A Mobile App to Evaluate & Categorize Maintenance for Residential Sewer Grinder Pumps

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History

- Town Meeting Vote
- ~525 Residential Grinder Pumps
  - E-Ones
  - Meyers
  - Barnes
- Privately owned – Town maintained
- Needed full inventory & condition assessment
  - What was where...
Creating the Evaluation Form

- Identify parameters for evaluation
- Historical issues & resident calls drove questions
- Identify current & potential problems
- Evaluate deficiencies from Town standard
- Track installation and accessibility issues
Categorize and Prioritize

Core/Pump Visual Inspection and Condition
- No. of Pumps in Very Good Condition: 104 (22%)
- No. of Pumps in Fair Condition: 15 (3%)
- No. of Pumps in No. of Pumps in Poor Condition: 26 (6%)
- No. of Pumps that Need Immediate Attention: 330 (69%)

Grease and Debris
- No. of Pumps with Light Grease: 91 (50%)
- No. of Pumps with Light Debris: 44 (24%)
- No. of Pumps with Heavy Grease: 39 (22%)
- No. of Pumps with Heavy Debris: 7 (4%)
Repairs

PM REPAIRS

Deteriorated Panel 128

Minor Repairs Completed During Inspections 63

Critical Repairs 120

Deficiency Repairs 373
Repair Plan

- Define parameters for repairs
- Determine criticality
- Prioritize
- Grouping
  - Multiple repairs on same pump
  - Geographic location
iDataCollect

The Old Way

Collect Data in the Field

Re-Key Data from Paper Forms

Handwriting Interpretation

Data Storage and Retrieval

The New Way

Store Data on Secure Server

Collect Data in the Field

Retrieve and Analyze Data

Weston & Sampson

frma

frma
Data Integration
Dispatch & Scheduling
Form Attributes

Signature

REQUIRED
Data Mining

- Track Inspection Progress
- Prioritize Repairs
- Individual Inspection Reports to PDF
- Historical Data on Alarm Calls
- Identify Access Issues
Access Issues
Sewer Grinder Pumps 101

- Installer Training
  - Reduce Call-Backs
  - Share best practices

- Installation Inspections
  - Proper Grading
  - Sealed Control Panels
  - Alarms Operating
Sewer Grinder Pumps 101

- Installer Training
  - Began as a policy in Chelmsford in 2005
  - Sharing best practices
  - Drainlayers must have Grinder Pump Endorsement to install pumps.
  - Greatly reduced installation issues
    - Reduce Call-Backs and Warranty Claims
Sewer Grinder Pumps 101

- Installation Inspections
  - Proper Grading
  - Sealed Control Panels
  - Proper wiring and Alarms Operating

- Certified programs lead to longer warranty offerings and improved customer experience
Residential Education

- Flush & Forget
- Alarms
- Vacation or Extended Absence
- Power Failure
- Neighbors Alarm Sounding
- Who to Call & When
Start Up Inspections

- What a start up inspection covers
- Why they are critical
- Sealed colored wire ties
- Proactive vs. Reactive
Lessons Learned

- Residential Education is KEY
- Preventative Maintenance
  - Plan and Budget
  - Reduced Alarm Repair Calls
- Preferred Model
  - Resident calls & submits for reimbursement
- Pictures are worth a thousand words
Thank You

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