

Best Practices in Utilities & Maintenance Services Plumbing Shop M3100

Volume I, Number I

The Plant Academy Publisher

February 1999

What are Best Practices?

Best Practices describe the optimum ways to perform a business process; they are a component or combination of component practices determined to be the most effective, practicable action steps in performing work; they make lasting contributions to improving quality of work life and services to customers. They are the means by which leading organizations have achieved top performance. They also serve as goals for other organizations striving for excellence.

Source: Anderson Consulting; Best Practices and Local Leadership Program, UNCHS (Habitat); Cooperative Extension, Institute of Agriculture and Natural Resources, U of Nebraska, Lincoln/2-5-99).



Center for Organization Learning

**The Plant Academy
Publisher**

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Location and Exercising of Water Main Valves "Protecting the Flow of Life"

Opportunity

Before Dave Gilbertson and John Iafolla instituted the valve-exercising program, the cost to Plant Operations and its customers was staggering.

For over twenty years, water valves on university property were not consistently identified, checked or maintained.

Broken water pipes and damaged water mains flooded basements and destroyed transformers. Damage to property came to hundreds of thousands of dollars in replacement costs not including the thousands of hours of lost time due to buildings

that were shut down in order to locate, isolate and repair or replace the damaged pipes.

The problems were mounting and very often high-traffic buildings half a block long were closed due to flooding. This problem presented our customers with an unsafe environment.

A disaster waiting to happen was what prompted the introduction of Best Practices in the *Valve Location and Exercising Program* by the UMS Plumbing shop.

In January 1994, Jim Christenson, Director of Plant Operations asked for a preventive maintenance plan. In 1997, the



new Director of UMS, Rich Robben and his general foreman identified these two goals:

- 1. Introduce new technology**
- 2. Set up a comprehensive preventive maintenance program**

Plan of Action

Once the project had been given the go-ahead, the implementation process began. The first goal, to introduce new technology, was set into action by buying new equipment such as the Pow-R-Drive portable reversible valve operator, Trav-L-Vac 300 skid mounted valve, &

the Buffalo Box Cleanout system. The next step was to pick people for the team. Once the team was assembled, training sessions were set up to get everyone acquainted with the new tools.

As with any new program, friction was en-

countered as a result of changing priorities. The work team was aware of the need for implementation and so all they needed was to feel that this was their program too. With John Iafolla's >

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Plan of Action

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< and Dave Gilbertson's leadership everyone was accommodated. With the program established, UMS began to reap the benefits of their efforts. The new tools provided improved efficiency in the maintenance process which showed a significant reduction in unplanned maintenance work. This meant that there were fewer breakdowns,

service interruptions and emergencies. It also resulted in reduced response time when breakdowns or other emergencies did occur.

Bottom line, the implementation of the new program led to savings

and resulted in an improved quality of service to our customers and the university community at large.

“...implementation of the new program led to savings and resulted in an improved quality of service to our customers...”



Data

Impact- Almost 1500 acres of land with over 400 buildings and 50,000-plus faculty, students and staff who use water 24 hours a day.

Equipment

- ◆ Portable self-contained vacuum
- ◆ Power valve turner
- ◆ Sewer TV & metal detector
- ◆ Pick-up truck with generator

Stats

- ◆ Amount of water used on a typical football Saturday is approx. 1,000,000 plus gallons
- ◆ Amount of water used by the University of Michigan last year was 1,512,107 CCU's or 1,132,568,143 gallons of water at a cost to the university of \$4,370,754.00
- ◆ The University has approxi-

mately 17% of the water mains in Ann Arbor on University property.

- ◆ About 75 miles of water mains that are the responsibility of the university to maintain and repair
- ◆ **Time Period**– Only about two months to order and receive equipment. Water main prints needed to be updated.

Key Results

Savings–

- ◆ In tens of thousands of dollars by being able to shut down the minimum number of buildings in case of a water main break
- ◆ In experiments in research
- ◆ In teaching time for students
- ◆ In working time for the staff

and this is not counting the possible loss of equipment that use water for operation.

- ◆ In construction by having more control of the water system
- ◆ In six football Saturdays, over 672,000 fans experienced NO plumbing problems

The Best Practices Project Team

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From the Publisher

Plant Academy collects and disseminates best work practices in Plant Operations

The Goals

- ◆ Share workplace solutions to problems from lessons learned
- ◆ Serve as a benchmark for assessing trends and conditions
- ◆ Identify who is doing what to

implement commitment to business objectives

- ◆ Provide insight to policy options and capacity-building opportunities to improve service to customers
- ◆ Work through common issues
- ◆ Promote interdepartmental communication and collaboration

- ◆ Use as training tools

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