

# **AGING INFRASTRUCTURE...**

*The Future of Ventura County*



**IS IT CRUMBLING?**



# THE PIPELINE

News from the Ventura County Public Works Agency

Special Edition Vol. 6 • No. 9

## VENTURA COUNTY PUBLIC WORKS INFRASTRUCTURE

At all levels of government, and among the public, open dialogue and debates are taking place concerning the current and future funding of the nation's infrastructure – roads, bridges, levies, flood-control channels, utility systems and plants, and public buildings. The emphasis in these conversations tends to focus on the decaying condition of these critical national, state, and local resources and the shortage of funding. However, much more could be said about the heroic efforts exerted on a daily basis to maintain and extend the life of these assets — and the creativity and technological innovations to achieve that end result.

By discussing these issues in a more positive, focused dialogue, the public may better understand what has been done, what needs to be done, and what it will take to ensure the infrastructure can support our growth and development in the future. Although the outlook does not seem encouraging, a realistic view is necessary in order to communicate our need for increased and stable funding.

"Through this special edition of *The Pipeline*, we will reveal the good, the bad, and the ugly of our infrastructure and what is needed to halt the deterioration of our maturing infrastructure to maintain and improve quality of life and citizen safety, and embrace expected growth and development," says VCPWA Director Jeff Pratt. "We seek to be a model for other counties. Now is the time to make a plan and implement that plan."

In this issue we hear from each department within VCPWA and learn what challenges they face with existing infrastructure, predictions for the future without adequate funding, and some of the innovations that are helping to reduce costs while meeting quality standards. They also share what they need from the public and voters in order to reach their goals, and ultimately preserve and improve quality of life within Ventura County.

### WATERSHED PROTECTION DISTRICT

**Director: Tully Clifford**



"The Watershed Protection District has an extensive infrastructure inventory to support its role in protecting life and property from damage associated with flooding and storm water," says Tully Clifford, VCPWA Director, Watershed Protection District. The existing flood protection facility inventory includes: 206 miles of maintained channels, including 68-levee miles; 50 miles of underground culverts; 230 miles of access roads; 4 pump stations; 56 dams and debris basins; and 2 maintenance yards.

"But the District has aging flood protection infrastructure; 80% of the District's facilities are more than 40 years old," explains Clifford. "Only limited



*This photo demonstrates what happens with inadequate funding for repairs and construction. Depicted here, typical earthen levee damage.*



infrastructure is in place to effectively utilize water such as storm water. Maintaining water-quality issues may necessitate the construction of storm water capture and filtration systems in the near future.”

Revenue sources are very limited. Funding is not available to replace facilities or to provide new facilities to increase flood protection. There’s limited funding

to integrate facilities or to provide repurposing of existing facilities to provide flood protection, storm water capture, groundwater recharge, and recreation. Therefore, facilities are maintained to a basic level, no facilities are added which increase capacity or address flooding where no facilities exist or existing facilities are constructed to a level of protection less than the 1% storm.



*Further indications of inadequate funding are seen here: above left, channel walls with spanners since we can’t afford to replace the walls properly, and above right, a channel collapse due to a storm.*

## WATER & SANITATION DEPARTMENT



**Director:  
David Sasek**

The Water & Sanitation Department operates and manages 4 water districts and 7 sewer districts, including 3 wastewater treatment plants and 1 reclaimed water system. Combined, the Department has 218 miles of water pipeline, 160 miles of sewer mains, 30 reservoir tanks, 8 groundwater wells, 49 pressure-reducing stations, 18 pump stations, and 16 sewer lift stations. Maintaining and operating aging infrastructure, and constructing new infrastructure for replacement, creates an increasing cost for each of the individual district budgets, which are funded solely by the customers being served.

The history of our water districts dates back to the early 1900s in some areas. Ventura County Waterworks District (WWD) No. 1 (Moorpark and surrounding areas) was established in 1921. WWD 17 (Bell Canyon) was



*Photos above show a 6” waterline break that occurred in Somis (WWD19).*



established in 1977. WWD 38 (Lake Sherwood) was established in 1989. WWD 19 (Somis and surrounding areas) was formed in 1980 after assuming ownership from the prior Rancho Las Posas Mutual Water Company, and has pipelines dating to the 1920s.

Preventing service interruptions in aging water districts is a complex process. For example, a recent infrastructure study in WWD 19 revealed that 36% of its water lines are more than 60 years old. Waterworks District 19 has higher-than-average costs related to the operation, maintenance, and repairs required in order to keep the aged water system operational — it spends about 35% of its budget

on operation and maintenance compared to the 15-20% spent by the other districts.

WWD 19's 46 miles of water mains have averaged about six times the number of main line breaks per year as compared with the much larger Waterworks District No. 1, which has 138 miles of water mains when you normalize the data. Keeping costs down requires creative and strategic problem solving to fund WWD 19's \$15 million list of high-priority unfunded projects. Looking beyond the approximately \$15 million in unfunded high-priority projects, WWD 19 still has nearly \$25 million in other unfunded projects.

## CENTRAL SERVICES DEPARTMENT, REAL ESTATE SERVICES DIVISION

**Director: Janice Turner**



Often County departments need office space in areas where County-owned facilities are unavailable. The Central Services Department, Real Estate Services Division (RES) works with those departments to find the right facility to meet space needs. "Our RES staff are experts in their field, they know the market and always protect the County's interests," says Janice Turner, VCPWA Director of Central Services. Below are two examples of RES successes in locating facilities and negotiating favorable lease terms for County departments that were occupying substandard facilities.

The County Behavioral Health Department had leased a building in Santa Paula for over 20 years. The County had borne the expense of adding square footage to the building as the program had expanded. In the mid-

2000s the building again became inadequate in size, and needed additional parking and interior updates. After a four-year search, space opened up with the downsizing of another County program that allowed us to move Behavioral Health to a new building with adequate parking and new tenant improvements.

The Healthcare Agency's Physical Therapy program had occupied the converted first floor of an office building across from the Ventura County Medical Center for over 10 years. The program had outgrown the space and needed more parking. RES was able to find a large former industrial building that was repurposed for the Physical Therapy program that allowed expansion of services and adequate parking.





## TRANSPORTATION DEPARTMENT

Director: David Fleisch



Ventura County's unincorporated roads currently have an average Pavement Condition Index (PCI) of 74 (out of 100) as of May, 2015, which is quite good. However, because our road infrastructure is aging, that PCI is predicted to drop to about 70 in the next 5 years.

"The state of County roads is not our only area of concern," warns VCPWA Transportation Director, David Fleisch. "The average Sufficiency Rating of our County bridges is between 70 and 81 (out of 100). Fifteen are structurally deficient, and 8 are functionally obsolete; 7 have been recommended for replacement. There are 7 bridges in the County that exceed 100 years old."

The County road fund receives its monies from the state gas tax, not from property taxes. The gas tax was set at 18 cents/gallon in 1994 and has not changed. Cars are more fuel efficient and the number of hybrid and electric vehicles is increasing. However, gas tax revenue is not increasing proportionately. All of these factors have caused a reduction in the available funds for road maintenance.

The County also receives project-specific grants from federal funds. There has been no long-term Federal Highway Program in place since 2009, so the amount of funding available

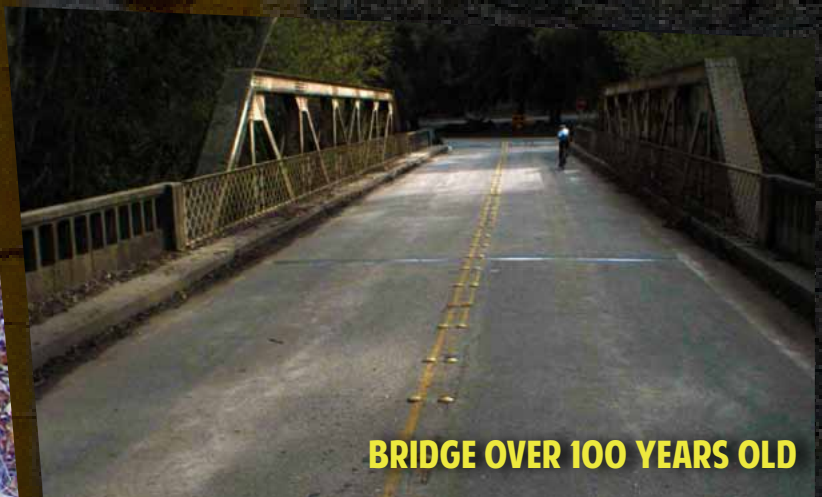
remains uncertain. The federal gas tax was set in 1993 and also remains unchanged. "This affects programs such as Highway Bridge Repair and Replacement and Surface Transportation Program, among others," explains Fleisch. "The uncertain federal funding also makes it more difficult to fund the recovery process associated with any major disaster, such as a bridge collapse or major flood."

However, in the face of such daunting odds as those presented by our aging infrastructures, VCPWA Transportation Department is able to take advantage of incredible new technologies. For example, we are resurfacing roads with various products that use pulverized tire rubber melted into the asphalt oil, such as Cape Seals and rubberized asphalt overlays. We have also used asphalt pavement with Kevlar fibers in the mix.

Public awareness is also a powerful tool. Residents can become informed voters by reading about ballot measures that impact funding for infrastructure repair and replacement. Social media helps get the word out about infrastructure repair work or road closures. Our infrastructure may be aging, but our approach to creatively solving the challenge this presents doesn't have to be.



**DRAINAGE STRUCTURE OVER 50 YEARS OLD**



**BRIDGE OVER 100 YEARS OLD**



## ENGINEERING SERVICES DEPARTMENT

**Director: Herb Schwind**



Various County agencies, departments, and districts, including the Health Care Agency, General Services Agency, and Fire Protection District, are struggling to manage their own challenges related to aging and deteriorating infrastructure. The County's Fire Protection District is one of those agencies that the Public Works Agency's Engineering Services Department closely collaborates with to implement their capital improvement program to bring their facilities into the 21st century.

"Many of the County's fire stations were built in the 1950s when firefighting needs were markedly different than they are today," explains Herb Schwind, Director of VCPWA's Engineering Services Department. "The size, variety, and complexity

of firefighting equipment has grown, as have the communities which the fire stations must protect, making the 60-year-old stations too small." Some of the fire stations were built in flood-prone areas, unknown at the time of construction. One fire station is located in an area with oil reserves beneath and it experiences methane gas seepage.

The Engineering Services Department has recently completed or is currently managing the delivery of six new fire stations which are designed to accommodate the communities they support, provide adequate space for modern equipment, facilitate today's improved communication requirements and provide for the safety of the citizens through reduced insurance rates and response times.



An accounting of the infrastructure in statistical and quantitative terms helps us to put the problems that each of our hard-working departments at the VCPWA face into perspective — the miles of pipeline, roads, drainage ditches, number of buildings, etc. and the funding required to maintain and improve them. It's clear that such funding has been insufficient to fully meet the demands of our aging infrastructure. We cannot count on funding from state and federal sources to make up the difference.

Ventura County's infrastructure is the core of its economy, and provides the foundation for its future sustainability. Our infrastructure connects us to the rest of the world, and if compromised, negatively impacts the livability of the cities we love and call home. A deteriorating infrastructure means a deteriorating future for our children and grandchildren.

The good news is that each department has utilized creative problem-solving, innovative technologies, and old-fashioned hard work to make the most of the resources available and reduce the financial burdens. However, it's not enough — we must get the word out to the public that supporting Public Works funding is a priority on par with public safety, and vital to maintaining Ventura County's high quality of life.

***Interested in learning more about Ventura County's aging infrastructure?***

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