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CUT WEED CONTROL COST BY 80%

**California City Saves \$24,000 and 600 Hours
in Staff Time Annually with Automated Weed Control**



*Lakeport, Calif., replaces manual weed control with
fully automated Trimble WeedSeeker system.*

Public Works crews in Lakeport, Calif., once spent more than 600 personnel hours annually on manual application of herbicide for curbside weed control. In 2007, the city installed a Trimble® WeedSeeker® system on an existing street sweeper. The system automatically detects and sprays weeds during scheduled street cleanings, completely eliminating staff time for weed control and dramatically reducing application of expensive herbicides.

Project Highlights:

- Personnel time spent on manual weed control activities has been cut by 100 percent, giving Lakeport more than a 600-hour net gain in time dedicated to more important Public Works duties.
- The city's street sweeper vehicle is doing double duty cleaning roads and spraying weeds with no net increase in staff time or fuel.
- Lakeport has reduced its annual expenditure on gasoline and maintenance by about \$1,300 per year for the truck once used in weed control.
- Expenditures on herbicides have been cut in half—a \$6,000 annual savings—thanks to computer-controlled spraying by the automated WeedSeeker, significantly reducing any environmental impact of chemical application.
- Total annual savings = \$24,000 (staff time, truck operations, herbicide)
- The WeedSeeker system pays for itself quickly.

Keeping the curbs and sidewalks weed-free is a never-ending task in Lakeport, California, especially during the rainy spring and summer months. A two-person crew from the Public Works Department once spent an average of two to three days per week for more than 12 weeks every year manually spraying the gutters and sidewalk cracks with a chemical herbicide.

"No one was really excited about going out on weed duty," said Doug Grider, Lakeport Public Works Director.

He explained that zapping weeds not only sapped morale, but was hurting the city financially. In recent years, Lakeport had cut the department staff in half from eight to four due to budget issues. Grider felt the city would



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benefit in many ways by taking his crews off weed duty and letting them focus on their primary jobs—maintaining the city’s infrastructure.

Today, Lakeport is doing more with less—and still winning the battle against weeds. The city installed an automated Trimble WeedSeeker system on an existing street sweeper. As the Elgin Crosswind sweeper makes its normal rounds cleaning Lakeport’s 32-miles of roads, the system electronically scans the curb and sidewalk for live weeds. If it detects one, a precisely metered dose of herbicide is sprayed on the plant—while the sweeper chugs along at 10 mph.

“We’re combining two operations into one with no net increase in operating expense because the sweeper is out there every day anyway,” said Grider.

All the driver has to do is remember to switch on the WeedSeeker when he begins the sweeping rounds every morning. That’s a far cry from the way it used to be. Anytime weeds started working their way up through curb and sidewalk cracks during the wet months, Public Works dispatched a weed control truck loaded with a 150-gallon tank of 2 percent glyphosate solution. One person drove and another operated the spray hose.

“A third crew member had to follow on foot with a hand-pump to spray around parked cars,” said Grider.

The crew in the truck usually spent two or three days out of each week making the 32-mile circuit of the city. And the walker took two to three days to complete his rounds. Assuming peak weed growth occurred in at least 15 weeks throughout the year, Lakeport was paying these personnel \$14–\$18/hour plus benefits for 600 hours every year to eradicate weeds. This totaled more than \$16,000 in staff time, roughly equal to three months of pay for a temporary Public Works employee.

“We’re a small community, and when you start taking that kind of manpower out of your staff, it really limits what you can accomplish,” said Grider.

He is quick to point out that once automated weed control was implemented, the city didn’t lay off any of the crew members. Instead, Public Works re-directed their efforts back to the more critical jobs for which they had been hired, focusing on construction and maintenance of the city’s streets, storm drains, and facilities. Department efficiency jumped proportionately.

“We’ve got our guys doing what they should be doing, like fixing streets and not worrying about weeds,” said Grider.

In addition, the flatbed Ford truck once used for weed duty just isn’t deployed that often anymore. Its maintenance costs have been eliminated along with the estimated 200–300 gallons of fuel burned per year making the rounds. Annual savings on fuel and maintenance for the truck total around \$1,000 and \$3,000, respectively.

In terms of other cost savings, each city-wide application consumed about 450 gallons of the diluted herbicide solution. At \$9–\$13/gallon (undiluted), the city was spending more than \$12,000 per year on glyphosate herbicide, but that figure has been cut in half. And contributing to the morale of the Public Works team is a reduction

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in paperwork. California requires a complicated and thorough reporting of herbicide application, but this accounting has been reduced substantially.

What's more, Grider felt there was another price to pay for glyphosate use, and he is aware that over-application isn't good for the environment.

"The less of these [chemicals] we have to use, the better off we are," he explained. "The crews always had the idea that more was better."

With WeedSeeker, the city has reduced its glyphosate consumption by 50 percent. Grider credits this to the fact the automated device administers a carefully measured dose directly on the weed, even if it's just the size of a dime. And the unit only applies the herbicide to live weeds because the built-in sensor scans for the presence of chlorophyll.

"It's a very select application, and I think that's the key," said Grider. "We've all become more environmentally conscious."

The system installed by Lakeport is actually comprised of two detector/sprayer units, which work independently to target the curb and sidewalk. WeedSeeker, however, is designed for modular expansion up to 40 units (usually for farming applications) that can be installed on a variety of vehicles including ATVs, utility trucks, tractors, and other agricultural equipment. The units can be adjusted for speeds up to 20 mph.

Overall, Grider is pleased with the system because WeedSeeker has enabled Lakeport Public Works to accomplish more with its small staff. The system has saved money on staff time, fuel and herbicide while relieving his crews of their least favorite duty. Perhaps just as important, the automated system does a better job of keeping the city weed free. Weeds under parked cars that once went un-sprayed are no longer a problem because parking restrictions are in effect on street sweeping days. Additionally, the system is more consistent throughout the day.

"The WeedSeeker performance doesn't wane toward the end of a hot day the way a person's does," said Grider.

Based on Lakeport's experiences, an investment in automated weed control will pay off quickly thanks to the cost savings in multiple areas and low operating expenses. Through five years of almost continuous use, Public Works has performed only routine maintenance on the unit. Grider says that sticking to the recommended maintenance plan has been key to trouble-free operations and no unexpected costs.

"We have had no maintenance issues with it," Grider said. "To me, that's huge."

Equipment Used:

- Trimble WeedSeeker System
- Elgin CrossWind Street Sweeper