to the setup crew.
- ❖ Updated technology of equipment in conference rooms by adding 'Skype for Business' to conduct virtual meetings, eliminating travel costs and travel time. Large wall-mounted monitors have been added to the conference rooms for better viewing.
- ❖ Provide training on equipment to customers as needed who wish to practice their presentations, improving customer satisfaction.
- ❖ Implemented a streamlined process for last minute requests for equipment to be handled directly with Maintenance Dispatch, eliminating redundancy of work and providing full time maintenance dispatch support.

With the new upgrades, savings include \$42,530.72 in 3,544.23 hours of labor, and \$936.00 in materials (7,880 sheets of paper and 12 ink cartridges).

## **Temporary Parking Permits**

Prior to 2011, a vendor or visitor in need of a temporary parking permit for one week or less was to apply for a parking permit. Once it was approved a temporary parking permit was issued. One permit was issued for each day due to the expiring chemical decal used on the temporary permit. There was also no process in place to track the temporary permits; who they were issued to or where they were authorized to park.

With the new process, one decal per event can be used across a finite time frame. The department submits a parking permit request on-line and it goes through the approval process. The permit is issued for the time frame needed.

Prior process took approximately 20 minutes for an average of 50 temporary permits per year equaling 16.6 hours. The new process takes 10 minutes for 50/year equaling 8.3 hours for a time savings of 8.3 hours per year or \$409.94. Use of the Graphics department will ensure a future savings in paper usage and in-house resources as well as making this a green accomplishment.

## **Parking Permit Application Process (E-Form)**

Prior Process - GSA processes approximately 1000 parking permits and hangtags annually. The parking permits and hang tags were obtained by submitting an application via brown mail, fax or email to GSA Security from the applicant. The application was reviewed for accuracy, processed and then approved by the GSA Special Services Manager. Once approved the parking permit went to the GSA ID Badge Desk for assignment of the appropriate parking permit, logging into the spreadsheet and distribution of the permit. This process took approximately 30 minutes each permit request for a total of 500 hours.  $500 \text{ hours} \times \$49.39 = \$24,695.00$ .

The new process requires the parking permit application form to be submitted to GSA Security via the on-line application. The application is approved on-line by the reviewer and sent via email to the authorized signer. Once approved it signals an email to be sent to the GSA Security Manager who approves it on-line. This process takes approximately 10 minutes; a savings of 20 minutes per permit.  $1000 \times 10 \text{ min} = 10,000 \text{ minutes}$  divided by 60 = 166.6 x \$49.39 = \$8,228.37 soft savings in time and in paper and ink \$44.70 for a total current savings of \$8273.07. Prior cost \$24,695.00 - \$8,273.07 = \$16,421.93 total savings.

## **Bike Locker Permit Process (E-Form)**

Applicant would contact the Security Control Center (SCC) about information on obtaining a bike locker. Security would email them the application to fill out. The applicant would fill out the application and turn it into the SCC. The applicant's information was then typed into a spreadsheet that required updating and monitoring for accuracy. This process took approximately 60 minutes per bike locker request. 1 hour X 96 requests = 96 hours x \$49.39 = \$4,741.44.

Improvement - Applicant goes online and fills out the e-form for a bike locker to be assigned. The request comes in to DocuShare and is immediately approved. A bike locker is assigned and an email is sent to the applicant informing them of the locker number and further instructions. Because the information is now in DocuShare, the spreadsheet is no longer necessary as reports can be run from DocuShare. By automating the system we have reduced the opportunity for human error, and saved time and paper. The process

now takes 5 minutes  $\times 96 = 480/60 = 8$  hours  $\times \$49.39 = \$395.12$ . The total savings is. \$4346.32.

### **Changing from Fax Machines to Scanners**

By converting to the use of scanners at \$50.00 each The Special Services Department has eliminated ten (10) Fax machines and Fax lines for a total savings of \$3,090.00 annually:

*10 Fax lines  $\times$  \$25.75 per Fax line  $\times$  12 months = \$3,090 per year*

As a result of this change we have eliminated the use of 80 toner cartridges. As we haven't had to buy them for the kiosks, this is a total savings of \$1,600.00 annually.

In addition to the above there has also been a savings in paper usage. From each of the kiosks to the Security Control Center (SCC) there were approximately eight (8) sheets of paper being sent per day. The total paper savings for the eight kiosks is 34,160 sheets per year.

From the SCC to the kiosks there were two (2) sheets of paper being sent per day. The total for the eight kiosks is 8,540 sheets per year.

Grand Total paper savings is 42,700 sheets of paper  
Cost of savings is \$1,281.00

The total cost savings for changing out the Fax machines and adding scanners is \$5,971.00 annually.

# **Maintenance Work Orders/Incident Reports**

## **Process Improvements**

### **Problem**

1. Timely distribution of information. People who need the information are not getting it in time.
2. Follow up is not efficient or effective. It is believed we can improve the problem by improving the method by which the information is documented.

### **Process Evaluation**

The results of the examination of the processes indicated the following problems:

1. The information for Maintenance service calls was being put into the Security Incident Reporting (IR) system by the nighttime security dispatch employee. The information was later being put into the Maintenance Work Order (W/O) system from the security IR system manually. Because of the format of the IR it is clear that relevant information was being buried in the description. The Maintenance W/O system is designed to facilitate management of W/Os. To eliminate this problem, the SCC now enters W/Os directly into the MAINTSTAR system. In addition to the benefit of streamlining the system and making information readily available to Maintenance personnel, the SCC data base and storage has been reduced by eliminating the non-related maintenance information. This process also eliminates one page in the Security Managers daily summary report.
2. Follow up on the Equipment Down List (See attachment II). There have been consistent complaints from the Maintenance Department that the status of the Equipment Down List is not real time – dated. Because of the new process the Maintenance Department can now go into their system and query real time information for tracking because the reference IR# that was on the Equipment Down List has been replaced by the W/O number.

## **Overall Analysis**

The removal of the IR# in the Maintenance reporting system has eliminated several manual steps, the production of reports and redundancy in data storage and management. They have been highlighted on the Future State process.

## **Additional Actions**

To improve communications and support the process changes, Rosalind Harris met with Maintenance, Projects and Special Services Staff and redefined the duties and Roles and Responsibilities. (See attachment IV). The SOP for SCC was also developed.

## **Hard savings**

Hard savings consist of paper, ink and data storage.

- Paper savings per year of \$884.52. This was arrived at by using the following:  $9 \text{ pages} \times 9 \text{ people} \times .03/\text{page} = \$2.43/\text{report}/\text{day} \times 7 \text{ days week} = \$17.01 \times 52 \text{ weeks}/\text{year} = \$884.52/\text{year}$ .
- Ink savings of \$2,653.56. This was arrived at by using the following:  $9 \text{ pages} \times 9 \text{ people} \times .09/\text{page} = \$7.29/\text{report}/\text{day} \times 7 \text{ days week} = \$51.03 \times 52 \text{ weeks}/\text{year} = \$2,653.56$ .
- Data storage savings of \$292.41. This was arrived at by using the following:  $1083 \text{ IRs}/\text{year} \times 9 \text{ people receiving them} \times .03/\text{page} = \$292.41$

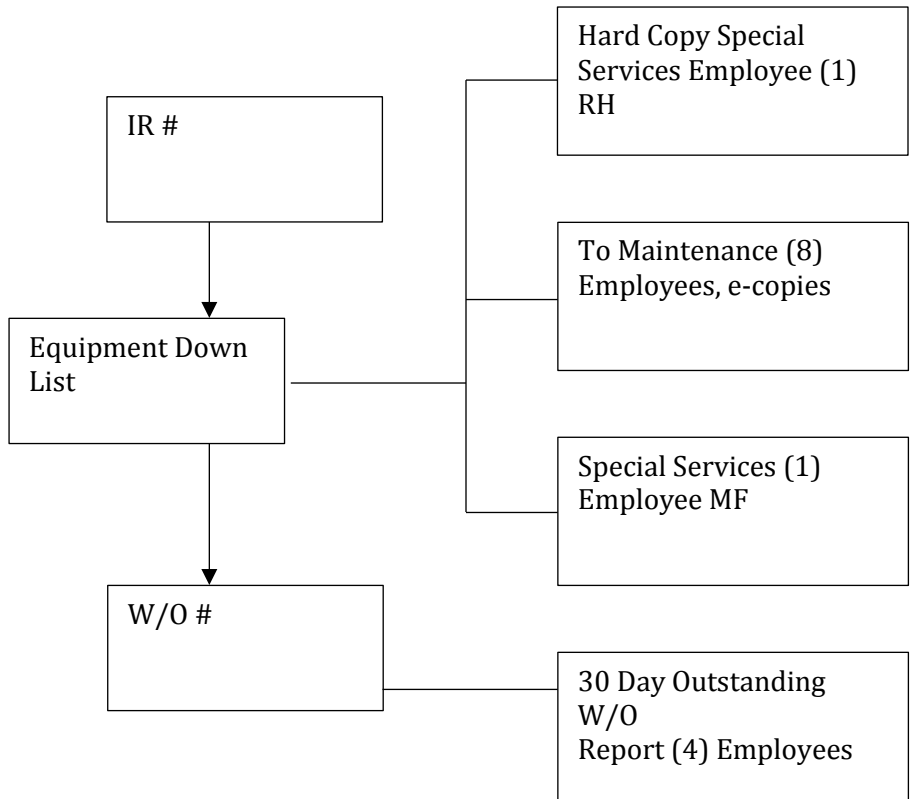
## **Soft Savings**

Labor savings

- 30 minutes/day entering data into Report Pro and reviewing the data.
- 15 minutes/day making copies and mail handling
- 10 minutes/day emailing reports
- This equals  $.68 \text{ minutes}/\text{day} \times 365 \text{ days}/\text{year} \times \$49.39/\text{hour}$  for an annual savings of \$12,258.60

## **CURRENT STATE – EQUIPMENT DOWN LIST**

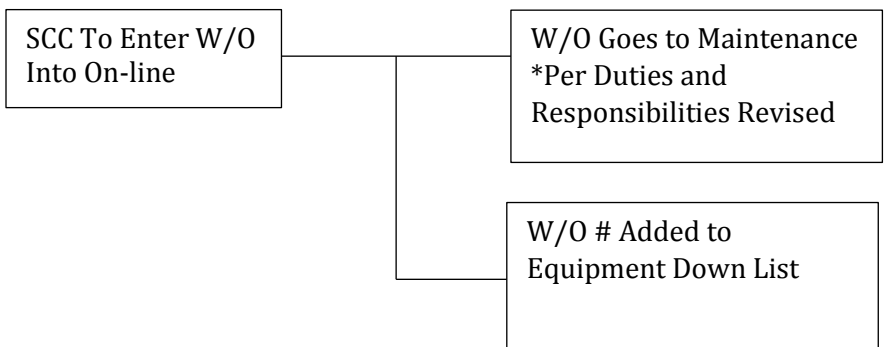
(For Oversight and Management Performance)



## **FUTURE STATE**

Maintenance Dispatch from SCC Recordkeeping

Eliminated 5 steps and eliminated the need for IRs which eliminated 5 steps as well as the redundancy of entering the information into CESI and MAINTSTAR by the separate department.





## **Room Reservation Process Improvements**

### **Improving the Process to Stay Green**

The process team documented and evaluated the existing process. A concerted effort was made to take advantage of technology by automating all manual processes. The following paragraphs discuss our findings and changes made.

The room reservation software program is currently managed and maintained by GSA Special Services. The previously used process required the client to print the room reservation/equipment rental form from the GSA Special Services Web site. Then, the client was required to correspond with the attendant to check the availability of the desired conference room. Once the availability was determined, the client had to manually fill out the form and fax it to Special Services where it was manually entered into the room reservation program. Special Services provided paper copies of all the meetings scheduled to various agencies and personnel on a weekly basis. Meeting confirmations were printed and distributed daily. Maintenance would then process a Work Order in MaintStar for workload tracking. The room setup and equipment is provided by GSA F&M.

The room reservation process in place today is much simpler to access and use. The program is available at every workstation via the intranet. The client has access to the current schedule to view the room's availability. Once availability is determined, the client schedules the room, equipment and setup as needed.

The room reservation administrator reviews the reservation the client scheduled for accuracy. Once complete, the reservation is confirmed. A courtesy confirmation email is then sent to the client.

The AV Techs review the reservations on-line daily and set the rooms up accordingly. The client is met in the room before the meeting to ensure setup and connectivity.

Monthly billing information is downloaded from the server and sent directly to accounting via email. We now have a completely paperless process.

## Benefits

- ❑ Improves customer service. More convenient for customer to schedule meetings.
- ❑ Facilities are better suited for technically supporting our business needs.
- ❑ Time saved for the Service building Security Guard kiosk.
- ❑ Free program updates available for 1 year without interruptions to the customer or services provided.
- ❑ Reduces errors and eliminates redundancy in effort.
- ❑ Increase in revenue and annual cost savings
- ❑ Reduces paper usage by approximately 11,700 sheets annually supporting the 'Paperless Office' commitment.
- ❑ Lower costs to clients.
- ❑ Time Savings for AV Techs will have reduced setup requirements enabling them to work on other projects. Time reduced approximately 39%.
- ❑ Scheduling Ease
- ❑ Customer Satisfaction Increased.

## **Parking Placard Process Improvement**

GSA processes approximately 300 parking placards annually. The parking permit placards were obtained by submitting an application to GSA Security. The application was processed and approved by the GSA SS Manager. Once approved the placard was developed and signed by the manager. Once signed, it was laminated and delivered to the client or the client was contacted for pick up. This process took approximately 30 minutes each. Total cost to process was \$7,510.50. The new process requires the parking permit application form to be submitted to GSA Security. The application is approved by the GSA Security Manager. Once approved the permit number is logged and the new hanging tag parking permit is provided to the client. Time savings of 25 minutes each. This process improvement saves both time and material.

# **SECTION 2**

## **GROUPS IMPROVEMENTS**



## The Weather Station and Water Conservation



In December 2008 the GSA Grounds Department installed a weather station at the GSA Service Building located on the Government Center Campus. The wireless system sends valuable information to our Central Irrigation Computer. The weather station provides

weather data that can be used for irrigation scheduling. The weather station takes weather information such as solar energy, temperature, humidity and wind velocity and converts this information into (ET) or Evapotranspiration. This is a measure of the amount of water that is used by turf, plants and trees on a daily basis. ET is expressed in inches of water per acre. Soil moisture is depleted by plants twenty four hours a day - ET tells us the amount of water that is depleted from the soil on a daily basis so we can replenish the soil water reservoir. The weather station also provides us with some weather forecasting based on changes in barometric pressure.

A recent evaluation of the irrigation water usage at the Government Center revealed a significant reduction in applied water for the year. Calculations indicated that the GSA Grounds Department achieved a water savings of 25% to 35% % less water from our well than was required according to the University of California Evapotranspiration (ET) data.

The benefits of the weather station are many; (1) water is conserved because the station shuts down automatically during rain events, (2) the weather station makes daily changes in the amount of applied water thus minimizing the potential for human error, (3) ET assures that the plants are getting the right amount of water at the right time – this makes for healthier plants that can resist pests and diseases thus minimizing the need for pesticide applications, (4) Healthier plants make for a better looking landscape.

The onsite Weather Station and Toro Sentinel II irrigation system have proven to be very effective tools. In fact so effective that the Toro Sentinel Wireless Irrigation System was recently installed at 2220 Gonzales Road, the Saticoy Yard and the Juvenile Justice Center by

Innovative Irrigation Systems. This was due to the substantial water savings that has been achieved at other sites such as the Government Center, 646 County Square Drive, 669 County Square Drive, and 4651 Telephone Rd using this system. The GSA Grounds Department remotely manages the irrigation from the Government Center.

## **Drought Conditions**

In response to the ongoing severe drought in California, we have curtailed the watering of the lawn areas at the Government Center, greatly reducing the frequency. At these minimum levels, we allow the grass to become dormant but not to die. Trees and shrubs continue to receive proper watering so they remain healthy.



This reduction of watering at the Government Center has netted a savings of many millions of gallons of water over the same period the previous year. This further encouraged us to reduce watering at our six outlying sites, thereby conserving even more water.

Approximately 5,000 square feet of turf in parking lot 'E' finger was removed. Weed barrier and a two inch layer of Cedar Red Mulch was installed. This work is part of the overall strategic plan to significantly reduce water consumption at the Government Center, in response to the current drought.

## **Water Conservation Measures**

The GSA Grounds Department has implemented numerous water conservation measures over the last several years. We are responsible for the irrigation system management at the Government Center and 24 additional County properties that the Department manages.



The Government Center is irrigated using an on-site well. Therefore, all of the water used is ground water. The cost of the water is much less expensive than municipal water. The only associated costs are for electricity to pump the water and for well maintenance. The water quality

is rated as being “poor” for the purpose of growing landscape plants, primarily due to its high salt content. However, the proper management and the use of salt tolerant plants, they are able to do a fairly good job of maintaining good plant health and vigor.

The other 24 County properties that are being managed get their water from municipal water purveyors. The irrigation systems are maintained and managed by landscape contractors. The Supervisor checks the properties regularly and corresponds with the owner and supervisors several times a week to assure that the irrigation is in good order and that the contractor is not over watering.

### **Best Practices**

One of the water consumption reduction measures was water scheduling modifications. As far back as 2003, the Government Center was receiving up 6 complete irrigations per week. Fiscal year 2005 the irrigation system automations were upgraded and re-zoned to facilitate more versatile methods and techniques of watering and to make maintenance easier. The careful water management has resulted in highly significant reductions in water usage and electrical pumping charges. The new system has hand held remote control devices which makes on-site inspection and repair easier. Fiscal Year 2006 the watering methods were divided up into three categories/areas.

Area 1: Which covers 20% of the campus; contains shady area established shrubs and ivy. The irrigation system was turned off in these areas.

Area 2: Which covers 40% of the campus; receives 10 minutes of irrigation.

Area 3: Which covers 40% of the campus; is more drought resistant and receives only 5 minutes of irrigation.

### **The frequency of irrigation has been reduced:**

Spring and Fall from 3 to 2 times per week; reduced to 1 time per week during the drought.

Summer from 6 to 3 times per week; reduced to 1 time per week during the drought.

Winter from 3 to 1 time(s) per week; curtailed altogether in the event of sufficient rainfall.

Fiscal year 2007 electronic flow meters were installed and tied in to the new irrigation system. These new meters report information into our data

base from our three largest locations: Government Center, County Square Drive and Telephone Road.

This information has facilitated the below summary of savings.

### **Government Center**

50% water consumption reduction

Water savings per year = 47,125,000 gallons = 63,001 HCF

Energy savings from well pump per year = \$688

*Note: There is no water cost savings due to the fact that we use well water.*

### **646 County Square Drive**

50% water consumption reduction

Water savings per year = 115,960 gallons = 155 HCF

Cost savings per year = 155 HCF (\$2.40/HCF) = \$372

### **669 County Square Drive**

50% water consumption reduction

Water savings per year = 256,568 gallons = 343 HCF

Cost savings per year = 343 HCF (\$2.40/HCF) = \$823

### **4561 Telephone Road**

50% water consumption reduction

Water savings per year = 513,552 gallons = 687 HCF

Cost savings per year = 687 HCF (\$2.40/HCF) = \$1,649

### **Total**

Water savings per year = 48,011,080 gallons = 6,419 HCF

Cost savings per year = \$2,844

Energy Savings = \$688

**Total Cost Savings: \$3,532**

Below is a summary of water savings measures that are currently being used.

- The irrigation system at the Government Center, 646 County Square Drive, 669 County Square Drive and 4561 Telephone Road are controlled using a Toro Sentinel irrigation system that is state of the art. The system has been adjusted to maximize efficiency. Flow meters have been installed to monitor water usage in order to conserve water usage.
- Water saving irrigation heads and nozzles added.
- Watering is done primarily at night to reduce evaporative losses.

- Changes are made regularly and quickly as the weather changes.
- Adjustments have been made to reduce the amount of applied water to many areas that are low or are shady most of the time.
- Some areas that have established drought resistant plants have been turned off for extended periods of time.
- Mulch has been applied wherever possible – again to reduce evaporative losses.
- Weather forecasting is used to turn off water before periods of rain.
- CIMIS Evapotranspiration (which is a State maintained weather station that gathers data) information is used for scheduling and to determine the best time to turn water back on after a rain event.
- Contractors are notified when to turn water off, make adjustments and when to make repairs.
- Irrigation systems are checked regularly and repairs made to assure that leaks are fixed and water is not being wasted.
- Drought tolerant plants from the Integrated Pest Management Committee Recommended Plant List are used for new plantings whenever possible.
- Conducts irrigation audit using California Department of Water Resource standards.

The use of the above mentioned measures equate to significant water savings. Please see our Key Performance Indicators accessible from the GSA home page for specific quantities.

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*Note: Evapotranspiration (ET) is a measure of plants water requirements on a daily basis. ET is measured using weather station data. Factors influencing ET are; solar energy, temperature, humidity and wind speed.*





## **Water Conservation Methods**

### **Pervious Pavement and Gutters:**



Currently pervious pavement and gutters have been installed at parking lots A and B at the Government Center. Pervious pavement and gutters allow for more water penetration into the water table rather than the water being wasted as runoff. Future pervious pavement and gutter projects have been approved for the entire Government Center complex. GSA is partnering with the Public Works Agency to provide maintenance to the pervious pavement installed in the Government Center parking lots. Pervious concrete comes with a guarantee of functionality for not less than 20 years from the date of completion of construction.

### **Animal Services Irrigation Upgrade:**

Our vendor installed a pressure regulator on the irrigation backflow prevention manifold to reduce excessive pressure to an appropriate working pressure of 75-85 PSI. This upgrade reduced strain on the irrigation valves, sprinklers, and seals, increasing their longevity.

293 sprinkler heads were replaced with water-efficient heads which save up to 30% water by applying water at a lower rate in order to allow soil infiltration and less misting. Less misting reduces wind drift and overspray.

Our vendor applied to the SoCal Watersmart Program, and passed along a rebate to the County of \$4 per sprinkler nozzle, totaling \$1,172.

### **Telephone Road Building Combined Methods:**

GSA installed jute mesh to stabilize the slope at the Telephone Road building, along with new mulch which suppresses weed growth and reduces the need for herbicides and pesticides. New mulch retains soil moisture, resulting in a 30% savings in water efficiency for the sprinkler nozzles which were exchanged. The sprinkler nozzles apply water at a slower rate and with less misting to reduce water loss from runoff, drift, and evaporation.



### **East Valley Sheriff Station Upgrade:**

The EVSS Property was upgraded with a Sentinel Controller to tie into the Irrigation Central Control System managed by Grounds for multiple sites. This included the installation of a Hydrometer to control and measure water flow, and the valve replacement and water efficient nozzle upgrades. These upgrades will have a tremendous impact on water savings for this large property by maximizing water efficiency through regular monitoring, appropriate water applications, and fail-safe back-up systems to prevent water waste when damages or malfunctions occur.

### **Drip System Installation:**

Installed drip systems specifically for trees to supply appropriate irrigation during periods of drought to preserve this valuable resource, independent of turf watering that can be cut back or eliminated at the southwest portion of the Government Center. Adding mulch to protect the system also helped to retain moisture and suppress weed growth, thus reducing the need for herbicides.

### **Agricultural Commissioner's Office:**

Modified Irrigation coverage patterns to eliminate overspray and apply water in a more efficient manner at the Agricultural Commissioner's Office.

### **Quad Landscape Design:**

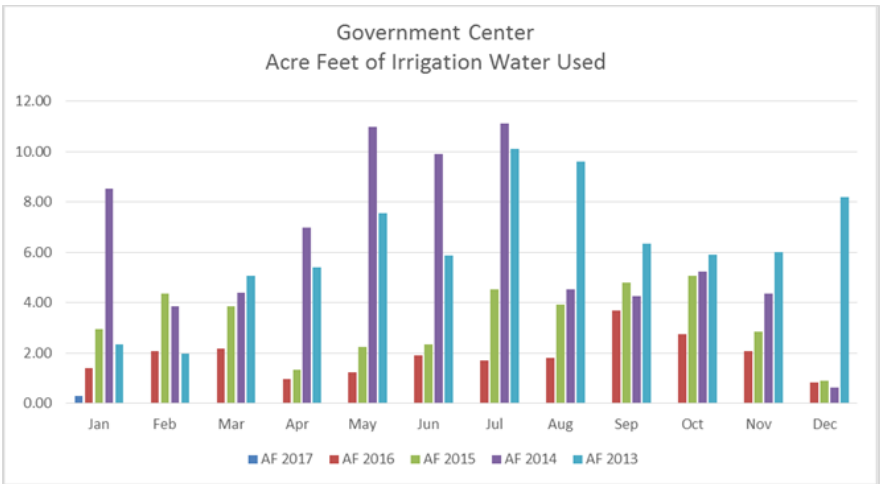
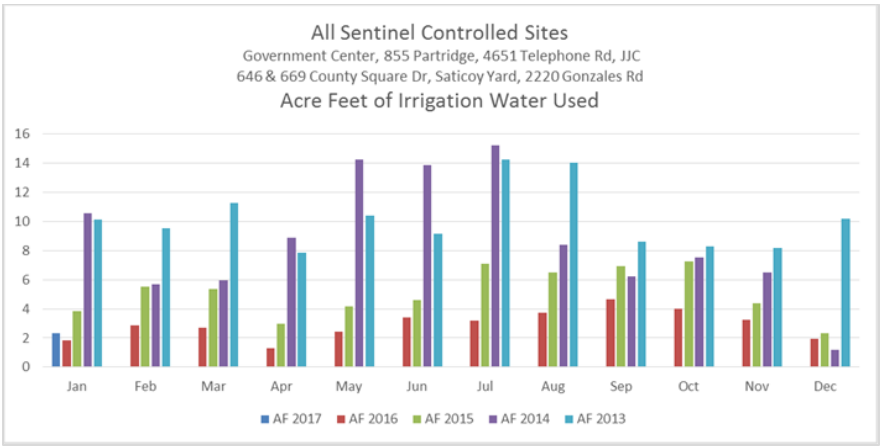
Installed Quad Landscape designed with drought tolerant plantings and a bio-swale to capture storm water run-off and allow to percolate into the groundwater system.

### Recycled Rubber Mulch Grant:

As part of a grant conveyed to the County, turf areas were exchanged with recycled Rubber Mulch with drip systems installed for trees in selected finger planters at the Government Center. This project furthers the goal of water conservation in periods of drought and significantly reduces the need for herbicide applications to control weeds.

### Xylosma Removal:

Removed aged, fast growing Xylosma hedge to permanently reduce maintenance costs for hedge trimming several times a year, pesticide applications, and watering in a less visible area of the Government Center.



## **Solid Waste Billing Process**

The Grounds Supervisor (GS) was reviewing approximately 285 line items of data on PDF images of invoices provided by GSA Accounting and sending them to the Grounds Manager (GM). (16 hrs/year). The GM reviewed and sent an email to GSA Accounting stating "funds available". (2.0 hrs/year). Total time: 18.0 hrs/yr).

Changes Implemented include GSA accounting receiving invoice data via a data download from EJ Harrison. Invoice data is then imported to Excel and compared to data from preceding month which highlights variances. This spreadsheet, together with PDF invoices, is emailed to the GS for review and approval of highlighted variances. (5.6 hrs/year). GS emails spreadsheet to the GM who reviews the approved variances and sends email to GSA Acct stating "funds available". (2.8 hrs/yr). Total time: 8.4 hrs/yr. The changes implemented also reduce invoice review errors and omissions which creates additional savings of 5.0 hours per year of prior period reconciliation of changed services. Total savings of 14.6 hrs/yr.

## **Illicit Storm Drain Discharge (Program Oversight)**

GSA, Special Services, Housekeeping and Grounds are providing compliance, education, training and awareness to our vendors and clients on an annual basis. It has also been integrated into our contracts and our quality assurance programs. The Contract Administrators for Landscape, Custodial and Special Services programs will oversee and inspect their contracts to insure compliance. Contract sanctions are available as a remedy. Any penalties, as discussed in the following summary from Anacapa Consulting Services, Inc. of February 4, 2011, will be passed on to the vendors of the County. (See Ordinance 4142).

All vendors that are impacted by the storm drain requirements have been notified by changes to their purchase orders. In addition, training sheets have been provided to the vendor with a signature line stating that the vendor has received the training sheets as well as a brief training session. A meeting was held with our vendors to explain the new changes and requirements. In addition to the above, we have provided information on the Outdoor Events requirements and the changes made to the IPM as a result of the Storm Water requirements.

By taking a storm water management approach including staff monitoring, vendor compliance and best management practices; GSA's Landscaping and Grounds program has adopted a preventative approach to illicit discharges that would be out of compliance with the National Pollutant Discharge Elimination System (NPDES).

In general, the risks of significant environmental damage from GSA activities are relatively low in comparison to larger entities like food production facilities, landfills, etc. If a discharge occurred, it would more likely be relatively small. A possible exception would be the illicit use of highly toxic chemicals by any of GSA's vendors. The IPM precludes these vendors from using toxic chemicals and any discharge would be considered a serious breach of contract.



- In the event that a violation occurred, either through its own actions or those of its vendors, GSA would be responsible for bringing this to the attention of PWA's enforcement personnel.
- With the exception of significant discharges as described above, and given the County's civic responsibility to meet its own standards, the most significant risks to GSA Landscaping and Grounds would likely be a notice of violation.



## Mulch

During the winter months, lawn growth slows down considerably. This gives us time to do projects that we wouldn't have time for otherwise. With the drought, we have had to step up efforts to ensure the life of our greenery. The GSA Grounds department has been applying mulch to bare soil areas, weedy areas and augmenting areas where the mulch is getting thin. Mulch breaks down over time and needs to be

replenished. Good quality wood chip mulch applied at a depth of 4 inches will typically last 3-4 years before replenishment is necessary. Finer green waste mulch materials may need to be replenished every 2 years.



The Grounds Department has an extensive mulching program at the Government Center and has started applying mulch to other properties that we manage. Mulch has been applied to 855 Partridge, 669 County Square Drive, 2220 Gonzales Rd and 4651 Telephone Road.

The benefits of applying mulch are many. Below is a list of many of the benefits achieved by applying mulch:



- Minimize soil erosion and impacts on storm water.
- Improve soil chemical and structural characteristics.
- Enhance the growth of beneficial microorganisms and earthworms.
- Conserve water.
- Reduce the need to apply herbicides for weed control.
- Reduce maintenance labor (mostly for weed control).
- Fertilize plants as it breaks down into essential plant nutrients.



The application of mulch also provides a pleasing natural look to the landscape. The next time you pass one of the locations where we have

laid rubber mulch, stop and take a look. You will see how well it blends in with the surrounding vegetation, complementing the living landscape as well as trying to preserve the future environment.

**XERISCAPE AT COUNTY PROPERTIES**

<b>PROPERTY</b>	<b>Xeriscape Improvements</b>
Government Center	10,750 s.f. Rubber Mulch 6,000 s.f. Crushed Brick Mulch 750 s.f. Synthetic Turf 5,000 s.f. R. Mulch
Rain Project	5,000 s.f. Mulch Behavioral
Health/Probation	4,000 s.f. Mulch
Moorpark PD	4,000 s.f. Mulch
East County Sheriff	4,300 s.f. Mulch
Juvenile Probation/Courthouse	6,500 s.f. Mulch 108,900 s.f. Mulch
Solid Waste Management	500 s.f. Mulch
Colston Youth Center	1,000 s.f. Mulch
Saticoy Yard	4,000 s.f. Mulch
Multi Service	9,000 s.f. Mulch
Animal Control	13,000 s.f. Mulch
ISD	300 s.f. Mulch
Multi Service	1,300 s.f. Mulch
House	300 s.f. Mulch
Ag. Commissioners Office	500 s.f. Mulch
Telephone Road Building	13,000 s.f. Mulch
Partridge Building	4,000 s.f. Mulch
<b>TOTAL</b>	<b>212,100 s.f. Mulch</b>

**4.9 acres**

**Drought Tolerant Plants**

In 2011, the GSA Grounds Department installed drought semi-tolerant plants, low maintenance plants, weed block and recycled rubber mulch in the small planter located at the entrance to the Public Works conference room at the Saticoy Yard. The new planting is an example of IPM (Integrated Pest Management) in that it reduces the need for pest control. Other benefits include conservation of water, the use of recycled materials and reduced labor costs.



## Demonstration Garden

In 2011, the GSA Grounds Department installed a Demonstration Garden at the south entrance to the Pretrial Detention Facility. The garden contains recycled rubber mulch, weed free plastic and synthetic sod. Future plans include the addition of another 1700 square feet of synthetic sod. The primary purpose of this installation is to show the community alternative products that can save water, and significantly reduce the amount of labor needed to maintain their landscape. We chose this site because it is located over an underground structure. The soil drainage conditions are less than desirable and it is hard to get plants to grow. We also wanted to reduce the amount of applied water and minimize the potential for leaks below. Recycled synthetic mulch reduces chemical weed control.



There is a native plant demonstration garden located on the right side at the entrance to the circular drive near the Victoria entrance. This garden was planted in the fall of 2009 with native plants. The plants were purchased from Performance Nursery by way of Matilija Native Plant nursery in Somis. A drip irrigation system was installed initially to get the plants established. The system was turned off after 5 months. We have not watered the



area for over a year and the plants are doing pretty well. Grounds



installed weed block material and mulch to minimize weed growth and to conserve water. The plants that have established themselves are; Manzanita, Sage, Galvesia, Blue-eyed grass, Juncus and Penstemon.

### **Ocean Friendly Garden**



Thanks to the Prop. 84 Stormwater Implementation grant, the County conducted Ocean Friendly Garden workshops at the Government Center for the general public to learn, design, and implement a project.

A 2,300 square foot site located outside of the Hall of Justice was selected, in cooperation with Public Works and GSA-Grounds Maintenance Department. The turf at this location was replaced with a rain garden.

After project completion, maintenance training was conducted for County employees and contractors as part of the Stormwater Training Program.

### **Tree Inventory Program**

A GPS Tree Inventory Software Program by ISA Certified Arborists was implemented for the Government Center, and off-site properties including 855 Partridge, 4651 Telephone Road, and 646 and 669 County Square Drive. This interactive, modifiable program and database provides GPS location, tree species (common and botanical name), size, characteristics, photograph, condition and assessment, recommended maintenance, and priority ratings.

## **Tree Management Plan**

The GSA grounds department keeps an inventory of trees. The trees are tagged and mapped whenever possible. The data base identifies trees as per their species, size and trunk diameter. Currently the GSA grounds department is responsible for approximately 2695 trees. Approximately 1098 of those trees are located at the Government Center. The remaining trees are located at other GSA/Grounds managed County properties.

## **Tree Attrition Plan**

The tree attrition plan is a comprehensive plan by which the trees are regularly inspected to determine the “Health and Safety” of each tree. The Tree Attrition Plan includes the following;

- Each tree is regularly inspected by an independent Certified Arborist.
- The Certified Arborist determines the relative health and safety of each tree.
- Trees are tagged and pictures taken whenever possible.
- Maps are regularly updated showing each individual tree.
- New trees are planted on an ongoing basis to replace trees that need to be replaced for health or safety reasons.
- Replacement trees are chosen that have desirable characteristics such as; drought tolerance, resistance to insects and diseases, or trees that are better suited to the environmental conditions in which they are to be planted.
- Recommendations that are provided by the Certified Arborist are prioritized (1-4). Priority 1 means that the tree needs to be dealt with immediately. This is usually a public health hazard. Priority 2 – as soon as possible. Priority 3 – in the near future. Priority 4 – when time allows.
- The GSA Grounds Department is very diligent in following the recommendations in a timely manner to assure the trees are healthy and safe.
- Environmentally friendly materials and cultural methods are used to maintain trees.

## **Tree Treatment**

To augment minimal irrigation schedules, Grounds is routinely deep-root feeding trees using a soil needle to inject water, fertilizer and

micronutrients directly in to the root zone to improve tree health, increasing resistance to diseases and insects during drought stress. Our trees have also been injected with Mycorrhiza. It is a soil fungus that forms a symbiotic relationship with the roots of most plants. The fungus increases the plant's absorptive capacity for water and mineral nutrients, thus limiting water waste.

## **Integrated Pest Management**

### **What is IPM?**

Integrated Pest Management (IPM) is the decision making process for managing pests that reduces the amount of health and environmental risks. It encompasses the use of mechanical, biological and green chemical treatment methods to reduce the amount of harmful substances introduced into the system.

### **GSA's Efforts**

GSA has demonstrated leadership in the successful implementation and use of an Integrated Pest Management Program. With the goal of utilizing the most environmentally sensitive approach possible to both plants and pest management, we have reduced the application of pesticides by 80%. Better planning, better pest management and choosing specific over systematic treatments have allowed us to create such a drastic improvement.

While reduction of pesticides has been successfully implemented, the elimination of these products would be a step too far. The IPM allows us to balance the use of pesticides to the health and safety of County employees and the public who visit our many locations. The ability to respond to an urgent situation that requires an immediate and potent treatment will still occur. The response to an urgent situation involving public safety may at times require treatment.

Through better practices, we should be able to identify the proper level of response and maintain our plan of using the lowest effective response. The Integrated Pest Management Committee was formed to share IPM methods and strategies that can be applied by other Agencies.

Throughout our IPM efforts, we have NOT used any EPA categorized tier I or tier II chemicals. The Use of Horticultural Oils on the Rosewood (Tipu) and Coral Trees.

## **We Have Taken IPM a Step Further**

The Rosewood tree, Tipu or “Pride of Bolivia”, *Tipuana tipu*, is a tree that is native to South America. It is widely grown as a landscape ornamental and shade tree in Southern California and elsewhere in the world. These trees are popular because they are drought tolerant, frost tolerant and have attractive leaves and flowers. In October 2008, the Tipu psyllid (*Platycorypha nigrivirga*), a new pest in California, was found feeding on Tipu trees in San Diego County. Over the last few years the psyllids have spread from San Diego to Los Angeles and Orange Counties. Only very recently have they been found in Ventura County.

Tipu psyllid nymphs and adults are tiny piercing sucking insects that feed off the vascular tissue of the tree. They attack young leaves and branches of Tipu trees. Nymphs produce a pelletized wax like residue. Adults and nymphs produce copious amount of honeydew which fosters the growth of the black sooty-mold on leaves and branches. The excessive amount of sticky honeydew can foul sidewalks and vehicles parked under the trees.

New pests such as these can multiply very quickly for a variety of reasons. When a pest arrives in a new area, there are often not enough beneficial insects to help in their control. Predatory insects that feed on the new pest may not have made the journey. Entomologists often return to the native origin of an insect pest to look for predatory insects that can be reared and used for control. Populations can increase very rapidly. Sometimes it takes a while before beneficial and predatory insects adapt and adjust to the new pest. It often takes a number of different species of predatory insects to develop in order to better control this new invader.

The Tipu psyllid was discovered at the 2220 and 2240 Gonzales Rd buildings in Oxnard on July 30, 2010. All of the Tipu trees (Approximately 80 Trees) had multiple life stages of the insect feeding on them. It was determined that the insects were causing undesirable residues on cars, parking lots and walkways. The infestation and multiplication of the insects happened rather quickly. For these reasons it was determined that quick control measures would be

necessary. All the trees were sprayed by a licensed Horticultural Pest control Operator. A Sunday was chosen to minimize any potential exposure to the public.

Least toxic alternatives and IPM (Integrated Pest Management) strategies were considered when determining the best control. Due to the high numbers of psyllids, honeydew on cars, and the lack of natural pest enemies, it was determined that quick and effective control was necessary. A combination of horticultural oil and a pyrethroid containing insecticide were chosen. The pyrethroid containing pesticide was chosen because it has a relatively low level toxicity rating and short residual, but when used with oil it provides quick and effective control.

The trees will continually be monitored for potential infestations. The psyllids are usually most prolific during the early leaf stage (spring and early summer) when there are a lot of tender leaves on the trees. Now that we are more aware of the new pest, we can monitor and control the pest more effectively. Early detection allows for more environmentally friendly pest control options and solutions.

In addition, the Coral Trees located at the HOA entrance were infested with mites. The mites stressed the trees by stealing water and nutrients. This caused undue stress which resulted in leaf drop and discoloration of the tree. GSA sprayed the trees with horticultural oil and the damage was kept to a minimum. The Grounds Department is pleased to report that it was effective in the treatment of the mites on the coral trees. Because of the success of this practice, we have extended its use to our outlying properties being maintained by our vendor of record.

This product is in line with the County's Integrated Pest Management strategies and is the least toxic alternative for adequate control.

Note: Horticultural oils are a non-toxic light mineral, vegetable, or refined based oils. The oil is usually combined with some type of emulsifying agent so that it can be mixed with water and used as a spray. Its use is an effective and ecologically friendly way to handle many garden insect pests and even some diseases. Generally applied as a spray, this type of pest control works by suffocating insects and their eggs. Horticultural oils may also deter pests from laying eggs and protect plants from viral or fungal diseases.

## **Integrated Pest Management and Sluggo**

IPM techniques utilized by the GSA Grounds Division minimize use of harmful chemicals to control pests at the Government Center and other sites we manage. Toward that end, we use a product called "Sluggo" to control snails and slugs. Sluggo consists of iron phosphate, a compound that occurs wildly and naturally in the soil and is not harmful to people or animals.

Traditionally snails and slugs have been controlled using products that contain toxic chemicals like metaldehyde. While effective in killing snails and slugs, metaldehyde poses danger to unintended targets. The toxicity level in metaldehyde is sufficient to cause serious, sometimes fatal, injury to animals and even children if ingested. Sluggo is the safer, least toxic alternative product and is an effective tool in implementing our IPM strategies.

## **Result of Caustic Chemical Use Outside of IPM**



When too much fertilizer is applied to a crop, garden or lawn, excess nutrients like nitrogen and phosphorus end up in the sewer and eventually in our lakes and streams.



Algae feed on the excess nitrogen and phosphorus and bloom in rivers, streams and ponds. The algae consume oxygen in the water, thereby choking fish to death.

Excess nitrogen in drinking water contributes to the "blue baby" syndrome in babies under 1 year old. One of the diseases causing blue

baby syndrome is Methemoglobinemia. Blood in such infants is unable to carry oxygen, and the condition can lead to death.

GSA Grounds does not use EPA Category 1 and 11 chemicals, and has reduced less toxic pesticides by 86% since 2007.

### **Anticoagulants and IPM**



Using anticoagulant bait interrupts the life cycle as smaller animals contaminate the larger animal.

In March of 2005, the Board of Supervisors recommended that the County of Ventura eliminate the use of anticoagulants due to the possibility of unintended poisoning of larger animals such as coyotes and mountain lions. This was in support of AB 1548 (PAVLEY) which recommends the avoidance of the use of anticoagulants to the extent possible. Specifically, the Grounds division is complying with the request by taking a comprehensive program overview to seek opportunities to reduce anticoagulants where applicable and use alternative methods.

Existing protocols for approval of any chemical application is documented. Decisions are first based on the need for control; secondly on the failure of non-pesticide control methods, and last on an evaluation of the various chemical options available; their toxicity, their potential for unwanted exposure and adverse impacts, and their demonstrated efficacy for the proposed application. Anticoagulants will be placed at the bottom of the list.

In an effort to prevent and eliminate rodent populations, it is important that conditions favorable to their survival be reduced or eliminated as much as possible, thereby reducing the chemicals needed to treat these pests. Prevention begins with sanitation. Additionally, exclusion measures shall be taken that will make structures less hospitable or accessible.

## Zero Waste Stream

Did you know that the GSA Grounds Division maintains the landscape at the Government Center and other County facilities as a nearly zero waste stream operation? All grass, tree and plant clippings are either reused on site as mulch or are hauled to Agromin and recycled to wood chips and green waste. Collection of clippings is done with reusable and recyclable burlap sacks made of Jute vegetable fiber and are



reusable for approximately six months, after which they are recycled to green waste. The plastic eco-friendly pesticide containers are triple punched, triple rinsed and recycled. Implementation of these zero waste stream efforts reduces our use of plastic bags by 95%.

## Master Gardener Workshop

### Can Help You Prevent An Asset From Becoming Waste

*For Eye on the Environment 1/18/15*

By David Goldstein, VCPWA, IWMD

Which one of your possessions would cost you thousands of dollars to discard? A large tree on your property can be a valuable asset or a terrible liability.

Selected, planted and maintained correctly, a tree can add value to your home and beauty to your neighborhood. The wrong tree in the wrong place, however, can grow into the eaves of your home. Its roots can disrupt your plumbing or crack your pavement, and its fallen leaves can become a burden. Even the shade of a tree, so valuable for reducing heating bills in the summer, can become a problem if it prevents your vegetable garden or solar panels from receiving sunlight. In some cases, trees can become fire hazards. For example, the blue gum eucalyptus is not only a flammable tree, it responds to fire by shooting out exploding seed pods capable of spreading the blaze.

The potential problems presented by trees, and the high cost to remove them, can be avoided through better knowledge — an area of environmental education called “urban forestry.”



From 8 a.m. to noon Saturday, the UC Cooperative Extension will present one of its quarterly workshops in a series titled “Mastering Your Home Garden.” The workshop, to be held at the Hansen Agricultural Research Education Center at 14292 W. Telegraph Road in Santa Paula (use the Briggs Road entrance) is titled “Tree Care 101 — All About Trees.”

It will include pruning demonstrations, an “ask an arborist” session and helpful handouts, including the famous UC “tree training cue card.”

Experts in this field sometimes find jobs in property management or grounds maintenance. For example, Scott Flammer, the county’s maintenance supervisor for grounds, learned about urban forestry in college and through previous jobs in grounds maintenance. Now, he and his boss, Sean Payne, oversee county properties, including the Government Center in Ventura and nearly 20 other sites.

Over the past few years, Scott, Sean and the landscape crew have used their expertise to save the two types of trees that have become iconic symbols at the Government Center. More than 200 magnolias line and form a canopy over the “fingers” of the Government Center — paved walkways extending into several acres of parking. These acid-loving trees have suffered during the drought, partly because well water used on site is salty, and salt buildup is alkaline — the opposite of acidic. Without rainfall to leach out the salt, the magnolias became stunted and started to die back.

To tackle the problem, crews watered from a different source, aerated the soil and conditioned the ground with “soil buster” to adjust the acid level. The magnolias recovered and are now thriving with the recent rains.

The other iconic tree at the Government Center is the Mexican fan palm. Falling palm fronds can be a danger, so some had to be removed. Others, such as those most visible surrounding the Hall of Administration fountain, were saved by a four-times-yearly schedule of trimming with special equipment capable of reaching the 70-foot tops without cracking the concrete underneath.

Trimming must be done to a precise standard. Too little means expensive trimming will be needed again too soon. Too much causes thinning of the trunk top, risking a break.

You will not become an expert like Scott and Sean after just one workshop. But you can increase your knowledge later this year as the UC Master Gardener program offers seasonal workshops March 28 on

“Creating Your Summer Vegetable Garden,” June 20 on “Planning and Growing a Cut-Flower Garden and Creating Beautiful Floral Arrangements,” Aug. 15 on “Good and Bad Bugs; What’s Bugging Your Garden,” and Nov. 7 on “Gifts From the Garden.”

You can keep your eye on the environment by learning more about urban forestry and gardening. For more information on the workshops, contact Leah Haynes at [ljhaynes@ucanr.edu](mailto:ljhaynes@ucanr.edu).

# **SECTION 3**

## **HOUSEKEEPING IMPROVEMENTS**



## **LEED and Custodial**



As the GSA works to certify more buildings in the LEED (Leadership in Energy and Environmental Design) Program, the Green processes in our Custodial Department provide the support and requirements for this program. From our Waste and Recycling programs to our Green cleaning products and practices, GSA Custodial plays a large role in the certification. A majority of the requirements were in place long before the LEED certification started, allowing us to concentrate on just a few changes.

### **Custodial Best Practices**

The GSA Housekeeping Division is literally working around the clock to keep your work environment clean, including your air! Exposure to indoor air pollutants can cause health effects including irritation of the eyes, nose and throat, headaches, dizziness and fatigue. Certain immediate effects are similar to colds or other viral diseases.

To keep you safe, we employ a number of best practices to reduce both chemical and biological pollutants to our indoor air. Our vacuum cleaners are equipped with HEPA filtration systems. We use cleaning towels and mops with micro fiber technology to capture airborne particulate and bacteria. Our carpet cleaning equipment employs a low moisture process to eliminate spores. All of our cleaning processes are designed to minimize cleaning solution atomization into the air and volatile organic chemical concentrations. Your work environment is our business.

### **Microfiber Cleaning Cloths**

Microfiber cleaning materials are a blend of microscopic polyester and polyamide fibers which are split in such a way as to create microscopic "hooks" which act as claws that scrape up and hold dust, dirt, and grime. They are 1/16 the thickness of a human hair and can hold six times their weight in water.

Microfiber products virtually eliminate cross-contamination during janitorial tasks. They drastically reduce chemical and water use while cleaning more effectively. Microfiber cleaning tools also absorb fat and grease and their electrostatic properties give them a high dust-attracting power.



The County of Ventura began using microfiber three years ago as part of the LEED certification program for the Vanguard Building in Oxnard. The County of Ventura is at the cutting edge of green, bacteria reducing products and will continue to review new products for smarter and safer uses.



The Microfiber tube mop is engineered with continuous filament bi-component Microfiber yarn for superior cleaning efficacy, superior absorbency, and release characteristics. It provides twice the cleaning power versus a standard cotton mop, and has triple the durability of standard blend mops, due to its headband and tailband construction. The material allows for faster drying floors and easier scrubbing of marred floors, so combined with the superior absorbency and release characteristics, we have improved and increased productivity at the same time as lowering operating costs.

### Smarter Cleaning

The WaveBrake side press mop bucket combo is the most effective mop bucket ever made that helps reduce splashing. It is a 35 quart capacity bucket that has the capability to accept a



separate dirty water bucket. This system truly allows for separation of the clean water from the dirty water, making it a more efficient product all around by eliminating unproductive trips to the janitor's closet. A cleaner mop and a cleaner floor improves the cost-in-use and sustainability by reducing water.

## **Custodial Supplies Quality, Price or Sustainable Products?**

The GSA custodial department often receives requests or questions regarding the custodial paper products and soap selected for our facilities, specifically employees and visitors ask how products are chosen. The truth is there is no one measure for any product that drives the selection, but rather a combination of criteria that is considered in our selection of products.

Due to the high volume of staff and visitors (thousands each day) we have to be concerned about price. We are spending taxpayer money on these items, and it is incumbent upon us to carefully consider the costs in relation to the product. This applies to both ends of the cost scale. Just because a product is the least expensive to purchase, it may not achieve our needs or might be of an insufficient quality.

Quality is of an equal concern. A poor quality product, no matter how inexpensive, causes other issues. Customer concerns, plumbing failures, and performance of the product all play into the issue of quality.

While trying to balance the two basic elements of price and quality, we also look to the environmental impacts caused by our products. Recycled content, landfill and water impacts, and chemical content are all considerations made in our goal to be as "green" as possible. As demand for these qualities rise, the availability increases and the price decreases, so we are always looking for the next improved sustainable product.

There is a fine balance to customer satisfaction, price, quality and responsible purchasing. The GSA custodial division continually strives to stay balanced on that fine line.

## **Green Soap Dispensers**

Over the course of the year, GSA replaced an estimated 96% of the soap dispensers we service. The new foaming soap is not only Bio-based, but it also Green Seal Certified and free of the soon-to-be FDA banned ingredient Triclosan. The change has not only been beneficial to our customers but has reduced soap costs by 50%.



## **Custodial Slip Resistant Shoes**

When the slip resistant shoes the custodial staff wears has reached the limits of their usefulness, there is a way to recycle the shoes. The custodial staff turns the shoes over to their supervisor. The supervisor turns the shoes into the Inventory Management Assistant for recycling and the Inventory Management Assistant contacts the recycling vendor for pick up. In this one small way we are helping to sustain the environment.

## **Greening Your Cleaning Can Protect Your Health**

*For Eye on the Environment*

By David Goldstein, Ventura County PWA, IWMD

The city of Ventura's Environmental Sustainability website asks the ominous question, "Do you know that many household cleaning products, even used as directed, could be hazardous to your health as well as the environment?" The web site follows with a series of recipes for "safe substitutes," featuring items such as "mold killers" made from tea tree oil and vinegar, furniture polish made from olive oil and lemon juice, and deodorizer made from vinegar.

Practicing what it preaches, the city requires its housekeeping contractors to use only Green Seal certified cleaning products. Green Seal, begun in 1989, is a non-profit organization evaluating and certifying the environmental claims of a variety of products. Green Seal focused first on standards for paper, and by 1993 they developed standards for the environmental claims of household cleaning products. Green Seal describes itself as using "science-based programs to empower consumers, purchasers and companies to create a more sustainable world."

"Since we started this program (requiring Green Seal certified cleaners) in 2007," said Joe Yahner, manager of the city's Environmental Sustainability Office, "our contractor has eliminated the use of many harmful cleaning products, improving indoor air quality and reducing the manufacture of toxic chemicals."

Similar to the city, the County of Ventura also uses only Green Seal certified products. However, rather than using a contractor to do the job, the County of Ventura's own General Services Agency provides cleaning services at County facilities. GSA Housekeeping staff began using the less-toxic products in November 2004. A study at that time estimated the 8 buildings (2 large and 6 small) cleaned by the General Services Agency janitors, reduced the amount of toxic products used by approximately 15,000 pounds per year after switching to Green Seal Certified products, with no additional costs.

"Custodians are the real heroes of our toxic use reduction program," reported Rosalind Harris, GSA's Manager of Facilities and Security. "They care about the environment and have always been willing to try greener products as management presents them, even if they require just a little more effort to clean."

Indeed, in some cases, elbow grease is the necessary added ingredient to make less toxic products as effective as toxic cleaners. This extra effort pays off by creating a healthier workplace, and switching to less toxic products can also enable cleaning crews to reduce the variety of specialized cleaners they use, saving money. Consolidating cleaner types enables more bulk purchasing in commercial settings, and at home it can result in fewer nearly-empty bottles cluttering a storage area.

If you do not see Green Seal certified options where you buy cleaning products, you can still make greener choices by staying away from products labeled with key words: "Danger," "poison," "caution," and "warning."

You might also avoid toxic products by creating your own cleaning, polishing, and deodorizing products from non-toxic ingredients such as baking soda, cornstarch, toothpaste, lemon juice, vegetable-based liquid soap, vinegar, and borax. When applying these cleaners, start with less abrasive tools, such as white nylon scrubbers, and then work



your way up to toothbrushes, pencil erasers, steel wool, pumice bars or single-edge razor blades if you need to really scrape and scrub.

Of course, it would be counter-productive to diligently restrict your cleaning to non-toxic methods on a daily basis and then hire a contractor to clean your rugs and upholstery with toxic cleaners. Fortunately, many cleaning companies offer plant-based, non-toxic cleaning solutions, applied in a vapor form. For example, Craig Pagett, of All Natural Enviro-Clean in Ventura, uses a tankless water heating system and automated agitators to clean carpets and upholstery with non-toxic cleaners. His truck-mounted pump sucks residual back into a tank, and after cleaning, with homeowners' permission, Pagett dumps about five gallons of leftover water and soap directly into their sewer drain.

Whether hiring a contractor or doing the cleaning yourself, you can keep your "eye on the environment" by using non-toxic cleaning solutions.

### **Compostable Bags**

In 2014, GSA began using compostable trash bags, to replace the standard trash bags previously in use. These bags are made with post-industrial and post-consumer recycled materials, 10% of which is New Technology Resin for more strength and source reduction. They also



contain a minimum 10% post-consumer recycled material. Construction allows for multiple uses of the liner, prevents leakage, and prevents bag failure and environmentally damaging 'chemical cleanups', so they begin as a friend to the ecosystem.

Compostable bags are great for contributing back to the environment, as the bags themselves can go back into the ground to make soil, mulch, or fertilizer that can be used in a garden or around the buildings, diverting plastic intended for land-fills. The decomposition is beneficial to the Earth, as opposed to biodegradable materials that simply disappear, without enriching nature or decomposing back into natural elements.

By using compostable bags for compostable waste, we are doubling our efforts to create healthy soil.

# **SECTION 4**

## **WASTE REDUCTION**



We recycle over 50% of our  
waste and reduce landfill

**REDUCE, REUSE AND RECYCLE**

## Why Recycle?

Recycling is good for the economy and the environment for the following reasons:

- Conservation of natural resources.
- Reduction in energy and fuel required to extract and process “virgin” or primary, raw materials to manufacture new products.
- Reduction of greenhouse gases, such as carbon dioxide, methane, and nitrous oxide used to transport and process raw materials.
- Creation of jobs to sort and process recyclable materials.
- Reduction of the cost of waste disposal in landfills and incinerators.

## Green Badge System

The electromagnetic key cards that are issued to employees and vendors have a second life. When an employee or vendor badge is returned to GSA Special Services, it is deactivated and the employee identification is removed. More than 95% of these electronic key cards can be returned to stock and reissued with a new activation and employee or vendor identification label. The overlying ID Badge is recycled. This is one more way that GSA reduces waste, both financially and environmentally.



## **Trash, Recycling and Wet Garbage**

In our continuing efforts to provide a safe, clean and healthy environment, the GSA Housekeeping and Grounds department has developed a no cost recycle removal program. Pick ups and dumping is provided by vendor service for free. The custodial staff removes the recycle from work locations at no additional cost to departments. Thousands of employees on a volunteer basis deposit their recycle materials into the proper receptacles. We have analyzed the process and behavioral patterns of disposal and have made adjustments to the quantity and locations of dumpsters and bins.

As a result of the joint efforts of everyone, we are proud to say that we have met state standards by recycling more than 50% of the solid waste material.



By recycling 12.831 tons of paper per year, the County avoids emissions of 4,000 metric tons of carbon dioxide, equivalent to emissions from 7,000 cars or 20 railcars worth of coal.

## **Food Waste Collection, Probation JJC**

The Juvenile Justice Complex has recently implemented a food waste collection program. In just the first 6 weeks, JJC diverted 4.56 tons of organic resources from local landfills. These efforts will save landfill space, reduce harmful GHGs, reduce the need for chemical fertilizers, and prevent soil erosion. These benefits accrued no additional costs to the county. This program has also proven to increase efficiency and safety within the JJC.

The staff and student workers are now responsible to take the food trays after meals. They dispose of the food waste into a specific receptacle to be picked up. Previously, the duties to scrape the food off the trays rested on the inmates, (where often food would end up splattered on a wall or the tray would be used as a weapon). Now when the inmates are finished with a meal, they simply leave their tray on a cart. This new procedure avoids any incidents or messes from occurring.

This program is currently being monitored to reduce the number of trash compactor pickups and reduce costs. This program could not have been achieved without the help of the Division Manager Joseph Moore and the kitchen staff. The simple procedural change has proven to dynamically benefit safety, efficiency and the environment.

## **Food Separation Program at RAIN**

Project RAIN in Camarillo is the latest county agency to participate in initiating a food separation process. The tenants, staff, and cooks, now separate and place their unwanted food scraps into a bin designated for organic materials.



RAIN's new countertop modification allows for easy disposal of organic materials, recyclables and trash. The organic material disposed is sent to our local composting facility Agromin, where it will decompose to become a rich soil amendment. This simple procedural change is responsible for

preserving natural resources, reducing the amount of discards sent to landfills, reducing the need for chemical fertilizers, and conserving water due to compost's strong ability to hold moisture.

RAIN has taken it upon themselves to ensure the success of the program. To assure tenants are disposing of the food properly, RAIN has assigned one tenant after each meal, to stand next to the receptacles and inform others to dispose correctly.



The trash pickups are currently being monitored to reduce the amount of pickups per week.

### **Composting at Fire Department – Simi Valley** **Firefighters Save More Than Just Lives**

Firefighters at Simi Valley Stations 44 and 45 come to the aid of the planet as well as people and property. Having demonstrated exceptional resource management practices weekly by performing basic landscaping maintenance and filling up a residential-size cart, the firefighters divert from landfills approximately 3,869 pounds of green material per year. Their efforts help to preserve natural resources, reduce the need for chemical fertilizers, reduce soil erosion, conserve water, and help to sustain the environment for future generations.

With the opening of Agromin's composting facility in Santa Paula, the gases generated from the green materials will be converted to natural gas to power the trucks delivering the compostables, as well as the facility itself. This incredible feat is a joint effort between the Fire Department, Agromin, Waste Management, and GSA.



## **Recycling at the Department of Airports**

The Department of Airports devised a method to better promote recycling, diverting approximately 32,500 pounds of waste annually out of the system, helping to preserve natural resources and sustain our planet.

## **Composting at Animal Services – Camarillo**

### **Cats and Dogs Can Compost Too!**



Cats, dogs, rabbits, and horses have helped to join in a new composting program at the Camarillo Animal Services. Their unwanted food, hay, cat litter, and newspapers for lining kennels, are now being separated onsite at the shelter. These organic resources are brought to

Agromin, our local composting facility, to decompose into a rich and safe soil amendment. Any pathogens or harmful bacteria that may be present are cooked away in the 140 ° F compost pile. These efforts have turned something that would have otherwise been land filled into a profitable and healthy soil. These efforts will also responsible for generating electricity from the natural gas emitted and collected at the new Agromin Composting Facility, as well as reducing the need for chemical fertilizers, and saving water, due to compost's ability to retain water better than dirt.

## **Food Waste Composting**

### **More ways to be Green at Todd Road Jail**

The County of Ventura has won the 2013 Green Leadership Award in the category of Waste Management for food waste composting at the Todd Road Jail.

Keeping inmates fed at the Todd Road Jail (TRJ) is a big job. Daily, thousands of meals are prepared and served. The bi-product of the



meal service is food scraps and ultimately Greenhouse Gas (GHG) emissions. Until recently, the practice of the TRJ kitchen staff was simply to throw the food scraps into the trash compactor with other trash. The contents of the trash compactor end up in the landfill, releasing tons of harmful GHG into the environment.

Recognizing an opportunity to be green, the Sheriff's Office and GSA, together with E. J. Harrison and their strategic partner Agromin, conducted a pilot program to divert TRJ food scraps from the waste stream and convert them to composted soil amendments.

During the pilot program (May 2012 to February 2013), 108 tons of food scraps generated by the meal service operation at TRJ were diverted from the landfill by disposing them in designated food waste containers for pick up by the hauler (E. J. Harrison). The food waste containers were then delivered to Agromin to be composted for 20 days, cured for 30 days, screened, and mixed to soil amendments.

The impacts achieved during the piloting period from this process change are significant:

The pilot was so successful that that the diversion program process changes have been fully instituted and the project was submitted for a Green California Leadership Award for outstanding environmental achievements in government.

According to Agromin, commencing in April 2013, food waste may alternatively be placed in a digester to yield methane gas for electricity production. Approximately 5 tons of food waste yields 1 megawatt of electricity.



All of the above noted composting programs are as a result of the partnership between EJ Harrison, Agromin, the General Services Agency, and the following participating agencies:

- Sheriff's Department - Todd Road Jail
- Animal Services – Camarillo
- Juvenile Justice Complex
- Human Services Agency - RAIN Project.

The following articles regarding composting and food separation were written by David Goldstein, Public Works Agency and appeared in the Ventura County Star.

## **Separate Collection of Food Waste Leads to Composting**

*Excerpted from For Eye on the Environment*

By David Goldstein, Ventura County PWA, Integrated Waste Management Division.

If you believe the success of environmental programs depends on convincing participants to be environmentalists, then you might doubt a composting program could succeed in a jail. There may be many inmates whose long-term thinking and compassion have helped them develop an environmental ethic, but a jail can be tense, full of immediate concerns about safety, and far removed from motivations inspired by the tranquility of nature.

Undaunted by this challenge, the Ventura County General Services Agency (GSA), Probation Department, and Sheriff's Department have implemented some of the most successful food waste separation programs in the county, arranging for Harrison Industries to separately pick up bins of sorted, compostable material from the Todd Road Jail and the Juvenile Justice Facility, delivering these loads to Agromin's composting site at Ormond Beach. Last year, Todd Road Jail was the biggest source of food waste for the Harrison/Agromin pilot program, contributing 103 tons. In the past six weeks, the County's Juvenile Justice Facility followed the good example of the Todd Road Jail, diverting 4.56 tons of their food discards from local landfills.

Using statewide data, the California Department of Resources Recycling and Recovery (CalRecycle) estimates wasted food is the largest single category of recoverable material in our garbage, comprising 16% of the waste Ventura County sends to landfills. While many County residents waste this resource, our jails have instead been leading the way with a pilot program that organizers hope will soon become widespread. Separating food discards and sending it to a compost facility "saves landfill space and reduces greenhouse gases, while producing a product (compost) that conserves water, reduces the need for chemical fertilizers, and prevents soil erosion," according to Rosalind Harris, GSA's Manager of Facilities and Security. She also points out these environmental benefits have come "at no additional cost to the County."

As with most recycling programs implemented in difficult locations, the key to success is to make recycling easier than disposal. That way, no one has to be convinced to develop a more enlightened world view. Whether in a jail or at an Earth Day festival, recycling has to be convenient, with adjacent containers for recycling and trash, using clear labels on sides and lids, and relying on a well-planned system of collection. At the Juvenile Justice Center, Division Manager Joseph Moore, the kitchen staff, and student workers implemented a system involving cart collection of inmates' trays, followed by separation of materials into containers. Labels on these containers show pictures of acceptable items and note in bright red the items to keep out.

Of course, food waste collection programs cannot become more widespread until we have more local facilities able to compost food waste. Of the existing composting and mulching facilities in Ventura County, only Agromin's Ormond Beach site has legal authorization to handle food. Composting food waste requires stringent environmental safeguards against odor, vermin, and other potential negative side effects. Agromin hopes to have a new facility permitted at the Limoneira Farm by the time their authorization ends at Ormond Beach.

Community Recycling, based in Sun Valley, also has a local food waste collection program, bringing food waste from about 100 accounts in Santa Paula to their compost facility in Kern County and is planning to develop a compost and waste-to-energy facility at the old Santa Paula Wastewater Treatment Plant, according to Tim Fry, the company's General Manager. Other companies, such as Farm Share, are trying to gain (or regain) permission to handle food waste, and H Cattle

Company feeds specialized sources of food waste (such as packing house fruit culls) to cows.

For now, most Ventura County residents who keep an eye on the environment and want to compost food scraps have to rely on backyard composting or worm boxes, and these will be the subject of next week's column.

## **Transitional Living Center Helps Homeless Recycle in New Ways**

*For Eye on the Environment*

By David Goldstein, Ventura County Public Works Agency, IWMD

When you think of the links between recycling issues and our County's homeless population, scavenging and river-bottom clean-outs might come to mind. However, recently, a far more inspiring story emerged, linking homelessness solutions to recycling solutions. The River Dweller's Aid Intercity Network (RAIN Project), Ventura County's main Transitional Living Center, worked with the Ventura County General Services Agency (GSA) to implement a comprehensive recycling program expected to save money and recover resources. The recycling program is having the added benefit of inspiring tenants, especially displaced families, with a community-building activity, involving both children and adults in making a positive contribution to their temporary home and to the environment.

In addition to starting programs in the shelter for recycling paper, steel ("tin") cans, and other items not commonly collected by homeless people, most impressively, RAIN and GSA worked with their refuse hauler (E.J. Harrison & Sons) and a local composter (Agromin) to start a program for separate collection of food scraps.

The average RAIN tenant finds more permanent housing after eight months, so as is essential for recycling programs in places with shifting populations, the program had to be simple and instructions had to be clear in order to succeed. The elegant simplicity and clarity of RAIN's comprehensive recycling program is best seen in their kitchen. Rosie Craig, RAIN's Operations Manager, worked with Sean Clark, GSA's Waste Stream Coordinator, to design and implement an impressively efficient sorting system. Cut into a countertop is a sorting area with

three holes, and a separate container is placed under each hole. Each hole is labeled with both words and pictures, indicating which recyclables go into one, what types of food scraps go into another, and that remaining garbage goes into the third.

At each meal, one RAIN tenant is assigned the duty of assisting others in proper use of the sorting system, and tenants help empty each container from the kitchen into the corresponding hauler bin or cart outside for collection by E.J. Harrison & Sons. This collector then hauls the mixed recyclables from RAIN, which is near Cal State Channel Islands, to Gold Coast Recycling, in Ventura, for sorting. The hauler transports the food scraps to Agromin, near Oxnard, where covered piles, aerated with a system of pipes conducting pumped air, speed and control the composting process of turning organic discards into soil amendment.

In addition to the innovative program in the kitchen, GSA also helped RAIN begin recycling programs in each of the tenants' rooms. Each room has separate five-gallon containers for trash and for recyclables.

As with other sites where they help establish food waste collection programs for composting, E.J. Harrison is providing extra collection services (separate food waste hauling) without additional charges for a limited time, with the expectation that RAIN will be able to reduce refuse service in compensation for the extra cost. Currently, RAIN's refuse bins are collected three times per week. If getting the food waste and recyclables out of the garbage lets them cut down to only once per week, there could be a cost savings.

Tina McDonald, RAIN's Program Manager, also says, "Don't forget to mention the other positive aspects of the recycling program," noting the opportunity the 70 tenants of the shelter have for participating in a positive program. "RAIN families and individuals have struggled to gain traction after the loss of employment, housing and self-confidence," she said. "Working together to protect the environment provides the opportunity to participate in a program dedicated to the common good of their community."

As the residents of RAIN's transitional living center are starting new lives, the center's discarded resources are also getting a new start, through recycling.

You can keep your eye on the environment by implementing comprehensive recycling programs in cooperation with your hauler, and you can volunteer at RAIN by contacting them at the below web site.

## **Solar Powered Trash Cans at the Government Center**

GSA Custodial and Landscaping has installed five self-compacting solar trash cans at the government center. Manufactured by Seahorse Power Company, these high capacity bins are designed to reduce the number or collections by up to 500%.

Inside each unit is a compactor which is powered by a solar panel on the top of the receptacle. When the trash level reaches a set height, a sensor triggers the compaction unit. This process will repeat until another sensor determines that the contents cannot be compacted further. The unit will indicate when this level has been reached.

Typical results of this product will allow it to accept up to five times the volume of a regular receptacle before it needs to be emptied. This saves landfill space and employee labor. The solar power source makes it totally “Green”. The chute is designed to keep birds and other animals from accessing the trash. We will be monitoring the use and savings provided by these units with an eye towards utilizing more of them in the future.



## Combo Units - Trash/Recycle



Placed strategically throughout the Government Center campus are nine new Trash/Recycle combo units. These combo units are designed to make disposing of recycling as easy as disposing of trash. Although, a seemingly small change; these units will help divert waste and extend the life of our landfills.

In an effort to further extend our recycling program, new combo units have also been placed at the East County Court House, East Valley Sheriff's Station, and Animal Services in Camarillo.

For further information regarding the County of Ventura's Recycling Program, please visit our informational recycling video, located at: <https://www.youtube.com/watch?v=kaNXozyaZzc&list=UU9MuTt2eODT1jsybVeVQYgg>



## COUNTY OF VENTURA

RECYCLE VIDEO

## Recycling of Cardboard Rolls

In an effort to recycle as much as possible in our determination to save the Earth, the County of Ventura now recycles the cardboard rolls found inside hand towels and toilet paper rolls. On average for the Government Center and the outlying properties, we recycle 220 cardboard rolls a day. Multiple this by 5 days a week by 52 weeks a year, we are now recycling 57,200 cardboard rolls a year. Something

that is so easy for us to do, but makes a huge impact on saving the planet!

### **Reduction of Paper Towels-Installation of Dyson Air Blade Hand Dryers**

In an effort to cut expenses and continue LEED certification, we are installing Dyson Air Blade hand dryers in the public restrooms at two county buildings: Vanguard in Oxnard (LEED Certified) and the East county Courthouse in Simi Valley. This simple change will provide many benefits. By switching from paper towels to hand dryers in the public areas, we are seeing the following benefits:

- \* Most cost effective method.
- \* Reduction in paper supply and budgetary expense.
- \* Will cut down on expensive plumbing issues by upset public (intentional plugging of toilets).
- \* Reduction in labor + time = more efficient use of resources and available for other custodial requests.
- \* Better on the environment > Green initiative.
- \* Further assist LEED Certification.
- \* Reduction in trash disposal > quantity and cost.
- \* More sanitary hand drying option.

#### **Vanguard**

County spends \$6,136.70/year on paper towels at Vanguard per year (18% of restroom supplies - \$1,250 minimum savings).

Cleaning contractor runs \$527.24/mo for day porter services (\$6,326.88/year).

County custodial billable rate is \$35.62/hr.

Changing out 4 restrooms to hand dryers. (Total number of restrooms in building = 22.)

#### **ECC**

Cleaning contractor spends an average of \$350/mo (\$4,200/year) on multi fold paper hand towels (17% of restrooms supplies - \$750 minimum savings).

Cleaning contractor runs \$524.24/mo for day porter services (\$6,326.88/year).

Changing out 4 restrooms to hand dryers. (Total number of restrooms in building = 23.)



## Calculations

Paper towel supplies = \$2,000 (\$1,250 + \$750)

Day porter services = \$12,653.76 (\$6,326.88 x 2)

Total Hard Savings = \$14,653.76

Total Soft Savings = \$89.05 (save ½ hour per day in not stocking restrooms with paper supplies and throwing away trash due to hand dryer usage).

Total Savings = \$14,742.81

## Installation of Dyson Air Blade Hand Dryers in the Hall of Administration

The installation of Dyson Air Blade Hand Dryers began in 2011. Along with the hand dryers, the use of paper towels was left as an option. Although the savings aren't as great as they would be if the paper towels were eliminated, there has still been a marked savings in paper towel usage.

2008 - 2009 multi fold towels 2,070,225'

2008 - 2009 Jumbo Rolls	<u>681,600'</u>
	2,751,825'

2011 - 2012 multi fold towels 1,944,478'

2011 - 2012 jumbo rolls	<u>955,200'</u>
	2,899,678'

Traffic in the HOA:

2008 -2009 average of 6,400 people per week

2011 - 2012 average of 11,000 people per week

Increase in population at the HOA of 42%

Our usage should be 3,907,592 today based on the increased population.

Our usage is 2,899,678 a savings of 1,007,914 feet of paper.

For the remaining sites where paper towels are used, all products are made from 100% recycled material.

## **We Recycle Our Green Waste**



The County of Ventura generates green waste daily from its Landscape operations. All generated green waste materials are either applied on site or recycled. Materials generated from tree removals are ground at the site and applied. Generated green waste materials that are picked up by a rubbish company, are processed into a variety of

recycled products such as mulch, wood chips, and compost and soil amendments. We apply the processed materials in our landscape in the form of mulch to enhance the soil, save water and to reduce the need for weed control.

## **Vending Machines**

Our Vending Machines do not use Styrofoam cups per Board of Supervisors directive. In 2004, Supervisor Steve Bennett recommended and the board approved a resolution prohibiting the use of expandable polystyrene (commonly referred to by the trade name Styrofoam) at the County Harbor, Parks, Government Center and County sponsored events.



## **Recycling Toner Cartridges**

Even in a 'paperless' society, everyone seems to print something every day. Toner cartridges may now have a long life, in comparison to the past, but they still eventually run out of toner and need to be replaced. What to do with your old, empty cartridge? Recycle it, of course.

In the General Services Agency Employee Recycling Guide, page 14 details two methods for recycling toner cartridges – calling the vendor (in this case Onestop for refurbished toner, Compuwave for OEM toner) to request pick up, or using a prepaid shipping label to return the cartridges directly. Onestop supplies 100 percent green, refurbished toners. If they pick them up for recycling, nothing goes to a landfill!

This second method is done through Clover Environmental, the source for returning toner cartridges directly to the recycling plant. They can be

found at: <http://www.cloverenvironmental.com/>. Simply register your email address with them, and then follow the easy steps to either print the shipping label yourself, or have them email it to you.

Gather your toner cartridges together and place inside either the original box or a shipping carton, attach the shipping label, and deliver to the mailroom. That is all it takes to recycle your toner.



Not much effort on your part – but you are helping to save the environment.

If you need assistance with vendor response, contact Procurement at 805-645-1322.

## **Recycling Fun Facts**

Did you know that recycling has been around since at least 400 BC? Archaeologists have found evidence of glass, pottery, jewelry, and bronze coins being recycled, turned into goods of greater value, or into items necessary at the time.

In pre-industrial times, items were frequently melted down for re-use, as that cost less than manufacturing new items from scratch. Even dust and ash from wood and coal fires were collected and used as base material in brick making.

Industrialization brought a slowdown of recycling, as mass-production became cheap and easy, resulting in the throwing away of items instead of reusing.

The World Wars saw an increase in recycling, due to rationing and the materials being needed at the warfront, enabling a greater chance of victory.

Since the 1970s, recycling has become popular, and the normal way of life. Curbside pick-up of recyclable goods in residential areas is done by the local sanitation companies, and Recycling Centers are open to the public, making it easy for all to participate. In a concerted effort to save our planet, environmental consciousness has brought about an awareness of what can and cannot be recycled – some of which may surprise you.

## COMMERCIAL GUIDELINES



### WHAT DOESN'T GO IN THE TRASH OR ANY OTHER CART?

**STOPPING HAZARDOUS WASTE!!**

These items are NOT accepted for Trash or Recycling

- Hazardous Waste
- Tires
- TVs/Computer Monitors
- Batteries
- Closed Containers
- Oil or Plaster
- Fluorescent Light Tubes



Not only is recycling necessary for the planet, it is also good for the economy, conserving resources, saving money, creating jobs, and generating revenue. It is also an ethically sound thing to do, as we consider what resources will be available for future generations on this planet.

Recycling has also gotten easier over time as methods progress. What used to need to be sorted before recycling no longer requires this, as plastics, paper, metal, and glass now all go in together. Styrofoam and food remain the most common items NOT recyclable – but almost everything else is.

The County of Ventura does its part when it comes to recycling. We have an established program, designed to make it easy for employees to recycle, and will perform on-site training. We gladly provide RAP (Recycle All Products) boxes for under your desk, which conveniently list what products can be recycled. We also provide blue bins for recycling larger objects, which Housekeeping will empty for you. We even have our own instructional video, located on the GSA Home Page, or at:

<https://www.youtube.com/watch?v=kaNXozyaZzc&list=UU9MuTt2e0DT1jsybVeVQYgg>.

During the week of August 22, 2016, we had a recycling display in the Hall of Administration main entrance, showing examples of what to recycle and how, an entry form for the County's Recycling Pledge, and fun and informative materials. There was even a blue bin for collecting

plastic water bottles. In just the one week, we were able to distribute 100 RAP boxes!

Remember, recycling is easy, so why not do your part today?

If you have any questions about recycling, or would like to schedule a training, please contact Cyndy Taschman, GSA Security and Special Services, at 654-2051.

## Recycling Pledge

We know that the County strongly encourages all employees to recycle, but now we have made it even easier to sign up to recycle.

By going on the new link to 'Quick Info' on the GSA Homepage, you can pull up the 'Recycling Pledge', complete the form online, and then click on the 'Submit' button. That is all it takes – very little effort from you, but it can accomplish so much in an effort to try to save the planet.

If you have not already taken the Recycling Pledge, why not do it today? Your participation WILL make a difference!

### Recycling Pledge

Name:	<input type="text"/>	Employee ID:	<input type="text"/>
Email:	<input type="text"/>	Phone:	<input type="text"/>
Brownmail:	<input type="text"/>		

*The County of Ventura places a high priority on protecting the environment. As an employee of the County, I*

*pledge to:*

- 1. REDUCE** the amount of materials and supplies used so there will be less to dispose of. I will avoid the use, generation and release of toxic substances.
- 2. REUSE** materials and supplies to the extent possible rather than disposing of them.
- 3. RECYCLE** all recyclable materials properly, never placing them into trash bins. I will strive to purchase recyclable products when available.
- 4. I will comply with all applicable environmental regulations and laws.**

[For more information on the County Green Initiatives Programs click here.](#)  
(clicking this link will navigate you away from this form)

# SECTION 5

## CLIMATE ACTION CHANGE



## Climate Change

It is no secret that our climate is changing. We are experiencing global warming as a result of the greenhouse effect, which is the process of heat absorption by certain gases in the atmosphere. They are called greenhouse gases because they effectively 'trap' heat in the lower atmosphere and some of this heat is re-radiated downward. Water vapor is the most abundant greenhouse gas, followed by carbon dioxide. Man has created this warming effect by the extreme use of fossil fuel. The product of fuel combustion is carbon dioxide, which is released into the atmosphere. The greenhouse effect caused by utility plants, automobile and textile plants, fossil fuel consumption contributes greatly to global warming. This warming is harmful to our health and environment:

- Human Health: Tropical countries will experience increased heat stress.
- Sea Level: The sea level will rise due to the melting of the glacial ice cap and thermal expansion, *(which is the tendency of matter to increase in volume when heated. When a substance is heated, its constituent particles move around more vigorously and by doing so generally maintain a greater average separation)*. Homes will be lost due to flooding and subsequent storms created by the change in sea water volume.
- Ecological System: Some plants and animals will not be able to adapt to the temperature change and the rise in sea level. They will die.
- Agriculture: Extreme increase in temperature will be harmful to our plant food source.
- Water Supply: Climate change will exacerbate water shortages in many water scarce areas of the world.

### Possible Solutions

- Reduce carbon dioxide emissions
- Increase biological removal of carbon dioxide emissions  
The later can be accomplished by the natural function of plants, which is to take up carbon dioxide through photosynthesis. Photosynthesis is the conversion of light energy into chemical energy by living organisms. The raw materials are carbon dioxide and water, the energy source is sunlight, and the end-products include glucose and oxygen. It is arguably the most important

[biochemical pathway](#),<sup>[1]</sup> A portion of the carbon is then stored in plant biomass and in soil organic matter. The amount of storage in natural systems can be increased through better landscape management.

GSA Landscape department is doing its share to benefit from this process. We have over 2,710 trees over 55.5 acres of land inventory and have developed a plan to properly treat and preserve trees, while taking into consideration the maturity contributor. We try to maintain a balance of young and old to ensure that there will always be mature carbon dioxide absorbing trees around for years to come. We are careful to maintain open green acreage while taking advantage of IPM methods to preserve our environment by reducing the amount of chemicals used in our tree treatment and landscape treatment programs. We are continually looking for new ways to reduce impacts that may have a negative effect on our environment. We are doing our best to “Go (Stay) Green”.

## **Climate Change Mitigation**

Climate change mitigation may be defined as any attempt to reduce the rate at which greenhouse gasses are accumulating in the atmosphere.

We absorb climate action by maintaining healthy trees. Through the process of photosynthesis, trees are able to absorb carbon dioxide from the atmosphere, however much of the carbon that is initially captured is released through respiration.

In addition to our trees reducing greenhouse gasses, we reduce greenhouse gas emissions (GHG) by diverting solid waste from landfills.

Waste over time produces and emits carbon dioxide. By reducing waste we reduce this occurrence. By recycling 12,831 tons of paper each year, the County avoids emissions of 4,000 metric tons of carbon dioxide.

## **Greenhouse Gas Reductions**

Trees and plants reduce carbon dioxide in our atmosphere, therefore reducing the warming “greenhouse” effect of the gas. Plants and trees do this in more than one way.



As plants and trees grow they take carbon dioxide out of the air and transform the carbon dioxide into, roots, shoots, leaves, bark, flowers and wood. This is a basic function of Photosynthesis by which plants and trees produce food for growth and sustainability. Over the life time of a tree, several tons of carbon dioxide is taken up. The carbon is taken from the atmosphere and tied up in the tissue of plants in a process called "carbon sequestration". Plants and shrubs do this to a lesser degree due to their size.

Trees in particular, produce shade and transpire water, in doing so they lower air temperatures and, therefore cut energy use, which reduces the production of carbon dioxide at the power plant.

The GSA Grounds department is responsible for the care of 2710 trees. These trees can remove as much as 44 tons of CO<sub>2</sub> per year. In addition, they can remove 7,600 lbs. of ozone, 5,700 lbs. of particulates and 2,850 lbs. of nitrous oxide each year. These same trees will produce 4,100 lbs. of oxygen for us to breath.

Trees have many benefits in addition to their effect on Greenhouse Gases. Trees and plants are an essential component to a healthy environment. Studies have shown that the prevalence of Asthma is greatly reduced in areas having trees. Trees reduce soil and polluted runoff into our streams and waterways. Trees provide beneficial psychological effects for most people. They provide habitat for a number of living organisms such as; birds, squirrels and butterflies.

The benefits of trees are many, but they do come at a cost. There are costs for planting, staking, watering, pest control, fertilization, pruning and general maintenance. The GSA Grounds Department has developed comprehensive tree programs that provide for public safety and sustainability of our trees.

Over the past year we have had to remove trees for various reasons. Removal of trees is always a last resort. Trees are only removed if they have structural defects, excessive decay or disease. These conditions weaken the tree and increase the potential for branches to fall off or for the tree to fall over. Public safety is always a major concern. Recently, seven trees were cabled that had weak branch structure as a means to prevent limb or trunk damage and for safety reasons. In the coming year we will be planting ten trees to replace those that were lost. The Government Center Campus Urban Forest is fairly dense, our

tree plan includes sustainability. We have been able to maintain the same approximate number of trees over the years. We have managed to install a number of California Native trees that are doing quite well.

### **Our Copier Vendor**

Advanced Office Automation Inc. uses “Energy Star” machines and 70% recycled paper. The vendor also recycles toner cartridges and uses recycled toner cartridges.



### **Vending “Energy Star” Machines**

Energy Star qualified new and rebuilt refrigerated beverage vending machines can save more than 1,700 kWh/year, per unit, or \$150 per unit, annually on utility bills.

New and rebuilt refrigerated beverage vending machines that have earned the Energy Star are 50% more energy-efficient than standard machine models.

Energy Star qualified new and rebuilt vending machines incorporate more efficient compressors, fan motors, and lighting systems to keep beverages just as cold and the machine visible while using less energy.



Energy Star qualified new and rebuilt machines come with a low power mode option that allows the machine to be placed in low-energy lighting and/or low-energy refrigeration states during times of inactivity.

## **Carpool Parking Program**

GSA Security oversees the carpool parking program. This includes, making sure there are enough carpool stalls available to carpoolers by conducting surveys and statistical analysis. In addition, we process and issue all carpool permits countywide, and we monitor the parking lots to insure that only participants park in the carpool stalls. Failure to do so results in citation issuance. We are pleased to report that there are 219 current participants in the program.

## **Bike Lockers and Bike Racks**

Did you know that riding a bike cuts your fuel emissions completely? Bikes provide a cleaner form of transportation than cars, buses, trains or other forms of public transportation. Not only do bikes cut down on the number of vehicles on the road, they cut down on congestion. This means fewer vehicles sit idling in traffic, ultimately reducing the time that the remaining cars spend on the road, thus lowering



their emissions. Let's say you spend an average of three hours a day in your car and reduce it two hours. You could save seven hours of greenhouse gas emissions, which is a remarkable step.

In a year you would be responsible for stopping 365 hours of greenhouse gas emissions.

Using a bike rather than a car also reduces the need for metals used in production. Metals used to produce vehicles must often be mined from the earth, which can devastate landscapes and cause deforestation. Pollution may enter the atmosphere through the extraction of these raw materials as well. Contamination of water sources is one of the most serious results of mining. Even small-scale mining can leave landscapes barren of vegetation for years, contributing to global warming by removing trees that clean the atmosphere.

Bike riding is also good for your physical and emotional well-being. Riding a bike gives you the opportunity to talk to people and get to know your neighbors, leading to a sense of community. It also lends itself to peacefulness of the mind and conditioning of the physical body.

Bikes also take up a lot less space than cars; on the road and in parking lots. When you ride a bike, you help reduce the need for more roads. This is huge as the materials used to build roads add to pollution. Paved surfaces also increase the "heat island effect." This is when built-up areas are several degrees hotter than surrounding rural areas. This translates into an increased demand for energy, especially in warmer months and greater energy-related greenhouse gas emissions. Narrower streets with planters and space for trees, green spaces and pocket parks in place of parking lots will make a city greener, healthier and more beautiful.

Here at the County of Ventura, we provide, free of charge, bike lockers and bike racks for county employees wishing to bike to work. The County of Ventura, General Services Agency, Security and Special Services division, is responsible for and manages the bike locker program.

We have several locations for bike lockers and bike racks at the Government Center as well as most offsite locations.

Bike Lockers are located at the following sites:

Government Center  
(A Lot, E Lot, F Lot, H Lot, R Lot)  
County Square Drive

Telephone Road  
Vanguard  
East County Courthouse

County employees wishing to apply for a bike locker can go to: <http://docushare:99/lfserver/Bike Locker Permit>

Bike Racks can be found at various locations both onsite at the Government Center and at most offsite locations. They are on a first come, first serve basis.

### **Future Projects**

Improve the environment by moving toward greener solutions. Initiatives include the Integrated Pest Management, LEED, Recycling, Elicit Storm Water Discharge Reduction, and Water Conservation.

Partner with other governmental agencies, community groups, and vendors on sustainable projects. They include California Department of Resources Recycling and Recovery (CalRecycle) for the 2014/15 Tire-Derived Product (TDP) Grant for reuse of tire materials, Surfrider's Ocean Friendly Garden under our Prop. 84 Storm Water Implementation Grant, and Agromin to provide free recycled tree products.

Implement year four of the five year water conservation plan and expand remote water management system to include 1911 Williams Drive, Oxnard.

Install hardy, drought-resistant plants and mulch to reduce water and chemical consumption at multiple properties, including 1911 Williams Drive, CCSU, and the Animal Shelter.

## **SECTION 6**

### **CREDITS**



## **Vendors Are Our Partners**

The Vendors listed below have agreed to use green products whenever feasible; to use Integrated Pest Management Practices, and abide by the Storm Water Requirements for the County of Ventura.

**Agromin** – Provides composting services and mulch for County properties.

**All Desert Sweeping** - Provides quarterly parking lot sweeping services for Saticoy Yard, 855 Partridge, 1400 Vanguard, 2220 Gonzales Road, Telephone Road Building, Juvenile Justice Courthouse, 1911 Williams Drive, 646 and 669 County Square Drive, and the County Government Center.

**American Resource Recovery** - Provides recycle waste service for County of Ventura.

**AmeriPride** – Provides County uniform laundering services for Housekeeping and Grounds departments.

**Bee Care Specialists** – Provide live bee relocation services for the Grounds department.

**E. J. Harrison** - Provides rubbish and recycling services for the County of Ventura.

**G.I. Industries** - Provides rubbish and recycle waste removal for County properties in East County area (Simi Valley).

**Greene Tree Care Services** - Provides tree trimming service. This includes removals and emergency services.

**House Sanitary** – Custodial supplies.

**Imperial Sprinkler** – Provides irrigation technical support services for the Sentinel Irrigation Central Control System.

**Kastle Kare** - Provides rodent control for the Government Center, 855 Partridge, and 646 and 669 County Square Drive.

**Mycol** - Provides weed abatement for El Roblar and Todd Road Jail, and monthly edging services at the Government Center, as well as installing landscape projects as needed.

**O'Connor & Sons** - Provides structural pest control service.

**Parkwood Landscape Maintenance** – Provides general landscape maintenance services for multiple County properties including planting, pest control, irrigation management, and tree health assessments. Installs landscape projects as required.

**Pride Industries** – is the contracted vendor for custodial services at the County of Ventura.

**R.A. Atmore & Sons** – Provides weed abatement services at selected properties and towers.

**Recology** – Provides rubbish and recycling services for the County of Ventura in the Santa Paula vicinity.

**Sinclair Sanitary Supplies** – Custodial Supplies.

**Ulrich and Ulrich** - Provides power washing for sidewalks, docks, trash compactors and cement staircases.

**Venco Power Sweeping** – Provides sweeping services at the Government Center, including special sweeping specifications relating to newly installed pervious paving.

### **Points of Contact**

<u>Name</u>	<u>Position</u>	<u>Phone</u>
Rosalind Harris	Department Head	654-3721
Mario Molina	Landscape Specialist	654-3821
Cyndy Taschman	Project Coordinator	654-2051
Patrick Squires	Division Head	654-3816
Sean Payne	Division Head	654-2116
Mario Molina/Rolly Berg	Custodial Contract Administrator	654-3810
Stephanie Peres	Special Events Coordinator	477-7187
Matt Wooff	Inventory Management Assistant	650-4019





**Special Services Staff:** Matt Wooff, Mark Milazzo, Steve Giles, Patrick Squires, Linda Hawk, Sean Payne, Stephanie Peres, **Rosalind Harris**



**Project Coordinator:** Cyndy Taschman



### **Custodial Staff:**

#### **Edgar Villasenor**

Serafin Alviz  
Paul Anda  
Larry Castro  
Sally Clark  
Sherry Cobb  
Salvador Duarte  
Maria Espinosa  
Olivia Herrera  
Arturo Melgoza  
Jerome Rabago  
Zabri Torres

#### **Carlito Aspuria**

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Josephina Perales  
Ellen Reclusado  
Ricardo Resendez  
Feliciano Rodriguez  
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Mike Carone  
Emmanuel Fogata  
Francisca Garcia  
Hector Garcia  
Steven Harvey  
Efrain Leyva  
Sandra Lopez  
Joseph Macias  
Rose Magdaleno  
Kelli Stewart





### Landscape Staff:

Jeff Ellis, Steve Romero, Lorenzo Villa, Robert Godinez, Antonio Barajas-Trujillo, **Mario Molina**, Sabino Benitez







**The Earth still needs us – it's up to us to  
save our planet.**

