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Intro to Salt Savers Program

Level 1, part II: Softener efficiency and evaluation

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Softening efficiency

Definition: The amount of hardness that a water softener can remove from water per pound of salt

Expressed as grains per pound

A softener with an efficiency of 4000 grains per pound removes 4000 grains of hardness for every pound of salt used by the softener

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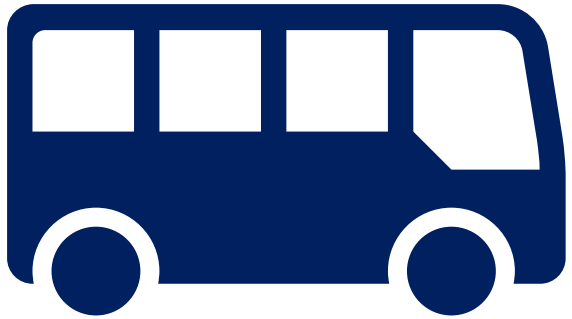
Efficiency varies between models

1 pound of salt

← Softens less water

Softeners more water →



1 gallon of gas

← Goes fewer miles

Goes more miles →

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Variation between softener efficiency

Old, deteriorated softener
Efficiency: 2000 grains/pound

Brand new softener
Efficiency: 4000 grains/pound
→ Can go twice as long between regenerations
→ Uses half as much salt

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Factors that affect softening efficiency

1) How it regenerates
2) Age
3) Model of softener
4) Softener settings

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Regeneration type

Based on days (time-clock)

- Regenerates after a programmed number of days, no matter how much water was softened

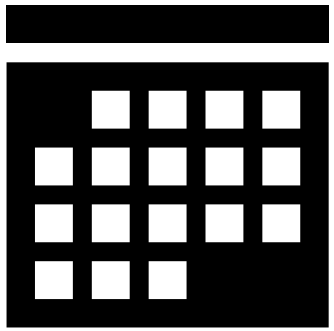
- **Less efficient** because the softener may regenerate before softening capacity is used up → discharges chloride more frequently

Based on gallons (demand-initiated)

- Regenerates after a programmed or metered number of gallons passes through the softener

- **More efficient** because the softener regenerates only when softener capacity has been used up

Time clock example



Time clock

"I'm going to empty and refill my gas tank every 7 days, because I assume I'm going to use up all my gas in 7 days"

→ What about weeks when you drive less?

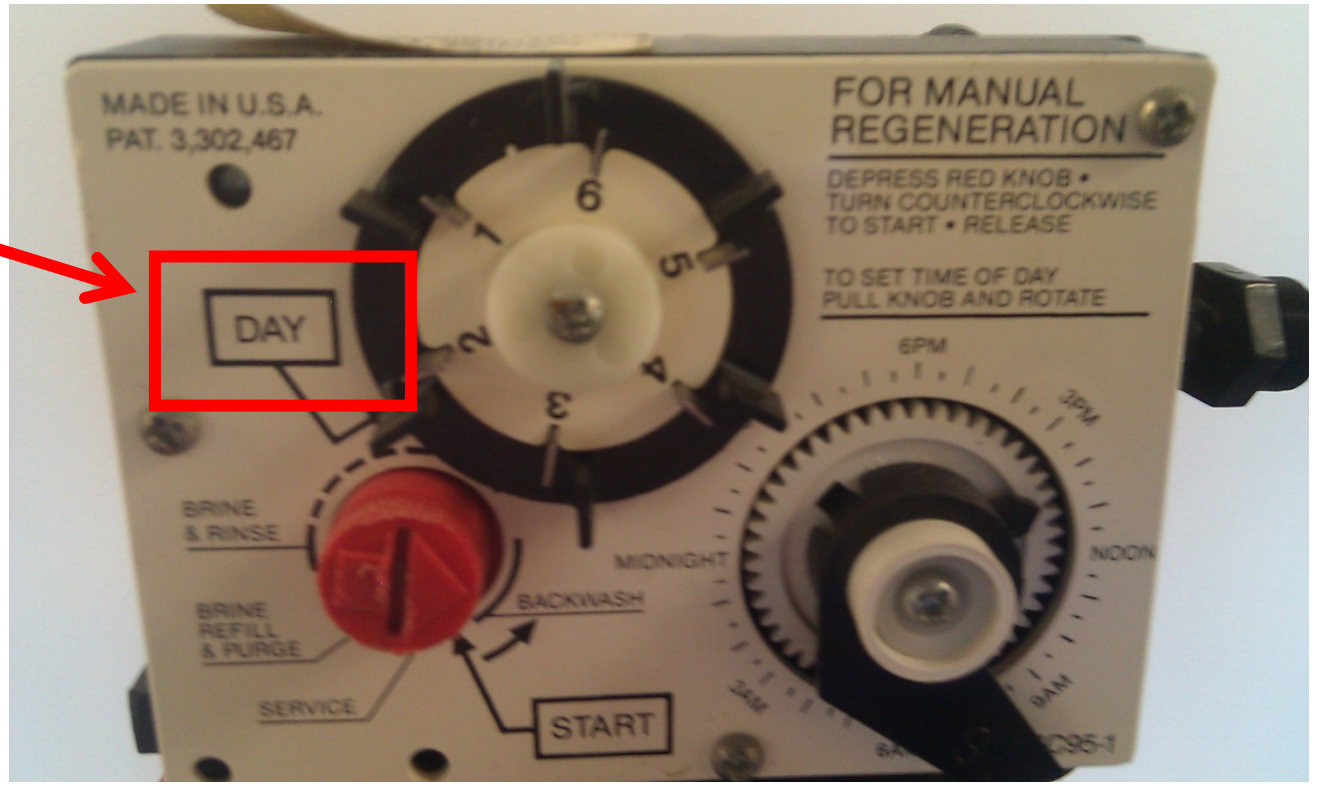
Demand initiated

"I'm going to fill up my gas tank when my tank is almost empty"

→ Doesn't matter how much time has passed, only how far you've driven

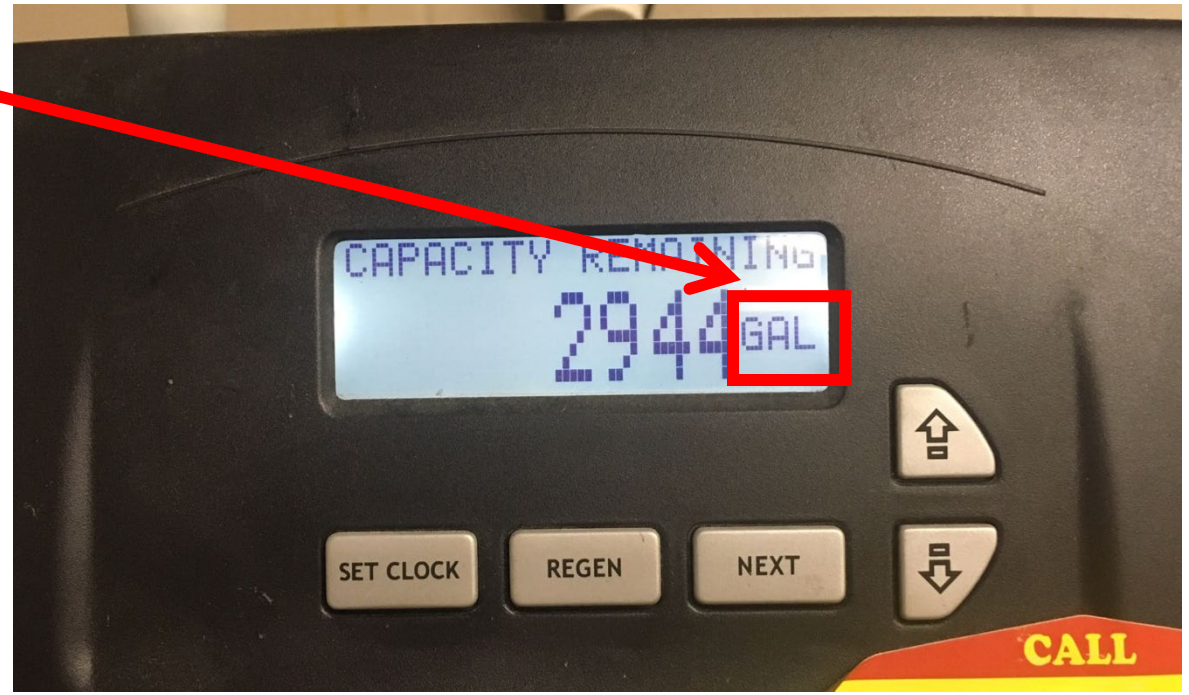
Day-regeneration identification

- Look for control labels or tabs that indicate a number of days between regenerations
- **If a time-clock, recommend replacement**



Gallon-regeneration identification

- Look for control labels that or tabs that indicate a number of gallons between regenerations
- Can be digital or controlled by a dial
- *Be aware of day overrides on demand-initiated softeners*



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Time clock or demand-initiated?

Poll Questions 5-8

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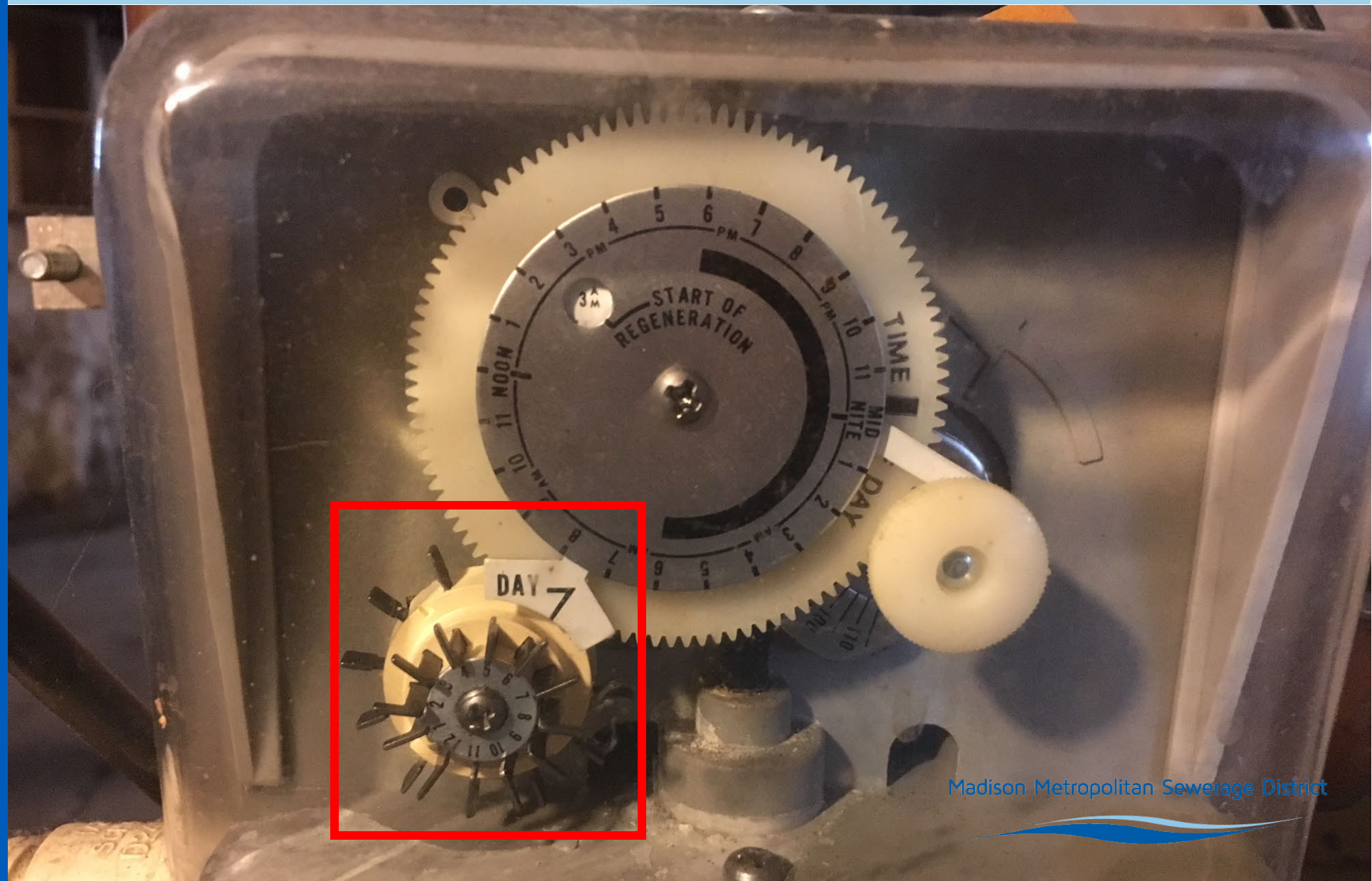
Time clock or demand-initiated?



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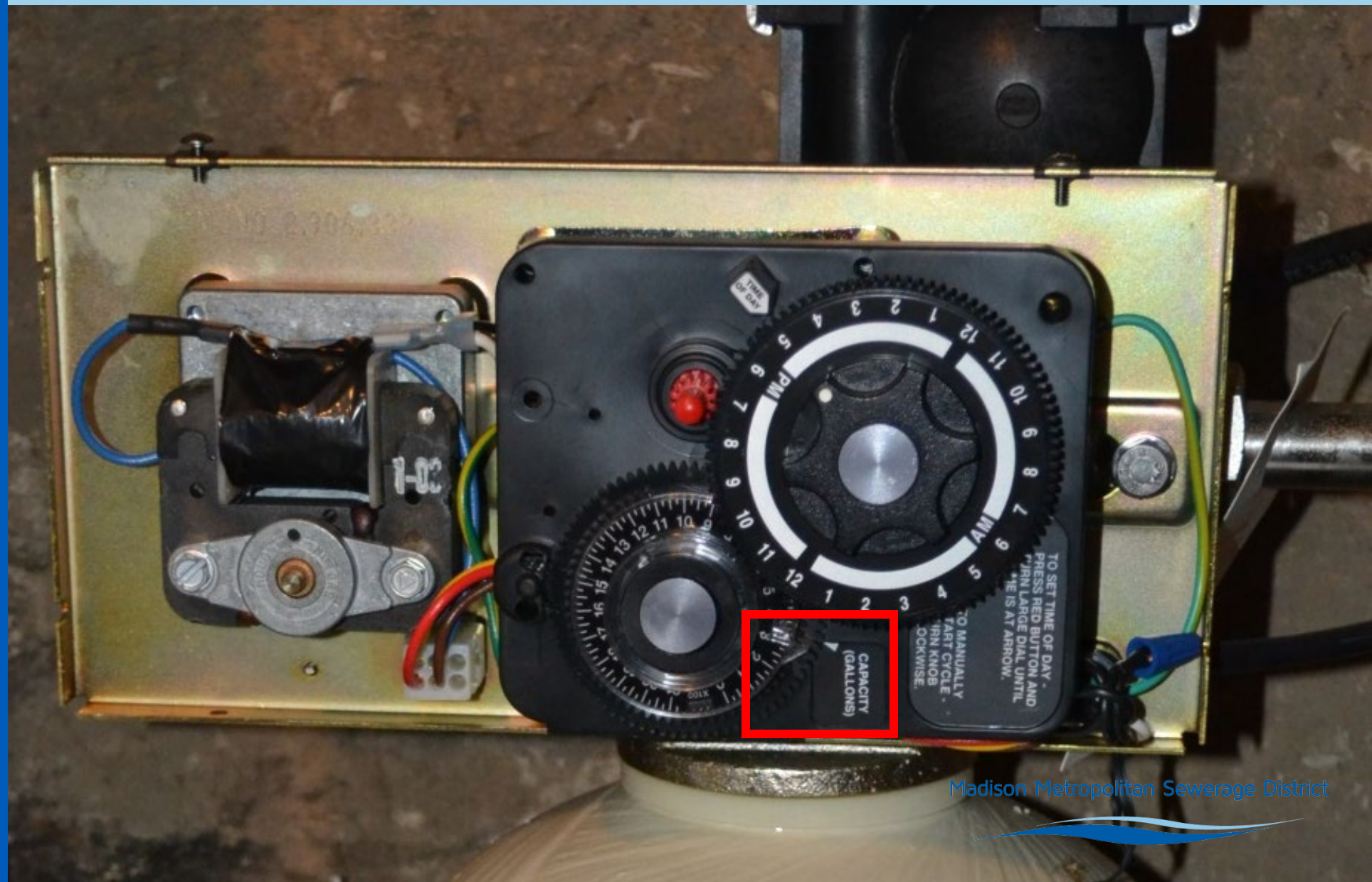
Time clock or demand-initiated?



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Time clock or demand-initiated?

2) How old is the softener?

- Resin beads break down/foul over time, resulting in lost efficiency (~1.5-2%/year)
- Parts experience wear
- Typical softener lifespan of 15-20 years
- **If older than 15 years, recommend replacement**

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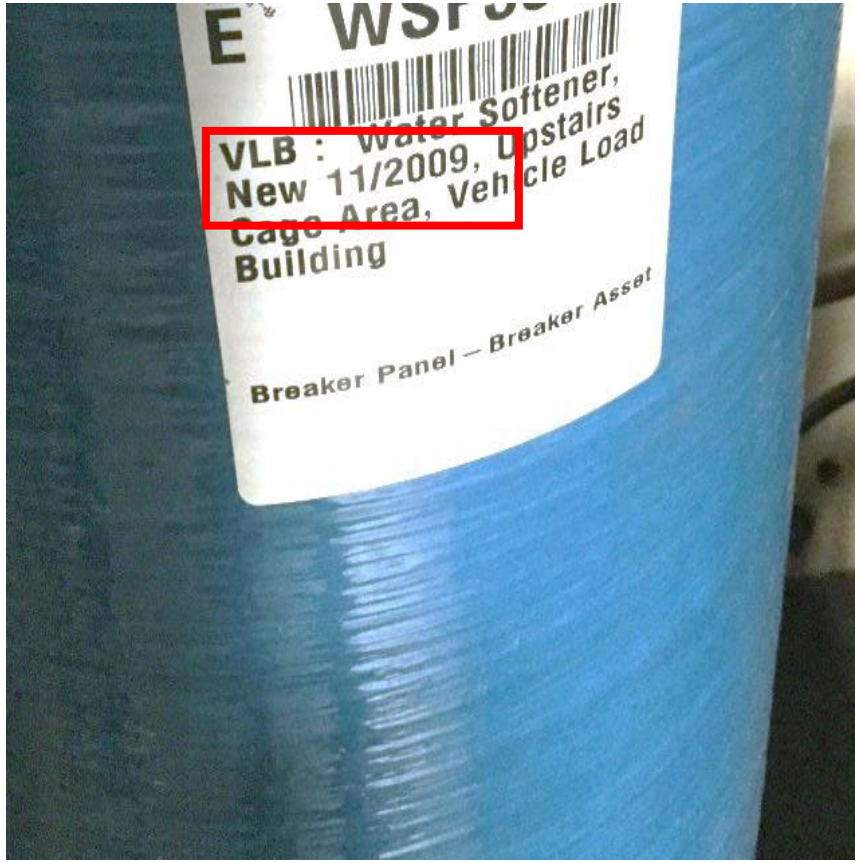
Determining age

- Sometimes indicated on unit – look for sticker or installation info
- Ask property owner or vendor
- Type of softener (e.g., time-clock)



3) What is the softener model?

- Different models designed to work more efficiently
- Identification depends on detail of labeling
- See “clunker” list
- **If an identified “clunker,” recommend replacement with an efficient unit**

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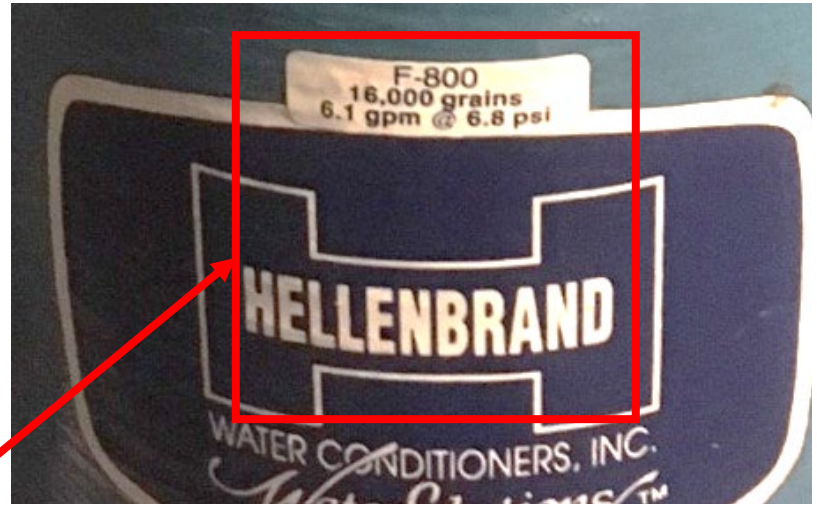
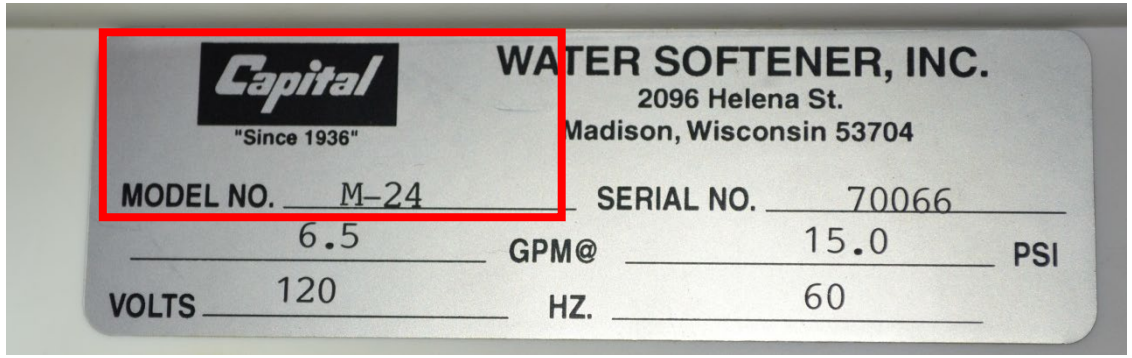
Determining softener brand/model





Remote evaluations highly encouraged

Most of the information in an evaluation can be collected over a phone or video call with a customer!

- Safer during COVID-19
- Can be done from your office
- Same reimbursement rate as in-person

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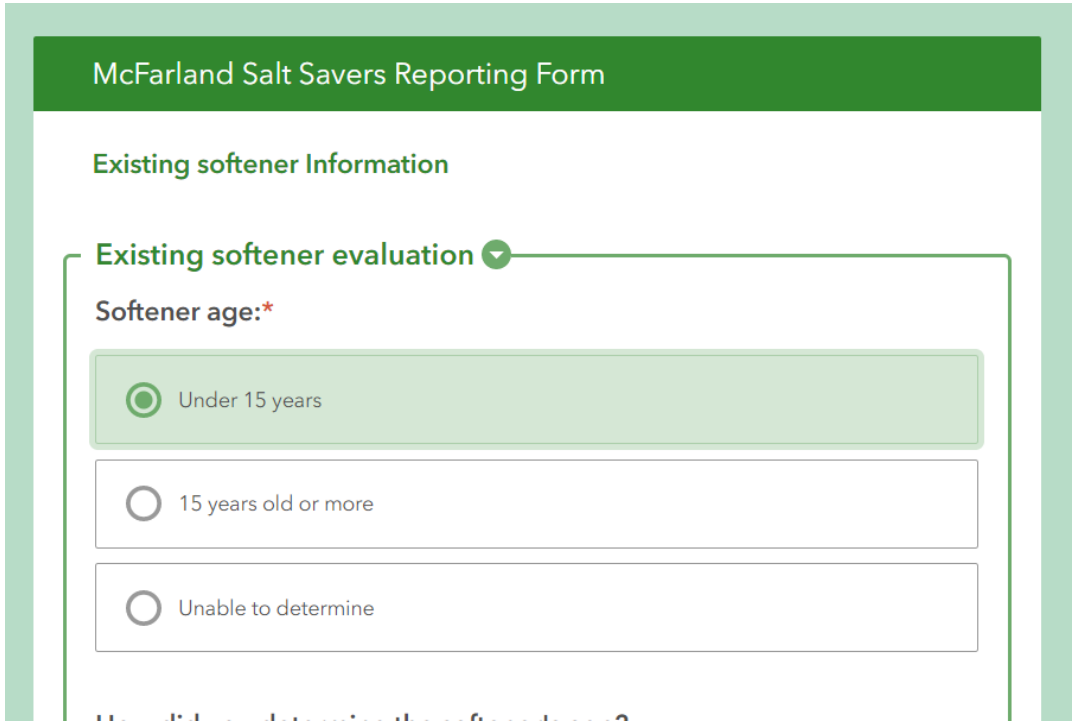
Remote evaluations



App up on your browser screen

Device screen with video call with customer

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Evaluation process walk-through in app

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Intro to Salt Savers Program

Practice Evaluations

Scenario 1 in guidebook
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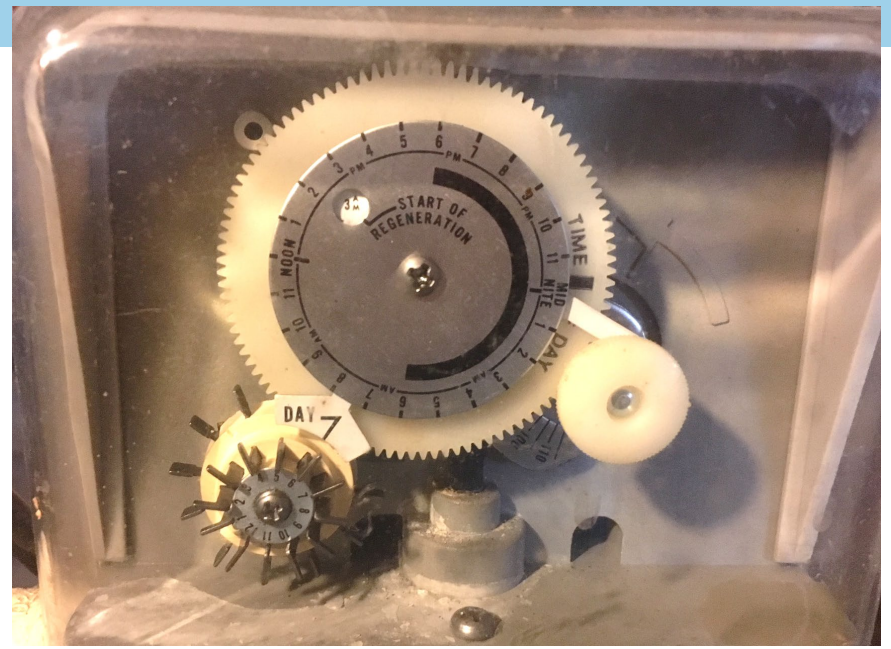

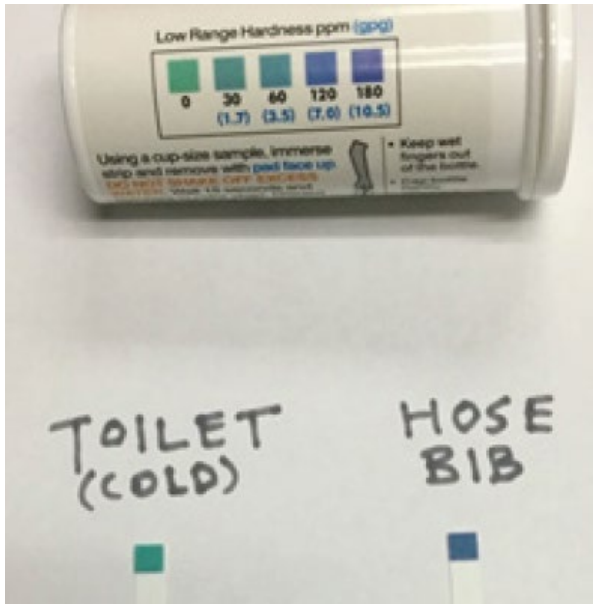

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Pump station 9 pilot

- Small, measurable area of sewer system
- Test app/process
- Give customers an “easy button”
- Involve municipalities

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Intro to Salt Savers Program

Your role in the pilot

Trained Softener Service Providers

The service providers listed below have completed training from MMSD about salt reduction, softener efficiency, and use of the MMSD reporting app. More providers will be added to this list as they complete training.

Different providers have different specialties, so use the information below to determine who to call for the appropriate service. For example, if you are having a new unit installed to replace a "clunker," call a service provider who has indicated that they are willing to perform installations of new efficient units in the table below.

Name	Organization	Contact information	Evaluation of existing softener	Optimization of existing softener	Installation of new efficient unit	Preferred brand(s) for optimizations
Dan Addie	Addie Water Systems	1-800-928-1652	X	X	X	Addie, Capital, Culligan, Fox, Hellenbrand, Morton, Omni, Supreme
Joel Addie	Addie Water Systems	1-800-928-1652	X	X	X	Addie, Capital, Culligan, Fox, Hellenbrand, Morton, Omni, Supreme
Terry Addie	Addie Water Systems	1-800-928-1652	X	X	X	Addie, Capital, Culligan, Fox, Hellenbrand, Morton, Omni, Supreme
Jason Delong	Addie Water Systems	1-800-928-1652	X	X	X	Addie, Capital, Culligan, Fox, Hellenbrand, Morton, Omni, Supreme
Brian Monroe	Addie Water Systems	1-800-928-1652	X	X	X	Addie, Capital, Culligan, Fox, Hellenbrand, Morton, Omni, Supreme
John Menz	AirWater	608-831-3033	X		X	HydroFlow salt-free water conditioner (installations)
Pat Ace	All Comfort Services	608-838-7300	X	X	X	Capital, Fox, Hellenbrand
Rich Hoeth	All Comfort Services	608-838-7300	X	X	X	Capital, Fox, Hellenbrand
Gary Kunkel	All Comfort	608-838-7300	X	X	X	Capital, Fox,

- Get listed as a trained service provider
- Promote program to customers in pilot areas
- Perform services and report them in the app

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Pilot process

1) Initiate a service
   - Option 1: a customer calls you off the trained service provider list
   - Option 2: you initiate the softener evaluation with a customer in the pilot area

2) Perform service and document in app

3) Customer receives reimbursement from Village of McFarland.

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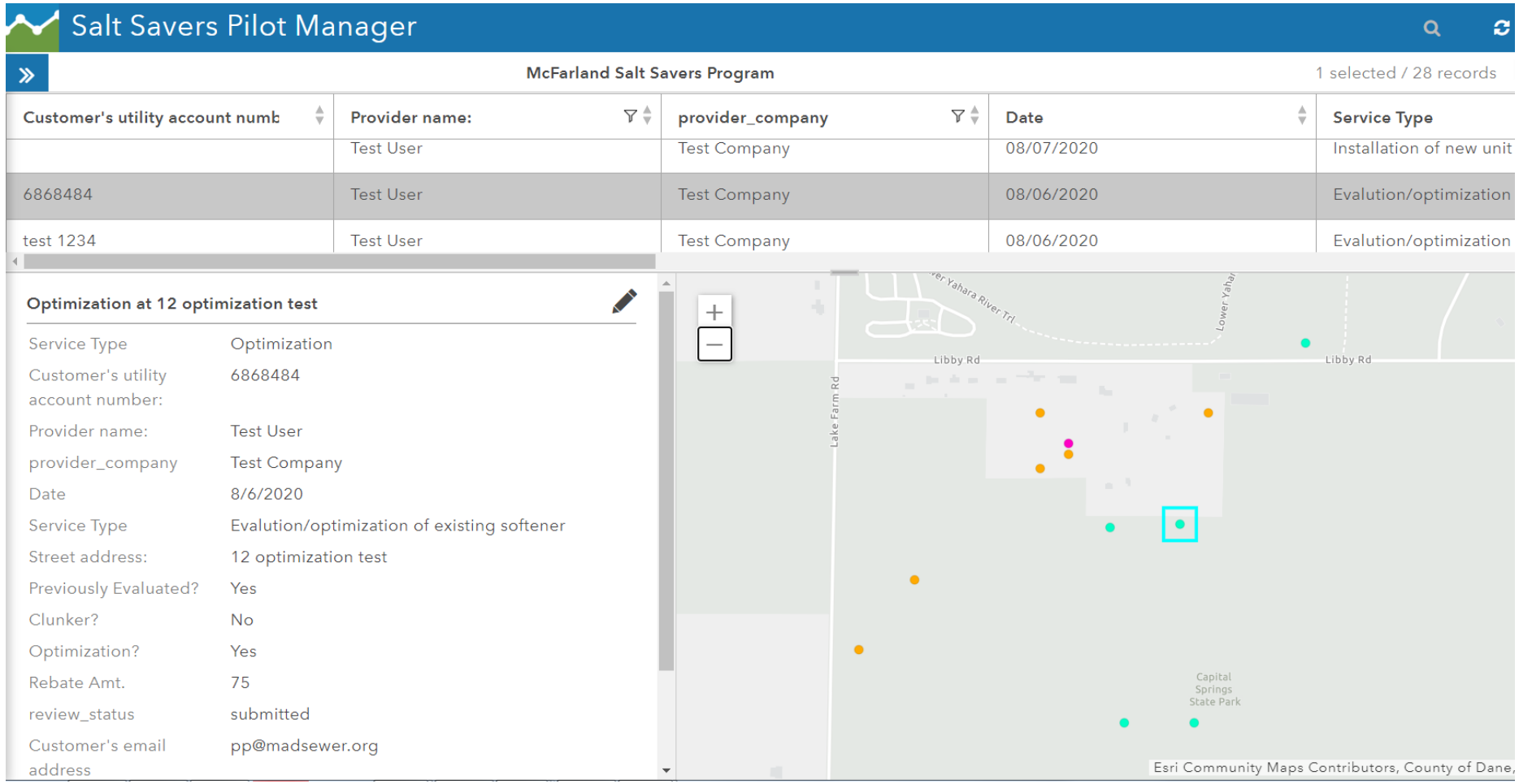
Reviewers see data in dashboard



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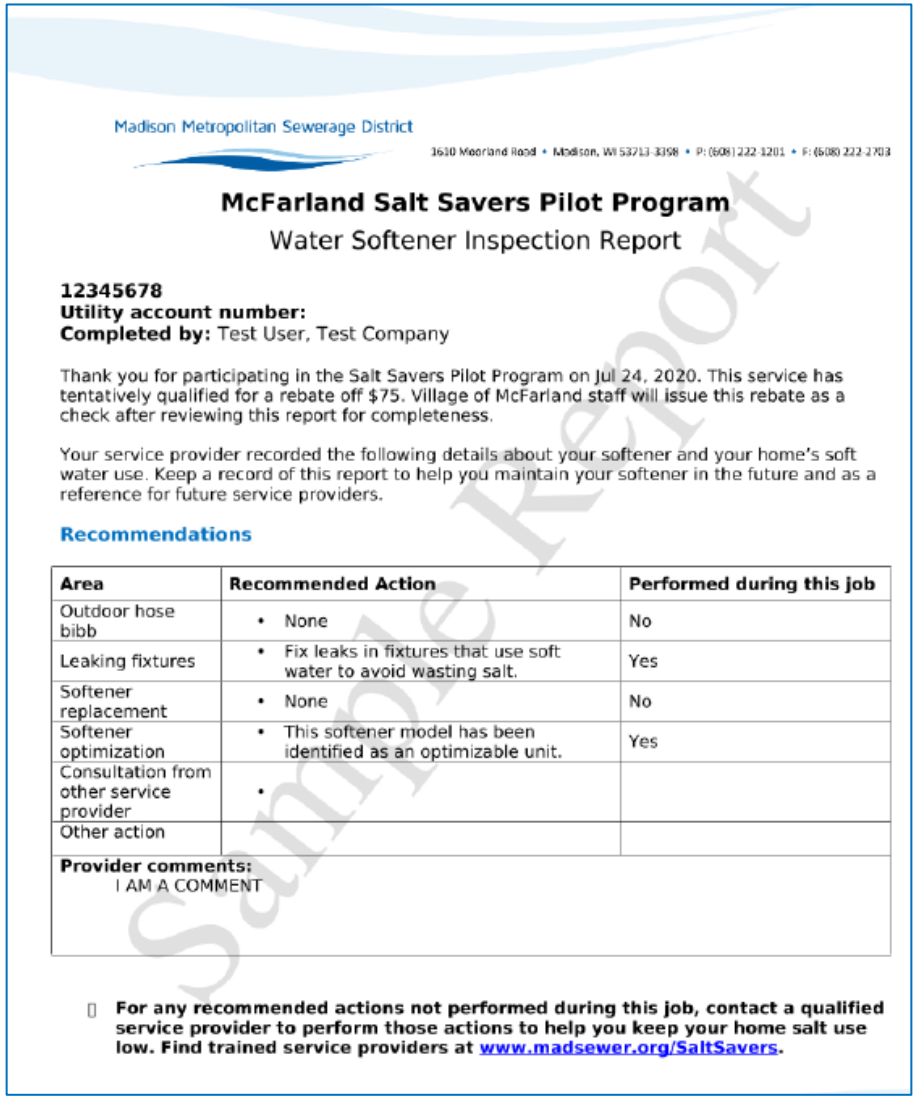
Report automatically emailed



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3610 Moorland Road • Madison, WI 53713-3358 • P: (608) 222-1201 • F: (608) 222-2703

McFarland Salt Savers Pilot Program

Water Softener Inspection Report

12345678
Utility account number:
Completed by: Test User, Test Company

Thank you for participating in the Salt Savers Pilot Program on Jul 24, 2020. This service has tentatively qualified for a rebate off $75. Village of McFarland staff will issue this rebate as a check after reviewing this report for completeness.

Your service provider recorded the following details about your softener and your home's soft water use. Keep a record of this report to help you maintain your softener in the future and as a reference for future service providers.

Recommendations

Area	Recommended Action	Performed during this job
Outdoor hose bibb	• None	No
Leaking fixtures	• Fix leaks in fixtures that use soft water to avoid wasting salt.	Yes
Softener replacement	• None	No
Softener optimization	• This softener model has been identified as an optimizable unit.	Yes
Consultation from other service provider	•	
Other action		

Provider comments:
I AM A COMMENT

For any recommended actions not performed during this job, contact a qualified service provider to perform those actions to help you keep your home salt use low. Find trained service providers at www.madsewer.org/SaltSavers.

Goes straight to customer

Summarizes actions taken on job and future recommended actions

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Contact:

Emily Jones
emilyj@madsewer.org

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