

# Shining a light on Outdoor Lighting

A D I F F E R E N T K I N D O F C U S T O M E R S E R V I C E S T O R Y

There's been a lot written about how we lose the ability to hear certain frequencies as we age. Did you know, though, that also applies to one's vision and the color spectrum?

The Outdoor Lighting team does. That phenomenon came to light when the team was changing out street lights in Sun City and Sun City West. After replacing the communities' mercury vapor fixtures with high pressure sodium ones, Outdoor Lighting began getting complaints.

"Those new streetlights are way too dim."  
"My street's darker since you put in those new lights."  
"We want the old lights back." And so on.

According to **Randy Edwards**, Construction/Maintenance Section Leader, Outdoor Lighting, re-installing mercury vapor lights wasn't an option.



Sodium light fixture

"For environmental reasons and state ordinances, we don't use the mercury lights anymore," he said. "APS' standard now is the high pressure sodium lights."

Concerned about the complaints, though, Outdoor Lighting sent crews to check the new streetlights and make sure they were working properly. They were.



Induction light fixture

So why the complaints?

"We found out that as we age, we lose our ability to see certain colors," Edwards said. "The first color that's affected is yellow, and high pressure sodium lights give off a yellow light. That was why we were getting complaints from the retirement communities but not anywhere else."

The solution was to replace the high pressure sodium fixtures with induction lights. A type of fluorescent light, induction bulbs produce a white light instead of a yellowish one. They also are more energy efficient.

For example, a 175-watt mercury vapor light produced 7,000 lumens but a 100 watt induction light produces 8,000 lumens. (A lumen is a measure of the intensity of light.)

"That's because the mercury vapor light requires 208 watts to operate the bulb and ballast in the light fixture," Edwards said. "The ballast acts like a tiny generator. The induction lights don't need ballasts. So you get more light using less electricity and the lights can last up to 20 years."

As the mercury vapor and high pressure sodium lights fail in the Sun City communities, APS is replacing them with the induction lights. To date, 4,000 lights have been replaced.

Because Sun City and Sun City West are unincorporated and under the county's

jurisdiction, the change to induction lights had to be approved by the Maricopa County Board of Supervisors. APS owns the outdoor lighting equipment and bills the county for the electricity used to run them.

In addition to the incorporated communities within Maricopa County, Edwards and his 24-person team maintain approximately 110,000 lights in the Phoenix metropolitan area.

While the induction lights have addressed the Sun Cities' lighting concerns and high pressure sodium lights are the current standard elsewhere in the service territory, the Outdoor Lighting team continues to check out new developments that would more cost effectively illuminate our communities' streets.



LED test fixture

"The use of LED lights probably will be next," Edwards said, "We keep watching what's available on the market and evaluating them for future uses. They're probably a year or two away from being ready for widespread application."

More information on Outdoor Lighting is available at <http://lighting.apsc.com/> and [www.aps.com/aps/aps\\_services/construction/streetlights\\_1.html](http://www.aps.com/aps/aps_services/construction/streetlights_1.html).

— Colleen Hawk