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## *Irrigation Case Study* *Shoreline School District*

### *Project Summary*

Working with Seattle Public Utilities, the school district developed a comprehensive program to reduce the amount of water used in irrigation. Conservation strategies centered around installation of a weather-based control system. As a

result, the school district's cost for irrigation water has dropped by up to 50 percent. Rising water costs during the 1990s have increased the value of these conservation efforts to **over \$50,000 per year**.

**Project Cost:** \$175,358

**Rebate:** \$59,031

**Water/Wastewater Savings:** 20 million gallons/year = \$50,600 per year

**Payback Time for Customer:** System payback under two years. Large projects were

### *Background*

The Shoreline School District irrigates 16 sites scattered over approximately 15 square miles just north of Seattle. The suburban setting of the district's schools features extensive irrigated landscapes in addition to irrigated turf athletic and playfields.

### *Problems Identified*

In 1992, when a drought brought attention to the need water conservation, the school was using three million cubic feet of water annually. Rising water costs and an increasing number of irrigated acres added to the conservation push. Research into more efficient designs was carried out in both the classroom and the field.

### *Solutions Targeted*

In targeting solutions, the school district abandoned certain accepted principles of irrigation. Initial savings helped get buy-in from senior management, resulting in support for further research, testing and acquisition of new technologies and irrigation management products.

“Bringing SPU into your irrigation management costs nothing and could possibly help you achieve results such as mine.”

– Russ Ayers, Shoreline Schools

- Moved toward **‘scientific scheduling’** of irrigation, based on actual irrigation system performance, soil characteristics, plant water needs and climatic data. Site audits showed that this alone decreased water use by 30 percent with no adverse effects.
- Installed **rain sensors** and widespread use of sprinklers with **in-head check valves**.

SAVING WATER PARTNERSHIP

The school district's landscape architects also joined in the effort, modifying accepted design standards and incorporating **new products and technologies into specifications**. The synergy that developed as a result of collaboration with SPU, designers, vendors and Shoreline's management allows for vastly improved, value-added projects to be developed.

### *Important Conservation Tips for Irrigation*

- Create or establish records of water use.
- Conduct an irrigation audit.
- Eliminate leaks and make timely repairs.
- Upgrade the control system for weather-based automated scheduling.
- Install rain sensors and check valves and master valves.
- Adjust turf cultural practices to further reduce turf and plant water needs (e.g. aerate, let grass grow somewhat longer during summer, fertilize as little as possible during dry months)
- Add conservation language to maintenance contract language.
- Get management buy-in. Facility managers and users need to understand and support conservation in order for changes to be smoother and for funds to become available.
- Education is essential to keep abreast of new technologies and ongoing development in irrigation, design and horticulture.
- Pre-dawn watering is best.
- **Call 206- 684-SAVE** for free technical assistance and project rebates.