

Plan to Address Vintage Grand's Current "Zero Reading" Water Meters

May 22, 2020

Background Information

- We now have at least 142 meters that are not providing consumption readings to the NES meter reader (“zero reading meters”):
 - 16 in building 10 due to destroyed meter wiring system (100% of meters in that building)
 - At least 3* in Building 5 which has just been remediated
 - 47 in remediated buildings excluding buildings 5 and 10 (32.6% of meters in those buildings)
 - 76 in non-remediated buildings (29.7% of meters in those buildings)

* status as of November of 2019, before remediation work was started. Additional zero read cases caused by remediation work may be discovered during NES’ upcoming meter reading cycle

(See Appendices A and B for a tabulation of zero reading meters by building)

Background Information (Continued)

- All 142 of the identified “zero reading” meters are the older design with a wired connection. They are not providing consumption data to the NES meter reader because either:
 - (1) the meter is defective or not properly installed, or
 - (2) the wiring from the meter to the meter reading box on the outside of the building is damaged, or
 - (3) both of the above conditions exist, or
 - (4) the unit is vacant
- Investigations and testing that was completed in building 22 earlier this year revealed that 8 of the 9 “zero reading” meter cases in that building were the result of defective meters. For the other case, our testing determined that the meter was operating properly (meter dial turned when water was running) so our assumption is that the meter wiring is damaged. We were not able to test the electrical continuity of the meter wiring, so we don’t know how many of the wiring connections to the 8 defective meters were also damaged.

Background Information (Continued)

- A February 2019 report from NES showed a total of 85 zero reading meters. Excluding building 10, we now (April 2020 NES report) have a total of 126 zero reading meters. Therefore our number of zero reading meters has increased by almost 3 per month since February of 2019:

$$(126-85)/15 \text{ months} = 2.73 \text{ per month increase}$$

- We have consulted with an electrician to assess the potential cost and feasibility of troubleshooting and then repairing or replacing defective meter wiring. We have determined that this would not be a practical or cost-effective solution. Replacing the old meter with a new “WIFI readable” meter is believed to be the most cost-effective solution to our problems of defective meter wiring.
- The “WIFI readable” meters have a built-in radio transmitter that sends data directly to the NES field meter reader’s data collection device (laptop computer). The data transfer does not use either an individual owner’s WIFI system nor the Association’s WIFI systems in the clubhouse or by the pools.

Benefits to Association of Replacing Zero Reading Meters

- Assuming an average of \$30 per month of unbilled consumption per zero reading meter*:
 - $142 \times \$30 = \text{\$4,260 per month or \$51,120 per year}$ of unbilled consumption that the Association could recover from the responsible owners if an effective consumption metering system were in place

*Based on an analysis of the March 2020 NES report – average billed water + sewer consumption for all non-zero reading meters

Cost of Replacing Zero Reading Meters with New WIFI Readable Meters

- Meter Cost \$175 per meter
- Installation Cost* \$143 per meter
- **TOTAL COST = \$318 per meter**

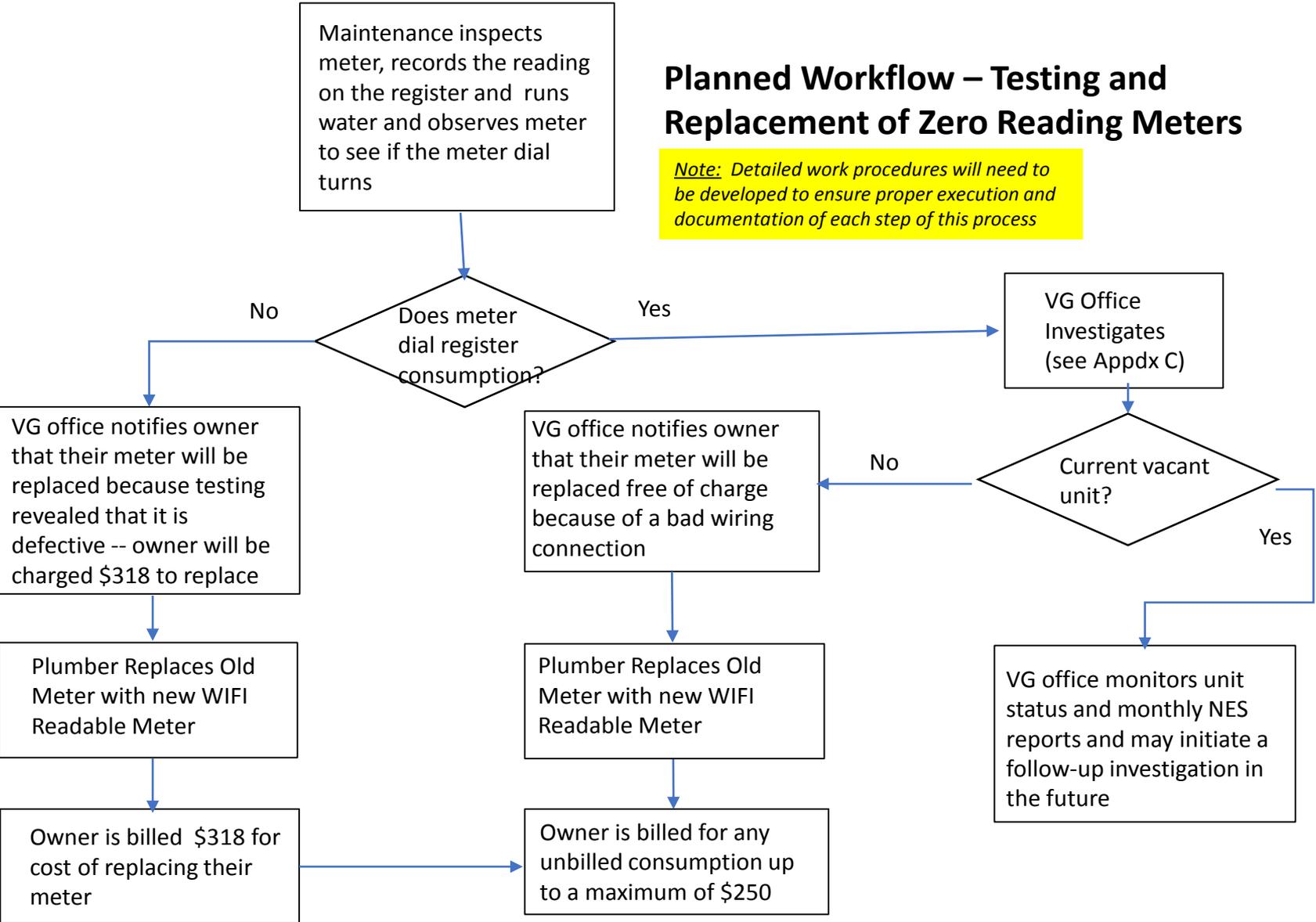
* Cost quoted by Daniels Plumbing for replacing all 142 meters in a mass program released to them batches of 10 or more

Planned Approach and Policies

- We will initiate a mass program to inspect, test and, where appropriate, replace all current identified zero reading meters with WIFI readable meters as soon as possible
(See the Planned Workflow Diagram on the next page)
- Work will be completed on a building by building basis, starting with building 10 and then working down the list of buildings based on the number of zero reading meters.
- Meter replacement costs will be split between individual owners and the Association as follows
 - If inspection and testing reveals that the meter is defective or not properly installed, we will charge the full cost of the meter replacement to the unit owner
 - If testing indicates that the meter is operating properly but is not recording consumption because of a faulty wiring connection, the Association will cover the full cost of the meter replacement as a common expense (will charge the costs to an operating account).
- For all meters that are replaced, the unit owner will be for any consumption recorded on the old meter register which was not previously billed to them by NES, up to a maximum of \$250

Planned Workflow – Testing and Replacement of Zero Reading Meters

Note: Detailed work procedures will need to be developed to ensure proper execution and documentation of each step of this process



Recommended Approach and Policy (Continued)

- After the mass replacement program addressing the current list of zero reading meters has been completed, the VG office will initiate a practice of reviewing NES reports on a monthly basis and investigating and addressing any new zero reading meter cases that may arise, following the same work flow as used on the mass replacement program. (Note: Plumber installation charges for future smaller quantities of replacements on a monthly basis may be higher than the \$143 per meter pricing that Daniels Plumbing quoted for a mass replacement program)
- Irrespective of who pays for the meter replacement, new meters that the Association installs will become the property of the affected unit owners. The owners will be responsible for any needed future maintenance or replacement of those new meters, in accordance with the new provisions of Section 7.1 of our Declaration that owners approved in January of 2020

Financial Analysis – Payback Period

- Total cost to replace 142 meters ($142 \times \$318$) = \$45,156
- Assume that 50% of replacements will be charged to owners after our inspection and testing reveals that the existing meter is defective or not properly installed. Therefore the Association's cost would be only 50% of the above = \$22,578
- Current Unbilled Consumption ($142 * \$30/\text{month}$) = \$4,260/month
- $\$22,728/\$4,260 = \text{payback in 5.3 months}$

Note: Above cost sharing assumption is believed to be conservative and payback calculation does not include any credit for past unbilled consumption that we may recover

Implementation Steps

- Board to approve a formal resolution to implement this plan (to be addressed at June 1, 2020 open board meeting)
- Communicate plan to all owners (via Newsletter or special President's Letter)
- Develop detailed procedures and tracking forms
- Develop letter templates for owner notification of meters to be replaced
- Work out logistics with NES (ordering and delivery of new meters) and with Daniel's Plumbing (process for shutting off water, replacing meters and returning old meters to office with appropriate documentation)
- Work out owner invoicing procedures with PCM (charges for meter replacements, back charges for unbilled consumption)

Appendix A: Zero Reading Meters in Remediated Buildings

	Bldg #	# meters	# zero reading meters	% zero reading
RECENTLY REMEDIATED BUILDINGS				
	10	16	16	100.00%
	5	16	3*	18.75%
			*status before remediation started	
OTHER REMEDIATED BUILDINGS				
	4	16	1	6.25%
	14	8	5	62.50%
	17	16	9	56.25%
	19	16	5	31.25%
	22	16	9	56.25%
	24	16	2	12.50%
	25	16	8	50.00%
	26	16	4	25.00%
	27	16	3	18.75%
	28	8	1	12.50%
	Totals:	144	47	32.64%

Appendix B: Zero Reading Meters in Non- Remediated Buildings

	Bldg #	# meters	# zero reading meters	% zero reading
NON-REMEDIAED BUILDINGS				
	1	16	7	43.75%
	2	16	6	37.50%
	3	16	3	18.75%
	6	16	3	18.75%
	7	16	3	18.75%
	8	16	9	56.25%
	9	16	4	25.00%
	11	16	4	25.00%
	12	16	5	31.25%
	13	16	5	31.25%
	15	16	7	43.75%
	16	16	2	12.50%
	18	16	5	31.25%
	20	16	6	37.50%
	21	16	4	25.00%
	23	16	3	18.75%
	Totals:	256	76	29.69%

Appendix C: Vintage Grand Office Investigation Procedure

- VG office investigations will be required only for those cases where the test performed by Maintenance reveals that the meter is not properly registering consumption when water is running in the unit
- For those cases, the VG office will compare the meter reading on the register dial as recorded by Maintenance to the most recent meter reading shown on the NES reports:
 - If the reading on the register dial is significantly higher than the reading on the most recent NES report, the VG office will conclude that the unit is occupied and the meter is operating properly, but data is not being transferred through the meter wiring. In such case, the meter will be replaced with a WIFI readable meter at the Association's expense
 - If the reading on the register dial is the same as or only slightly higher than the reading on the most recent NES report, the VG office will contact the unit owner or rental agent to determine if the unit has been vacant and, if so, when it is expected to be occupied again. If the unit has been vacant, no immediate action will be taken to replace the meter. If the unit has not been vacant, the meter will be replaced at the Association's expense on the assumption that the meter wiring is defective