



## PATHWAYS &amp; PARKS



**Location:** Wray, Colorado

**Client:** City of Wray, Colorado

**Installer:** WSI Lighting, Inc.

**Products used:** GreenWay™, 125 watt series with 17.5 watt LED and Type V Fixture

**Overview:** In the middle of the flat prairies of northeastern Colorado, the rolling hills and shady lanes of Wray are a welcome sight. The Republican River flows through the town, making Wray a nice break on US 34, just shy of the Nebraska border. Especially scenic is the pathway meandering through the center of Wray, which is now illuminated by Sol's solar outdoor lighting.

One of Wray's claims to fame is birdwatching. Watching prairie chickens, you might think that they lead a rather mild-mannered existence—that is, until mating season. In the spring, prairie chickens dance, stomp, and fight in search of a mate. Your best bets to see prairie chickens in Colorado are the town of Wray and select sites within the Comanche National Grassland.

“We selected Sol lights based on reliability, their reputation and decades of experience in the solar lighting industry, and the cost.”

– Stan Holmes, City Manager of Wray at the time of install



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**Requirements:** The pathway meanders along the Republican River and through the middle of town for over two miles. Being so close to the river presented some unique challenges for the project. Trenching would have been problematic with all the groundwater present, so installing a grid-powered lighting system would have been very expensive.

**Our Solution:** Funding was provided by the Energy and Mineral Impact Assistance Fund (EIAF) grant program. Without the additional cost of trenching and wiring, solar pathway lighting fit the bill perfectly. Sol's GreenWay™ solar LED lighting systems were selected to ensure an enjoyable and safe walkway. Sol designed 71 of these solar lights to illuminate just under two miles of the trails and bike paths. "The solar and battery application allowed us to install lighting without installing underground power lines to the light poles," said Stan Holmes, City Manager of Wray at the time of the install.

The Dark-Sky Compliant fixtures used were also crucial for the project: Holmes commented that the "lighting is very focused—very little trespassing into unwanted areas." Dark-Sky Compliant lighting addresses the negative impacts of artificial lighting on wildlife. Light pollution can cause disorientation for birds, and may affect reproduction among amphibians, insects, and fish. Since the lights were installed along the river, Dark-Sky Compliant lighting was essential to reduce light pollution, and Sol's solar lighting systems worked perfectly.

WSI Lighting, a local installer, was selected to install the system. Steve Straub of WSI Lighting commented on how quickly the lights were installed. "We had the assistance of one of Sol's lead installation and technical support people and he made everything flow smoothly," Straub said. There was minimal disruption to the pathway and surrounding area, and once installed, the lights were up and running that night.

The residents of Wray now feel much safer thanks to the improved lighting, noting a previous lack of any light other than some nearby streetlights along a portion of the pathway. "During the first month of operation we had over 20 comments, and they were overwhelmingly favorable," noted Holmes.





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## Follow-up: 10 years later

In 2017, approximately 10 years after the installation along the Republican River Trail, what is the status of the 71 GreenWay lights in Wray, Colorado?

**Functionality:** “Everything is still working,” says Lee Tufton, City of Wray Electrical Lineman Supervisor, who handles maintenance for city lighting. “We even went through a traumatic hail storm—it was really bad. And there was no damage to the solar panels.”

And what about snow? “We’ve never had any issues with snow because the solar panels clear themselves up if we get a little bit of sun because of the angle of them,” Tufton says. “That was one issue I was wondering about for maintenance, but I’ve never actually had to go up and clean any of the solar panels.” The City also experiences lots of wind and lightning, and the lights have held up to both.

**Feedback:** Community feedback has remained positive; Tufton says everyone loves the lights. Plus, people in the community let the City know the lights are out—because they’re using the trail, perhaps more than before.

**Maintenance:** The City opted to use a different company for their batteries, which have been the only things to require replacement so far.

“It’s been quite a headache-free project because I haven’t had to worry about it,” says Tufton. “It’s saved me a lot of time on maintenance—I can go and do other projects around the city. Trying to get in all these lights with the utility would have been a nightmare; trenching all along the river, high water levels, tree limbs, cleanup afterwards—solar lighting has saved my department a lot of time.”





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**What's next:** “Our community has had a long history of exploring innovative ideas, from the green lighting application with the Sol solar lighting to a school district owned wind turbine that the community put together,” says current City Manager James DePue. “We work hard to educate our customers and our constituency about the importance of energy efficiency and what that looks in your homes and businesses. At the City, we’re also looking at what the most efficient use of our resources is and how we can continue to challenge the status quo and think outside the box.”

The City has talked about other solar projects, but nothing has progressed yet. But when Tufton heard about the new EverGen M Series lights from Sol—which include remote monitoring—he got excited.

“One light would go bad, and a customer would come in and say there’s one light out. So we couldn’t narrow it down, when we were trying to troubleshoot,” Tufton explains. The solution was to put numbers on each system so citizens could report which light had the outage and Tufton could find it easily.

With remote monitoring, however, the City could see the outages for themselves, right from their office. Tufton says, “The new Sol EverGen would give me a quick way of finding them and fixing the light.”

“ One of the first things that people see when they come from the west into Wray is the walking path and, at night, lit by solar lighting. People remember Wray for a lot of reasons, and one is that great walking path that has the solar lights on it. ”

– James DePue, City Manager, City of Wray