



"In the Works"

Striving to be the Leading Public Works Department Through Innovative Stewardship of Infrastructure and Environment

Stanislaus County
Public Works

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Public Works Has Relocated to Morgan Road

Submitted by Sylvia Jones

Public Works Tenth Street Place (TSP) team members joined our Morgan Road team members the last week of June!! (Hooray!!) It was a busy and exciting time with both buildings packing and moving boxes, computers, desks etc. modulars being set up, and SBT connecting us to the outside world!!

Linda Allsop and Sylvia Jones coordinated the moves. Their goal was to try to have everyone only move once, but in a few cases that was not possible. Our wonderful Roads team assisted TSP with the move to Morgan Road, and we definitely appreciated their help!!!



During the week of June 28, Administration, Finance, GIS, and Survey Divisions moved to Morgan Road. The Transit Division

and David Gein will remain at TSP located on the 4th floor.

Our new contact information:
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Inside this issue:

Survey Division	2
Pervious Concrete Pilot Study at Morgan Road	3
Road Kill Softball Team	3
Public Works Employee Appreciation Luncheon	4
Transit Corner	4
Staff Updates	4

Morgan Shop to Save the World

Submitted by Olivia Tanner

T. Boone Pickens said, "A fool with a plan is better than a genius with no plan, and we look like fools without a plan." Pickens was an environmentalist and successful businessman who had a passion for reducing our dependence on fossil fuels, investing in alternative energy, and looking for other ways to enhance U.S. energy security and stability. He became drawn in with natural gas fueling with a vision to tap into natural gas as a way to operate vehicles.

Two reasons for his motivation were to lessen dependency on foreign oil, and most important, to guarantee a cleaner environment for future generations. Pickens said, "I have been an oilman my whole life, but this is one emergency we can't drill our way out of." (For more information on T. Boone Pickens, go to www.boonepickens.com).

Primarily composed of methane, natural gas is clear, odorless, and non-corrosive. Its combustion does produce greenhouse gases. However, it is a cleaner burning fuel and safer for the environment than other fossil fuels like gasoline, diesel, or propane. Carbon dioxide and water vapor are the main products formed during the com-

bustion of natural gas. These two items are the same compounds we exhale when we breathe. Compared to oil and coal, burning natural gas emits less harmful pollutants into the atmosphere. The combustion of natural gas releases extremely small amounts of sulfur dioxide and nitrogen oxides, hardly any ash or particulate matter, lower levels of carbon dioxide, carbon monoxide, and other reactive hydrocarbons. "According to the Department of Energy (DOE), about half of all air pollution and more than 80 percent of air pollution in cities are produced by cars and trucks in the United States." www.naturalgas.org

By using natural gas in the transportation sector, high levels of pollution emissions from gasoline and diesel powered cars, trucks, and buses can be reduced. According to the EPA (Environmental Protection Agency), vehicles using compressed natural gas (CNG) have reductions in carbon monoxide emissions of 90 to 97 percent, and reductions in carbon dioxide emissions of 25 percent. Other non-methane hydrocarbon emissions could be reduced by 35 to 60 percent and nitrogen oxide emissions can be reduced by 35 to 60 percent.

Compressed natural gas (CNG) is natural gas under pressure. Vehi-

cles can use natural gas as either a liquid or gas, however, most vehicles use the gaseous form compressed to pressures above 3,100 pounds per square inch. Natural gas is an abundant and secure source of energy. Currently, more than 99 percent of natural gas used in the United States comes from North America or other domestic sources.



Public Works Morgan Shop is one of the many agencies around the world who have picked up on T. Boone Pickens' vision, to guarantee a cleaner environment for future generations, by investing in CNG. Public Works Morgan Shop currently maintains two CNG fueling dispensers operating at 3600 pounds per square inch (PSI). Morgan Shop's natural gas comes from a Pacific Gas and Electric Company main line. It is compressed and stored in cylinder shaped tanks. The high pressure from the tanks flows into the vehicles through a dispenser.

(Go to bottom of page 2)



Check out GIS at:
www.gis.stancounty.com

Ethics Quotes

Potter Stewart:

"Ethics is knowing the difference between what you have a right to do and what is right to do."

"Health & Safety Byte"

Submitted by Laura Janovich

Did you know that....

1. You can call **1-800-427-ROAD (7623)** to get information on Road conditions
2. You can get **LIVE** traffic information from www.video.dot.ca.gov
3. Caltrans has a **Freeway Service Patrol** that will help you **FREE OF CHARGE** if your car breaks down in a congested urban freeway?

Survey Division

Everything You Ever Wanted to Know About Surveying and Then Some!!!

Submitted by Sylvia Jones

When I first sat down to write an article on Surveying, I thought this should only take a few minutes. Then the cover of The American Surveyor (Vol.7, Issue 2) caught my eye and I was destined to go on a fact-finding mission. So I sat down at my computer and typed in the word "surveying", and was rewarded with a wealth of information. Please read on.....

Definition of Surveying (From Wikipedia) – Surveying or land surveying is the technique and science of accurately determining the terrestrial or three-dimensional position of points and the distances and angles between them. These points are usually on the surface of the Earth, and they are often used to establish land maps and boundaries for ownership or governmental purposes! **Is that a mouthful or what???**

Surveying has been an essential element in the development of the human environment since the beginning of recorded history (about 5,000 years ago). The first president of the United States, George Washington was a surveyor. At the tender age of 17 in July of 1749 he was officially appointed the county surveyor of Culpepper County (located in the Commonwealth of Virginia). Washington used his surveying and mapping expertise during his military career (International Institution for the History of Surveying & Measurement – Donald Buhler).

Surveying is necessary in the planning, and execution of nearly every form of construction. Modern uses are in the fields of transport, build-

ing and construction, communications, mapping, and the definition of legal boundaries for land ownership.

The basic principles of surveying have changed very little over the years, but the tools have evolved tremendously. Surveyors must be able to use delicate instruments with accuracy and precision. Surveyors must also have a thorough knowledge of algebra, basic calculus, geometry and trigonometry, as well, as know the laws that deal with surveys, property and contracts. In most of the United States, surveying is recognized as a distinct profession apart from engineering. Licensing requirements for surveyors vary by state, but all have general components of education, experience and examinations. The 2008-2009 edition of the Bureau of Labor and Statistics' Occupational Outlook Handbook contained the prediction that "Overall employment of surveyors, cartographers, and surveying and mapping technicians is expected to increase by 21 percent from 2006 – 2016, which is much faster than the average for all occupations."

Thinking about a career change???

Stanislaus County's surveying team provides field services, which include monument preservation (a monument is a mark on the ground that defines location and must be durable and long lasting) indexing (i.e. benchmarks, certificates of correction, corner records, deeds and easement, and subdivision maps, map checking, writing and recording of legal descriptions, legal description verification, drafting services, road abandonment's, surveying and mapping all Township 2 South Range 12 East Mount Diablo Base and meridian as a Record of Survey), and act as a public resource on a daily basis.

In 2009 our survey team maintained and preserved approximately 9,000 corner monuments, upgraded GPS survey mapping of the County, submitted 88 maps for checking and recording, verified approximately 93 legal descriptions for LAFCO, Building Permits and Planning Department, recorded 14 County Records of Survey, processed nine Certificates of Compliance, wrote, verified, recorded 26 easement descriptions, created boundary descriptions for Empire CSA annexation, and assisted 427 customers at our counter with survey information.

In January, 2010 the Board of Supervisors received a Letter of Commendation from the California Land Surveyor's Association (Central Valley Chapter) recognizing our talented survey team for the excellent service they provide to the people of Stanislaus County, and the Land Surveying Community. The cover letter from the California Land Surveyors Association stated the County Surveyor's Office was a model County Surveyor Department in the Central California Region (**Go Team Stanislaus!!**). The goal of the team in 2010 is to get the new Survey truck on-line and work with California Land Surveyors Association (CLSA) to re-collaborate Stanislaus County's Survey Course.



Our Survey Team consists of (L to R) Curt Chappell, Chuck Kincaid, Larry Fontana, and Rich Brown.

* * *

"Morgan Shop to Save the World" (cont'd from page 1)

Individuals must receive training by a Morgan Shop employee before they are allowed to use these dispensers. Public Works Morgan Shop also maintains 45 natural gas vehicles used by the Roads and Bridges Division. These vehicles range from pick-ups, flat beds, sweepers, water trucks, patch trucks, and man-lift trucks just to name a few. Other county departments and intergovernmental agencies also fuel their CNG vehicles at the Morgan Road station. These vehicles include Transit buses, Community Services cars, Parks Department vehicles, Ceres Dial-A-Rides, a Yosemite Community College District van, and other types of vehicles.

Although, saving the environment plays a part in saving the world, it is unrealistic to think that Public Works Morgan Shop can "save the world"

alone. However, by working together and helping the environment, we can all make the world last longer. Stanislaus County is doing its part to contribute to a cleaner, safer, environment in more ways than one. Providing and supporting the use of compressed natural gas and compressed natural gas vehicles is an example of how the County is dedicated to helping save our environment, and thus saving our world. Public Works is proud to be part of that. "There is hope if people will begin to awaken that spiritual part of themselves, that heartfelt knowledge that we are caretakers of this planet."
~Brooke Medicine Eagle

For more information on how you can play a part in saving our environment, go to www.seql.org/100ways.cfm

Sources for this article include:

www.quoteqarden.com
www.consumerenergycenter.org
www.naturalgas.org
www.boonepickens.com
www.wikipedia.org

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Pervious Concrete Pilot Study at Morgan Road Facility

Submitted by Chris Brady

In an effort to aid the development community in solving storm water runoff management and to help meet the State's new NPDES storm water regulations, Public Works is in the process of developing a new standard for pervious concrete. This future standard will be utilized by the commercial and possibly residential development communities. Pervious concrete, in the right application, would essentially replace the typical concrete and asphalt concrete pavements utilized in most developments today.

This new standard would allow a developer to save money by eliminating the storm water collection systems typically used to collect and store storm water on a private development site. The pervious concrete technology allows storm water runoff to infiltrate through the concrete and into the underlying soils, hence, eliminating the need for all the standard storm water pipes, catch basins, manholes, and retention basins.

Obviously, a lot rides on the underlying soil characteristics. If the native soils are sandy in nature, they would be excellent

for utilizing the pervious concrete technology. If the underlying soils are heavy on silts and clays, the technology may not work. For design engineers, the message should remain that all the storm water runoff would still need to be stored and/or percolated per the existing County storm water standard.

Public Works has taken the first step in developing the pervious concrete standard by completing the pilot study. In April, Public Works successfully constructed a test slab of pervious concrete at the Morgan Road facility. The Roads Division was instrumental in the success of this project by performing all the site preparation which involved roadway excavation, grading, and drain rock placement/compaction.

With the help of Heritage Bomanite from Fresno and Fresh Mix from Ripon, a 120 foot by 20 foot, 8" thick pervious concrete slab was formed and poured in less than three hours. After a week of curing, our Roads Division came back to complete the conform paving to complete the project. Fortunately, we had late rains this year which put the slab to test immediately. Following hours of rain, the newly

placed pervious concrete slab performed perfectly and drank every last ounce of runoff. The new pervious concrete slab has the capability of infiltrating an average of nearly 400 inches per hour of storm water runoff.

Along with this amazing rate of infiltration, our site was blessed with very sandy soils which allow for excellent percolation. The pilot study was a huge success in illustrating the benefits of utilizing the pervious concrete technology, along with the well draining native soils.

The next step in the process of developing the new standard is to explain the overall design process of the pervious concrete structural section and to clearly outline the requirements that are necessary to get the desired principals out of the concrete itself.

Please go the link below listed under *Featured Video* to watch "Pervious Concrete in Action".

<http://www.stancounty.com/publicworks/construct-manage.shtm>

Road Kill Softball Team

Submitted by Jayne Sissle



This year Public Works joined the inter-county softball league. We recruited several Public Works employees and their families to come out and enjoy the nation's favorite pastime. The team has come out strong in spirit and has shown that we are out there for FUN.

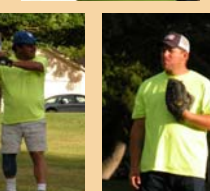
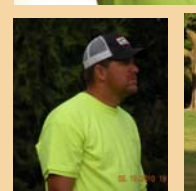
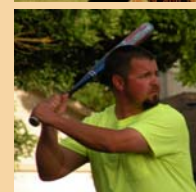
We have been working in two separate facilities for so many years now that Public Works employees have not had the opportunity to know other co-workers. Softball on Wednesday nights has helped to bridge that gap. We have had success on the field, blending and making new acquaintances not only within our own department, but with the other County teams that we play.

The team has had its share of bumps, potholes, and at times some alligator crackings. But overall they have taken the crackseal pot and used AC and Bitsie oil to fill the holes. (For those of you who do not know, AC and Bitsie oil are mixed to fill potholes and gaps).

We go out each Wednesday night to have fun, laugh at ourselves and laugh with the opposing team. Errors are made, but this is sandlot softball. Just show up and play. We have an AWESOME TEAM and AWESOME evenings of FUN!

There's a chance that someone will slide on their knees to back up their fellow team mate. You never know when the home plate ump will call a foul ball and rob one of our team mate's of a triple. You never know which player will have a sit and spin moment (when the ball is under their feet and they are spinning in circles to find it). You never know who will hit a home run, and how fast some of your team mates can RUN....

YOU HAVE TO LAUGH AND ENJOY!!!!



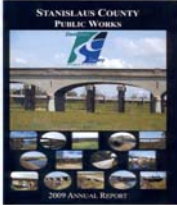


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To access our Public Works
2009 Annual Report, go to:

<http://www.stancounty.com/publicworks/pdf/annual-report.pdf>



Transit Division Submitted by Brad Christian

The Transit Division is wrapping up its big spring public outreach push. Staff participated in over twelve events in the last few months, including Earth Day, Beyond Earth Day, Waterford Heritage Day, Probation Open House and Senior events in Modesto, Oakdale and Newman.

Staff is also getting ready for its annual service changes in August including updating the StaRT Ride Guides and web site. The Division distributes guides to over 250 agencies.

Staff is also happy to report that phase I of the Patterson Transfer Facility project is completed and, upon approval of state bond funds, will be moving on to phase II of the project. The StaRT buses now have adequate space to safely load and unload passengers in downtown Patterson.

Additional projects being worked on are the completion of the Google Transit Trip Planner, installation of new security cameras and electronic fareboxes in the buses, the purchase of a new paratransit bus and an update of the Countywide Transportation Guide. These projects are being primarily funded with federal economic stimulus and state bond monies.

Transit Division's website is: www.srt.org/
Passengers may call StaRT at 1-800-262-1516 for route information.

2010 Public Works Employee Appreciation Luncheon

On May 26th, the Public Works' Management Team hosted their annual appreciation luncheon at the Morgan Road property. The managers prepared the buffet style lunch of grilled hamburgers and hot dogs, tossed green salad, cold beverages, and cake.

Matt Machado expressed his thanks for the staff's dedication and hard work during this difficult budget year. County service award certificates were presented to those employees with five or more years of service.



Staff Updates

Retirement:

James "Woody" Woodhead (Road Supervisor, Roads Division) retired on March 2, 2010 with 31 years of service.

Thank you for your service!

New Staff:

Donal Hicks—Senior Engineering Tech, Design Division.

Welcome to our team!

News:

Andrew Malizia (Assistant Engineer, Traffic Engineering Division) passed his Civil Engineer examination.

Congratulations!

New Baby:

Peou Khiek (Manager, GIS) has a new baby boy named Caleb born on May 7, 2010.

Best wishes!!



We're on the web: www.stancounty.com/publicworks