

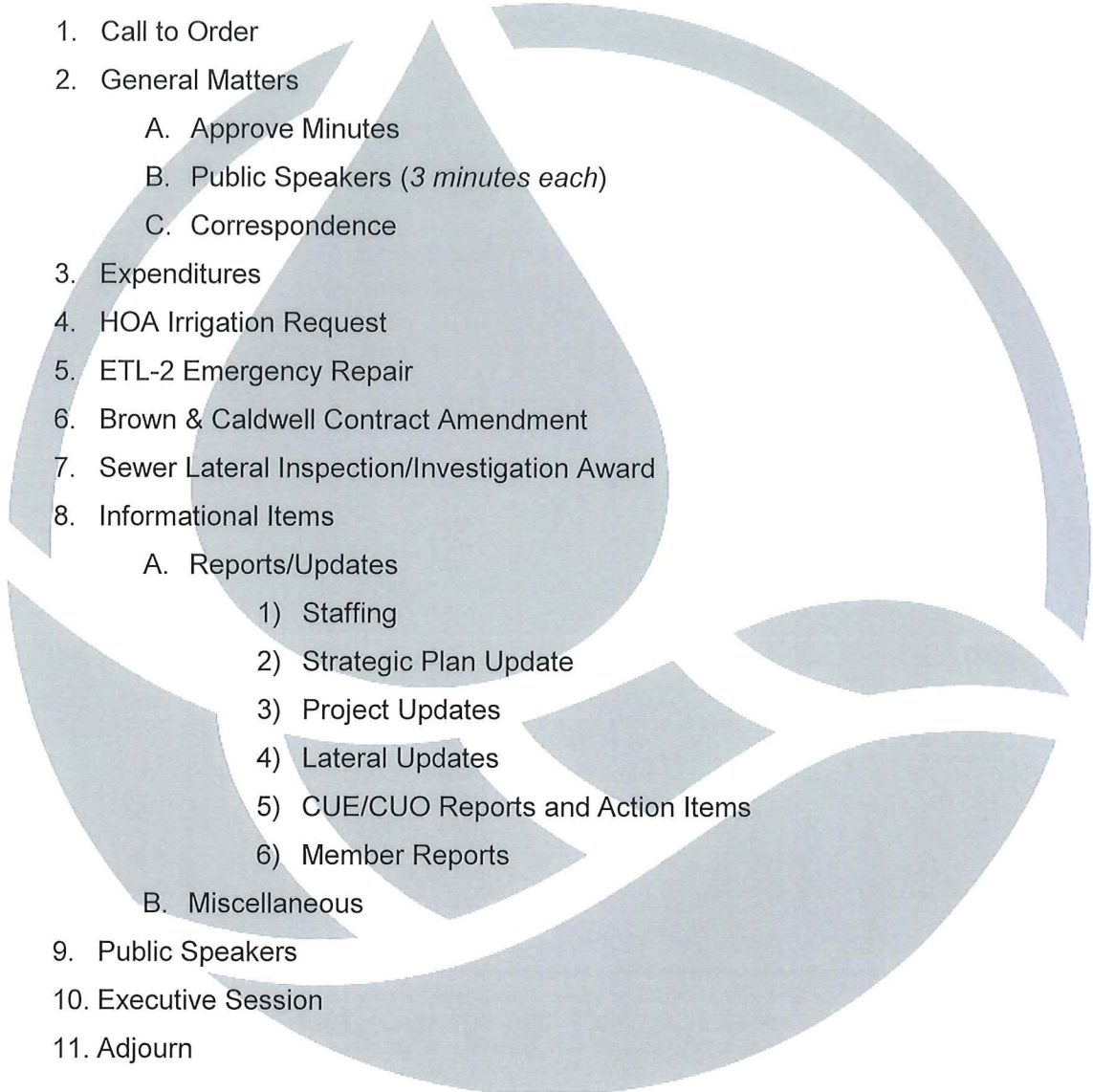
**AGENDA**

For

**Tuesday**

**November 6, 2018**

**Immediately Following Work Session**

- 
1. Call to Order
  2. General Matters
    - A. Approve Minutes
    - B. Public Speakers (*3 minutes each*)
    - C. Correspondence
  3. Expenditures
  4. HOA Irrigation Request
  5. ETL-2 Emergency Repair
  6. Brown & Caldwell Contract Amendment
  7. Sewer Lateral Inspection/Investigation Award
  8. Informational Items
    - A. Reports/Updates
      - 1) Staffing
      - 2) Strategic Plan Update
      - 3) Project Updates
      - 4) Lateral Updates
      - 5) CUE/CUO Reports and Action Items
      - 6) Member Reports
    - B. Miscellaneous
  9. Public Speakers
  10. Executive Session
  11. Adjourn

Avon Lake Regional Water  
**MEMORANDUM**

To: **Board of Municipal Utilities**

From: **Todd Danielson & Rob Munro**

Subject: **Agenda Items – November 6, 2018**

Date: **November 2, 2018**

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Item 4: **HOA Irrigation Request – TAD**

Mr. Mark Bennett, President of the Legacy #2 HOA/Condo Association (Tournament Drive and Champions Court), has expressed a desire to convert the water supply of their irrigation system over to Avon Lake Regional Water's system. Currently the irrigation system is supplied water from Legacy Golf Course ponds. He has expressed concern regarding the foul odor of the pond water and it also leaves residue on the homes and lawns. His HOA/Condo Association appreciates the high quality of water that we provide to the region and would like to explore the options available for moving this forward.

Item 5: **ETL-2 Emergency Repair – TAD**

The 42" pre-stressed concrete transmission pipe for ETL-2 has developed a leak beside Race Road in North Ridgeville. Due to capacity limitations within ETL-1 and the inability of emergency interconnections with other systems to provide sufficient pressure to certain residents, ETL-2 must continue to provide water to customers and be fixed before a catastrophic failure. Staff has identified a solution that entails constructing a temporary bypass, inserting temporary valves into the line, and then investigating and repairing the line. Staff has worked closely with the ETL-2 consortium (Rural Lorain County Water Authority, Medina County, the City of Medina, the City of North Ridgeville, and the City of Avon) and most recently met with the consortium on November 1<sup>st</sup> to present the final approach and budget. The consortium members support the approach and want us to move forward with this emergency repair, with the understanding that it will cost approximately \$600,000. This was not a budgeted item, and the Board will need to appropriate the money from available ETL-2 fund balance, which means there is no direct impact on Avon Lake residents.

*Recommended motions:*

*I move to appropriate \$650,000 to the ETL-2 budget for the emergency water line repair.*

*I move to authorize staff to enter into contracts and make expenditures related to the emergency repair of ETL-2 for the health, safety and welfare of all customers that rely on this transmission line for drinking water.*

Item 6: **Brown & Caldwell Contract Amendment – RKM**

In our ongoing effort to modify our National Pollutant Discharge Elimination System (NPDES) permit with Ohio EPA, staff has asked Brown & Caldwell to provide a proposed scope and budget to amend the existing contract for assistance with the Long-Term Control Plan (LTCP). The approach of this scope of work will satisfy our immediate needs of providing information



and costs to Ohio EPA that was requested in order for Ohio EPA to consider granting more time for ultimate compliance with the LTCP. Additionally, it will provide the required work necessary to study the effects of our sewer separation efforts over the next two (2) years. It is the recommendation of staff to approve this necessary amendment to the existing contract.

In making this decision, the Principles that would help guide the Board are:

- ◆ Maintain existing assets, while investing in infrastructure that will take us into the future.
- ◆ Exercise fiduciary responsibility.

*Recommended motion:*

*I move to authorize the CUE to approve the contract amendment with Brown & Caldwell, for current and future services related to the Long-Term Control Plan (LTCP), for a not-to-exceed amount of \$188,980 and authorize the CUE up to a 10% contingency for out-of-scope items.*

**Item 7: Sewer Lateral Inspection/Investigation Award – RKM**

In response to recent discussions by the Board, staff issued a request for bids for sewer lateral inspection/investigation services. Seven companies received copies of the bid packages, and two submitted bids for this unit-price contract. The lowest price and best bidder was Great Lakes Pipeline Services of Cleveland, Ohio at a total estimated cost of \$93,500, which is below the engineer's estimate. The bid tabulation is attached. Staff recommends award of the contract.

In making this decision, the Principles that would help guide the Board are:

- ◆ Maintain existing assets, while investing in infrastructure that will take us into the future.
- ◆ Lead by influencing change that would lead a legacy for future generations.
- ◆ Exercise fiduciary responsibility.

*Recommended motion:*

*I move to authorize the CUE to execute a contract with Great Lakes Pipeline Services of Cleveland, Ohio, the lowest and best bidder for the Sewer Lateral Inspection/Investigation contract, for a not-to-exceed amount of \$93,500 and authorize the CUE up to a 10% contingency for out-of-scope items.*

**Item 8A1: Staffing – TAD**

Along with the write-up is a letter from Cashier-Bookkeeper Linda Stotridge announcing her retirement. Linda began working for Avon Lake Regional Water part time in 1992 and full time in 1996. Staff appreciates the service she has provided during these 26 years.

In preparation for her retirement, Linda has been training Customer Service Clerk, Rebecca Robertson, regarding the duties Linda performs. Additionally, staff has interviewed Customer Service Clerk applicants and conditionally offered employment to one. Following successful completion of the background check, physical, and drug screening, information will be provided in the next Board package.

**Item 8A2: Strategic Plan Update – TAD**

Unless requested by the Board, staff intends to pause work on the strategic plan until the beginning of the New Year in order to immediately focus on lateral separations, the 2019 budget, and 2019 and 2020 rates.

**Item 8A3: Project Updates – RKM**

*Blue Water Tower:* On Tuesday, October 23<sup>rd</sup>, the Blue Water Tower off of Walker Road successfully came down.

*45 Project:* Sanitary sewer line work continues on Lakewood. Last week, the crew started back on Tomahawk with laterals work. To this date (halfway through the two-year contract duration), we are about 64% complete.

*Curtis Area Sanitary Sewer Rehabilitation Project:* Final work for the year is currently being completed. Pending weather issues, the gravel berm beside the asphalt will be installed the week of November 5<sup>th</sup>. Aside from potential minor other items, final clean-up will take place in the spring.

*Elyria Interconnection Project:* Building footers were poured the week of October 29<sup>th</sup>. Site prep work continues and the pre-fabricated building is scheduled for site delivery the week of November 5<sup>th</sup>.

*Wastewater Plant:* The contractor is preparing to begin digester cleaning soon. Weather delays have pushed back placing the pad for the pole barn until the week of November 5<sup>th</sup> or 12<sup>th</sup>.

**Item 8A4: Lateral Updates – TAD/RKM**

The lateral separation program continues to progress. As of November 2, 2018, letters have been sent to 3,067 residents indicating that they may have clean water entering their sanitary lateral and requesting Avon Lake Regional Water be contacted to determine whether this may be the case. To date, 2,999 (98%) have responded (up 26 since 10/12/18, an average of ~9/wk). Of the 2,999, 2,572 either have come into compliance or were already in compliance (up 50, or ~17/wk) and 427 either have problems or are believed to have problems. By extrapolation, approximately 470 (427 + ~67% of homes not inspected) may need to do some work to come into compliance.

As of November 2, 2018, two of the homeowners with the 11/30/18 deadline have yet to respond and have their free inspection. Currently, 159 homes need to complete work to comply by the 4/30/19 completion date.

The total executed Lateral Loan Program agreements are now at 335 (up 14) with \$1,170,898 committed and \$844,540 paid to contractors so far. The average loan request is for approximately \$3,465. Cumulatively, 246 of the 706 (35%) who have separated laterals have used the lateral loan program.

Please see the attached graphs for additional information.

**Item 8A5: CUE/CUO Report and Action Items – TAD/RKM**

*Action Items are as presented with the write-up and available on the Board Dashboard.*

**Item 10: Executive Session – TAD**

The CUE requests to meet in executive session with the Board to discuss employment and legal matters.



*Recommended motion:*

*I move to meet in executive session as allowed by ORC 121.22 (G) to discuss employment and legal matters and to include CUE Danielson, CUO Munro, and Community Outreach Specialist Arnold.*



Board of Municipal Utilities  
**Work Session Minutes**  
**October 16, 2018**  
201 Miller Road  
Avon Lake, Ohio

***Call to Order – Roll Call***

The meeting was called to order at 6:04 PM.

Present: Mr. Abram, Mr. Dzwonczyk, Mr. Rush, and Mrs. Schnabel. Mr. Phillips was excused.

Also present: Council Member Zuber, CUE Danielson, CUO Munro, and Community Outreach Specialist Arnold (arrived at 6:15 PM).

***Sewer Lateral Path Forward***

The Chairman asked members to review the revised (dated 10/16/18) Sewer Lateral Path Forward and confirm it aligned with preferences stated at the last meeting. Members asked if the Avon Lake Police Department would assist Avon Lake Regional Water when staff needed to inspect properties using an administrative search warrant, indicating a fallback plan may be to work with off-duty officers or the Lorain County Sheriff.

CUO Munro noted that in the last week, Member Phillips worked with the CUO to draft and send an additional certified letter, the Chairman helped reach out to one individual, and staff continued efforts to contact property owners who have not yet had an inspection. With these efforts, the list outstanding has shrunk from 14 to 8. The Chairman expressed that these efforts are paying off and he requested of Council Member Zuber that the Board would appreciate help and support to achieve compliance with the inspection and separation deadlines.

Community Outreach Specialist Arnold stated that staff would start knocking on doors and placing door hangers for the 166 properties that have work to do by the Group A deadline. Additionally, staff will update the website, speak with the local press, and provide talking points for Customer Service and Distribution & Collection staff. Additionally, the CUO indicated staff will meet with contractors to both better understand their scheduling and help them know the revised deadlines.

The CUO also indicated that staff is currently advertising for camera investigation services to assist with determining whether clean water may be entering a number of laterals that staff was unable to determine whether those homes were in compliance. There was a discussion regarding Avon Lake Regional Water paying for those inspection services, and that some residents have already paid for similar services on their own. It was also stated that staff should consider providing bill credits for any person who had previously paid a contractor for those inspection services and not had the contractor waive the fee because the contractor then did the subsequent work.



**WEFTEC**

The CUE then made a brief presentation about staff attending the Water Environment Federation's annual conference. Following the presentation, the Chairman indicated that it is good for staff to be exposed to the thinking and products at these national conferences. He also indicated a desire for staff to limit the amount of trips through 2019 and concentrate on completing the Sanitary Sewer Separation Project. The Chairman also indicated that when possible, rotate which staff attend the annual conferences in order to assure that staff is exposed to the knowledge and that expenditures are properly monitored.

***Adjourn***

Mr. Dzwonczyk adjourned the meeting at 6:40 PM.

Approved November 6, 2018

John Dzwonczyk, Chairman

Todd Danielson, Clerk

DRAFT

Board of Municipal Utilities  
**Meeting Minutes**  
**October 16, 2018**  
201 Miller Road  
Avon Lake, Ohio

***Call to Order – Roll Call***

The meeting was called to order at 6:48PM.

Present: Mr. Abram, Mr. Dzwonczyk, Mr. Rush and Mrs. Schnabel.

Also present: CUE Danielson, CUO Munro, Outreach Specialist Arnold, Councilman Zuber and former Board member Dave Rickey.

Excused: Mr. Phillips.

***Approve Minutes***

Chairman Dzwonczyk presented the minutes of the October 9, 2018 work session and regular meeting. With no changes, additions or corrections noted, he ordered that the minutes stand and be distributed as presented.

***Public Speakers***

Councilman Zuber commented to the Board about a joint meeting that CUO Munro attended regarding City Force software that the City currently uses and a new Citizen Engagement App that is being developed. The CUO briefed the Board on the various components of City Force that he feels would be valuable for Avon Lake Regional Water and residents. This software would be a shared system with the City of Avon Lake Building, Zoning and Public Works departments. . The CUO will seek Board approval for the purchase of this software as part of the 2019 budget process.

***Correspondence***

None.

***Expenditures***

Following review of expenses dated October 16, 2018, for funds and amounts as follows, Mr. Abram moved, Mr. Rush seconded, that all be approved and paid per budget:

Water Fund 701	\$	224,491.02
Wastewater Fund 721	\$	116,801.51
MOR Fund 703	\$	232,379.20
MOR Fund 762	\$	364,899.88
LORCO Fund 749	\$	17,321.51
Water Construction Fund 704	\$	9,700.25
Lateral Loan Fund 765	\$	24,600.00
Wastewater Construction	\$	40,771.75



Ayes: Abram, Dzwonczyk, Rush and Schnabel  
Nays: None  
Motion carried.

### ***Lateral Path Forward***

Based upon discussion at the work session, the CUE sought approval by the Board regarding a revised sewer lateral path forward.

Mr. Rush moved, Mrs. Schnabel seconded to adopt the Sewer Lateral Path Forward revision dated October 16, 2018, and to forward this document to City Council for their assistance and implementation.

Ayes: Abram, Rush and Schnabel  
Abstain: Dzwonczyk  
Nays: None  
Motion carried.

### ***Project Updates***

*45 Project:* During the latter part of the week of October 15<sup>th</sup>, pending any weather issues, paving on Lake Road & Electric Blvd. (between Lear and South Point) will take place. Sanitary sewer work will continue on Lakewood during this week also.

*Curtis Area Sanitary Sewer Rehabilitation Project:* Pending any weather issues, paving is scheduled for Wednesday, October 17<sup>th</sup>.

*Elyria Interconnection Project:* EFI's excavation contractor has started the site work and should be pouring the building footers the week of October 15<sup>th</sup>. The station is due to be delivered the last week of October. The Community Outreach Specialist will coordinate with Board members to schedule the ribbon cutting ceremony.

*Old Water Tower Demolition:* The contractor is scheduled to be on site October 22<sup>nd</sup> for preparations and demolition is scheduled on October 23<sup>rd</sup>. Residents, businesses and safety forces have been informed of the demolition.

*Wastewater Plant:* MWH continues to work on punch list items and close-out change orders. Bay Mechanical and Electrical continues to complete the HVAC work. Work on cleaning the secondary digester should start within the next two weeks.

### ***Lateral Updates***

The lateral separation program continues to progress. As of October 11, 2018, letters have been sent to 3,059 residents indicating that they may have clean water entering their sanitary lateral and requesting Avon Lake Regional Water be contacted to determine whether this may be the case. To date, 2,973 (97%) have responded (up 0 since 10/5/18). Of the 2,973, 2,522 either have come into compliance or were already in compliances (up 2, or ~2/wk) and 451 either have problems or are believed to have problems. By extrapolation, approximately 510 (451 + ~67% of homes not inspected) may need to do some work to come into compliance.

As of October 12, 2018, 10 of the homeowners with the 11/30/18 deadline have yet to respond and have their free inspection. It is anticipated, approximately 180 need to do some work to comply by 11/30/18 (~17/wk).

The total executed Lateral Loan Program agreements are now at 321 (up 0) with \$1,145,798 committed and \$813,140 paid to contractors so far. The average loan request is for approximately \$3,475. Cumulatively, 231 of the 700 (32%) who have separated laterals have used the lateral loan program.

### ***Miscellaneous***

The Charter Review Commission invited the Board to a meeting on October 25, 2018, at 7:30PM. Mr. Rush and Mrs. Schnabel will represent the Board at the meeting.

Mrs. Schnabel and Mr. Rush suggested that the Community Outreach Specialist post an explanation on Facebook on Issue 22 which will be on the November ballot regarding the competitive bidding process for clarification.

### ***CUE/CUO Report and Action Items***

Action Items will be updated and sent to Board members in the next week or two.

### ***Executive Session***

The CUE requested to meet in executive session with the Board to discuss legal matters.

Mr. Rush moved, and Mr. Abram seconded to meet in executive session as allowed by ORC 121.22 (G) to discuss legal matters and to include the CUE, CUO and Community Outreach Specialist.

Ayes (per roll call): Abram, Dzwonczyk, Rush, and Schnabel

Nays: None

Motion carried.

Board reconvened at 8:35PM.

### ***Adjourn***

As there was no further business, Mr. Abram moved, Mr. Rush seconded, that the meeting adjourn at 8:36PM.

Ayes: Abram, Dzwonczyk, Rush, and Schnabel

Nays: None

Motion carried.

Approved November 6, 2018

John Dzwonczyk, Chairman

Todd A. Danielson, Clerk



## **Avon Lake Regional Water Suggested Scope of Work for assistance with LTCP**

As requested, Brown and Caldwell (BC) has prepared this Proposed Scope of Services to assist Avon Lake Regional Water (ALRW) with various aspects of their Long-Term Control Plan (LTCP). The recommendations from the recent collection system evaluation technical memorandum constitute a “build and measure approach” to both meet the requirements of the LTCP and to meet the desired Level of Service of the overall sewer system. The recommendation included development of an overall sewer system plan that provides phased improvements and is updated at the various intervals so the improvements and their effects on the system and individual sewersheds can be accounted for in subsequent projects.

Avon Lake Regional Water is currently negotiating LTCP options with Ohio EPA. An option under consideration is to increase WWTP capacity to reduce the Miller Road overflow volume. Due to potential hydraulic limitations in the existing WWTP outfall, however, a new or additional outfall would likely be required to accommodate higher flows. Another option is to divert a portion of the WWTP effluent to another existing conveyance pipe during wet weather conditions. ALRW has identified a 108” storm sewer which runs north-south along the west side of the plant as a possible discharge location to divert additional treated effluent which will be conveyed to Lake Erie.

Below is the outlined scope of work to assist Avon Lake Regional Water with their LTCP and Sewer System Analysis.

### **Evaluation to address the increased flow at the Avon Lake Regional Water WWTP**

#### **Evaluate Existing WWTP Outfall:**

Conduct field investigations to collect data on the current configuration of the WWTP outfall. This includes the Miller Road overflow structure and the manholes running from the plant to the near-shore drop shaft to confirm the connectivity of the sewers. Gather measurements from the rims to the inverts to compare with existing information.

An important part of this evaluation is determining the connectivity of the 30” overflow at the drop shaft. Record drawings show the 30” overflow is connected to the 48” storm sewer, however the GIS data does not show this connection. In addition, the invert elevation data in the GIS shows the 48” sewer to be significantly higher than the 30” overflow. Figure 1 illustrates the WWTP outfall and nearby 48” storm sewer. If it is found that the 30” overflow from the outfall is connected to the 48” storm sewer, then additional information may be needed including flow monitoring of the 48” storm sewer.

The information gathered from this evaluation will be utilized to model the existing WWTP outfall and determine its realistic capacity and will be incorporated into the existing SWMM model. BC will complete an AACE Class 4 engineers estimate for the installation of a duplicate outfall. The estimate will be based on the drawings for the existing outfall from the plant to the diffusers in Lake Erie. It is anticipated that the new outfall will extend into the lake the same distance as the existing.

*ALRW Responsibilities:*

- Perform field work with assistance from C&K to determine connectivity of outfall and nearby storm sewers.
- Provide BC with findings from field work.

*BC Responsibilities:*

- Be present to observe field work performed by ALRW and C&K.
- Review findings of field work and determine if additional information is needed.
- Model the outfall with Visual Hydraulics to estimate head loss coefficients and capacity. The outfall will be modeled from the diffuser in the lake to the WWTP. Drawings and findings from the field work will be used to create the model.
- Provide ALRW with progress update summarizing findings of outfall connectivity and capacity.

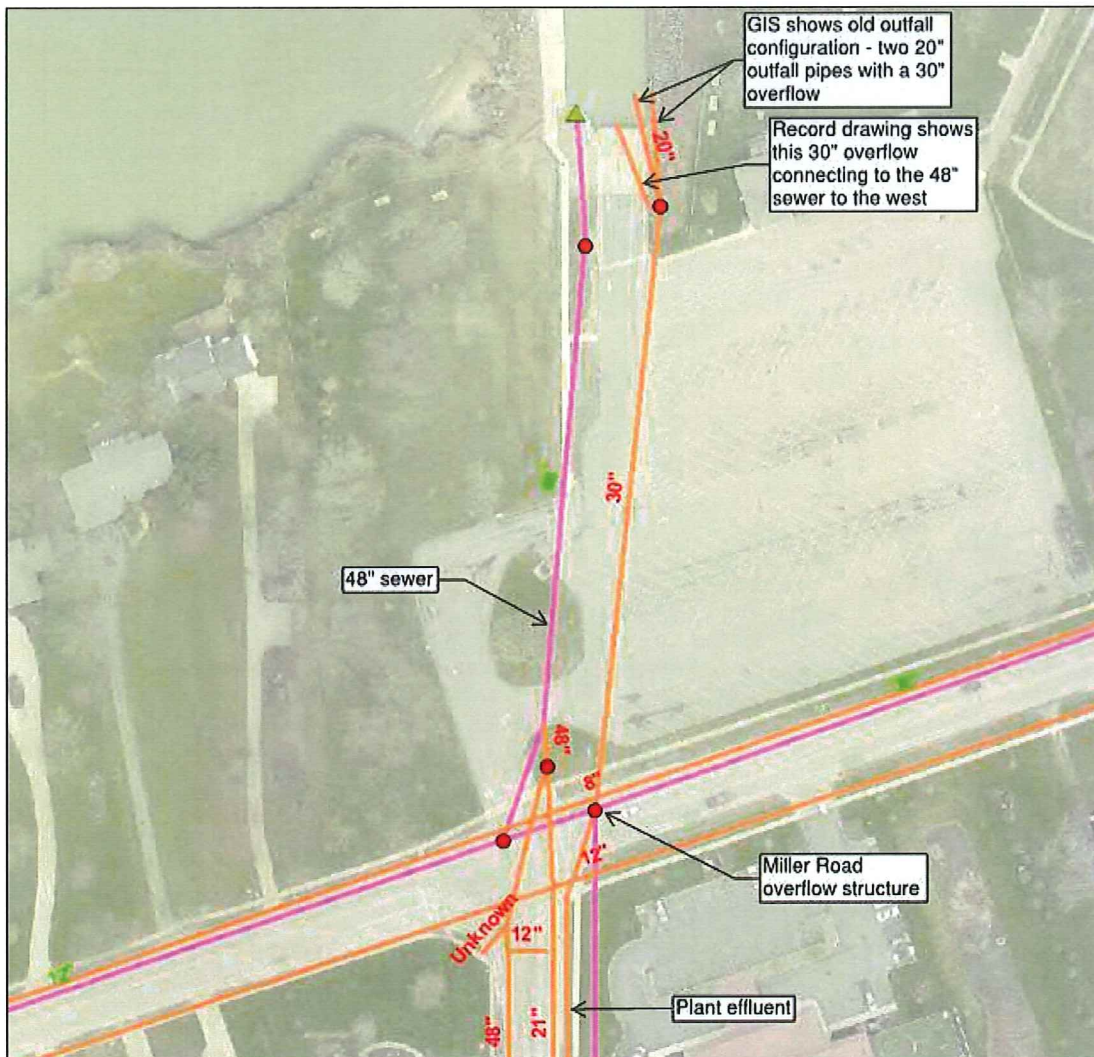




Figure 1: GIS of WWTP Outfall and 4" Storm Sewer

### **Evaluate Existing 108" Storm Sewer:**

Collect and review available information for the existing 108" storm sewer and evaluate how to divert a portion of flow from the plant outfall to the 108" sewer. The proposed diversion will include a control structure to maintain a set amount of flow to the existing outfall. The structures weir/gate shall be adjustable (e.g., adjustable weir) so that the plant flow to the outfall can be altered in the future if needed.

Model the 108" storm sewer based on existing mapping and available information to estimate storm flows. Develop a simplified SWMM model of the sewer by grouping areas together at the upstream ends of the storm sewer to represent the tributary areas. Conduct flow monitoring of the sewer and rain monitoring to collect data for calibration of the SWMM model. The monitored and modeled flows will be evaluated to identify if the 108" sewer has capacity to handle additional flow diverted from the WWTP outfall.

#### *ALRW Responsibilities:*

- Provide BC with any mapping, GIS information, or other information pertaining to the 108" storm sewer near the WWTP. ALRW may need to obtain information from the City.
- Inquire with City regarding basis of design for storm sewer.
- Install flow monitor in the 108" storm sewer and collect level, velocity and flow data.
- Install two rain gages to collect rain data in the area tributary to the 108" storm sewer. One located near Miller Rd and Walker Rd, and another located near Miller Rd and Norfolk & Western RR. Figure 2 illustrates the storm sewer extents and general rain gage locations.
- Provide monitoring data to BC.

#### *BC Responsibilities:*

- Perform field investigation to verify the extents of the storm sewer. This will just include walking along upstream areas of sewer to make observations and verify locations of ditches shown on mapping.
- Perform QAQC of flow and rain data provided by ALRW. Determine if storm events captured during the monitoring period are adequate size for model calibration.
- Develop and calibrate SWMM model of storm sewer. Model will be developed with sewer mapping, GIS, and any other information obtained from ALRW. Model will include estimated tributary area, percent impervious and other parameters. Model will be calibrated with the flow and rain data obtained from ALRW.
- Use the calibrated model to project peak flow for several design storms to estimate available capacity in the storm sewer.
- Develop simple sketch and basis of design information of diversion structure to divert WWTP effluent from the outfall to the 108" storm sewer. A Visual Hydraulics model or other hydraulic calculations will be performed to support this effort.
- Provide ALRW with progress update summarizing findings of the 108" storm sewer evaluation.

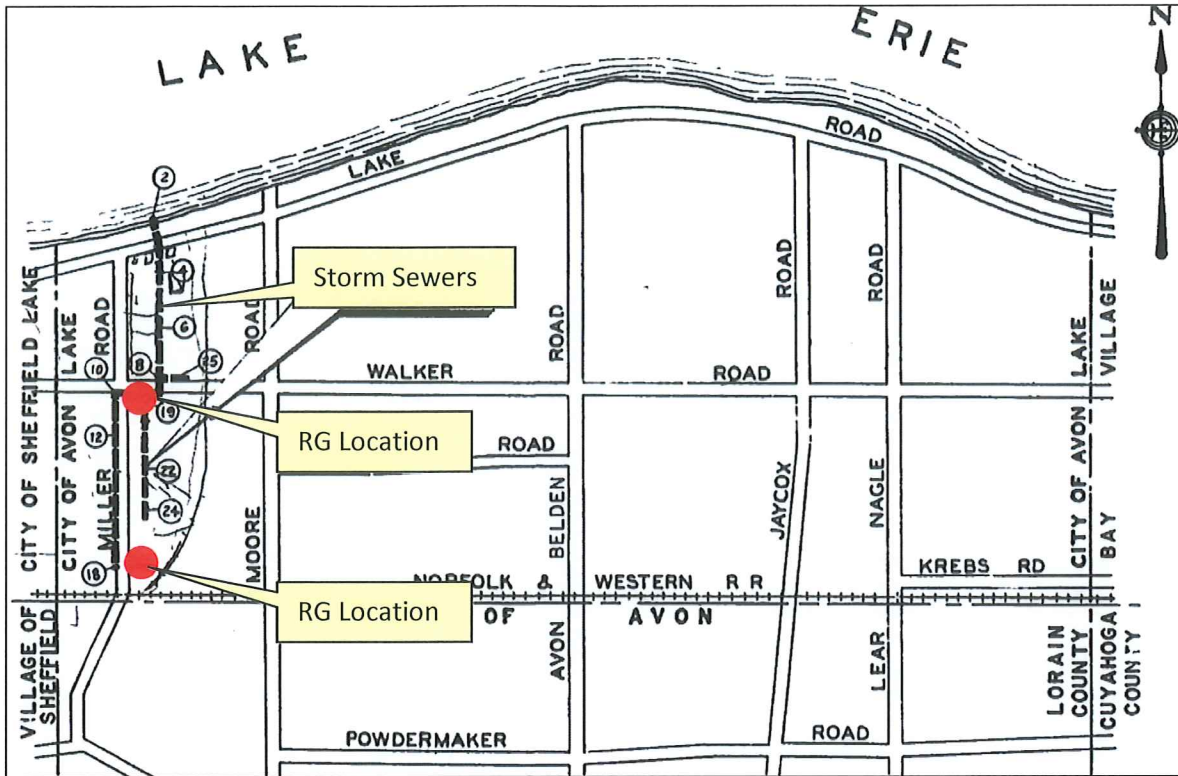


Figure 2: GIS of WWTP Outfall and 4" Storm Sewer

### System Scenario Modeling:

Update the collection system SWMM model based on the findings from the WWTP outfall and 108" storm sewer evaluations. The updated model will be used for several model scenarios to evaluate various WWTP peak flow scenarios and conveyance options for the WWTP outfall and Miller Road overflow.

The modeling scenarios will include WWTP capacities of 15 and 20 MGD. Higher capacities will also be considered as appropriate. Each of these plant capacities is assumed to be a sustained flow (TBD: 6 or 12 or 24 hours?). The initial scenarios and additional considerations are listed below. It is assumed that the 108" sewer will be able to accept additional flow. The scenarios may be modified and/or additional scenarios may need to be identified and run during the course of this study.

### Initial Scenarios:

1. WWTP capacity of 15 MGD. This scenario was performed in the previous modeling work but will be rerun with updated model to determine if there are changes.
2. WWTP capacity of 15 MGD, with 5 MGD of plant effluent diverted to the 108" storm sewer.
3. WWTP capacity of 20 MGD.
4. WWTP capacity of 20 MGD, with 5 MGD of plant effluent diverted to the 108" storm sewer.
5. WWTP capacity of 20 MGD, with 10 MGD of plant effluent diverted to the 108" storm sewer.
6. Increase WWTP capacity to eliminate storage at Miller Road.

Considerations:

1. Future conditions were evaluated in previous modeling work. These conditions included various levels of separation and I/I removal. These conditions will be considered during the scenario modeling.
2. Change in weir height for the Miller Road overflow. Increase in plant capacity, among other changes, may allow for adjustment to Miller Rd overflow elevation.
3. Separating Miller Rd overflow from the WWTP outfall.
4. The 30" overflow in the near shore manhole may provide relief to the lake outfall. This may allow more flow to be sent from the existing WWTP to Lake Erie via the outfall and the 30" overflow.

*ALRW Responsibilities:*

- Provide BC with the current WWTP firm capacity (peak and duration).

*BC Responsibilities:*

- Update collection system SWMM model with findings from outfall and storm sewer evaluations. Include latest outfall configuration for all models. Include 108" storm sewer and diversion structure for diversion scenarios.
- Use findings from the outfall and storm sewer evaluations to determine additional scenarios to model and/or modify initial scenarios listed above.
- Perform scenario modeling with 10-year design storm. Additional design storms and typical year may also be evaluated as appropriate.

### **Center Road Pump Station**

Evaluate the impact of conveying additional flows from Center Road Pump Station to the Lake Road interceptor to determine if it is practical to eliminate a portion or all storage east of Center Road Pump Station. Utilize the updated model of the selected scenarios for this evaluation and determine what improvements would be required to accommodate the additional flows.

Considerations:

1. The CRPS capacity would need to be increased.
2. The LRI may not have capacity for additional flows, so a new force main may be required.
3. WWTP capacity may need to be expanded, otherwise the flow would discharge at Miller Rd.
4. WWTP outfall capacity may need to be increased.
5. Increasing CRPS capacity will likely change how the relief structures and CRPS overflow react.

*ALRW Responsibilities:*

- None



### *BC Responsibilities:*

- Select and model two scenarios of increasing capacity of the CRPS.
- Evaluate impact on overflows upstream of the CRPS and at the CRPS. Evaluate impact at Miller Rd and the WWTP.

### **Technical Memorandum:**

BC will complete a Technical Memorandum for the following:

1. Summary of findings from the WWTP outfall evaluation. This will include configuration and capacity, and connectivity of the 30" overflow.
2. Summary of findings from the 108" storm sewer evaluation. This will include flow monitoring and model results, available capacity, and proposed diversion structure configuration.
3. Summary of system scenario modeling. This will include findings for the various WWTP capacities and conveyance options.
4. Summary of CRPS evaluation findings.
5. Up to three scenarios will be selected for cost comparison. An engineer's estimate will be completed for each of these scenarios.

### **I&I Removal Plan:**

BC will assemble an I&I removal plan to remove excessive stormwater from the separate sanitary sewer system based on past collection system evaluation results and information supplied by the Agency. The plan will establish priority areas of high I&I and set target preliminary removal strategies. The plan will serve as a document to track work completed by Avon Lake Regional Water and will be kept and updated by them.

BC proposes an allowance be established to assist Avon Lake Regional Water with developing strategies for I&I investigations and removal methods as requested. BC will discuss the identified work with Avon Lake Regional Water and then assemble a proposed scope and budget, after authorization from Avon Lake Regional Water, BC will then complete the work utilizing the funds from the allowance.

BC can assist Avon Lake Regional Water with I&I field investigations providing field personnel, developing investigative strategies, analysis of the findings and recommended mitigation measures for removal of the I&I.

### **Fee for Proposed Scope of Work**

Brown and Caldwell proposes the above scope of work for a not to exceed fee of \$XXXXXX with an allowance for I&I assistance as directed by ALRW of \$30,000 as shown in Table 1.

**Avon Lake Regional Water Collection System Evaluation**

Phase	Phase Description	Total Labor Hours	Total Labor Effort	Total ODCs	Total Sub Cost	Total Expense Effort	Total Effort
100	Project Management	137	\$23,736	\$0	\$0	\$0	\$23,736
200	WWTP Outfall&108" Storm Sewer Eval	258	\$40,499	\$5,100	\$10,000	\$15,100	\$55,599
300	System Scenario Modeling	300	\$51,976	\$1,250	\$0	\$1,250	\$53,226
400	I&I Removal Plan	45	\$6,417	\$50,000	\$0	\$50,000	\$56,419
	<b>GRAND TOTAL</b>	<b>740</b>	<b>\$122,628</b>	<b>\$56,350</b>	<b>\$10,000</b>	<b>\$66,350</b>	<b>\$188,980</b>

SEWER LATERAL VIDEO/CCTV INSPECTION & INVESTIGATION  
 BID DATE: 02 NOV 18  
 ADDENDUM(S) 1 & 2  
 Engineer: J.R. Gaydar  
 file: I:/SEWERCOLLECTION/SEWER LATERALS CCTV/Engineers Estimate

Plan Holders  
 List & Bid

Item	description	unit	qty	unit cost	cost	C&K Industrial	DIS Diversified Infrastructure	AAA Advanced Plumbing	United Survey	National Power Rodding, Chicago, Illinois	Lake County Sewer	Great Lakes Pipeline Serv. Cleveland, OH
1A	Sanitary Sewer Lateral CCTV Location, As Directed	each	110	\$ 250.00	\$ 27,500.00	\$ -	\$ -	\$ -	\$ -	\$ 3,500.00	\$ -	\$ 25.00
1B	Storm Sewer Lateral CCTV Location, As Directed	each	110	\$ 250.00	\$ 27,500.00	\$ -	\$ -	\$ -	\$ -	\$ 3,500.00	\$ -	\$ 25.00
2A	Side Launch Camera Into Sanitary Lateral, As Directed	each	110	\$ 150.00	\$ 16,500.00	\$ -	\$ -	\$ -	\$ -	\$ 50.00	\$ -	\$ 200.00
2B	Side Launch Camera Into Storm Lateral, As Directed	each	110	\$ 150.00	\$ 16,500.00	\$ -	\$ -	\$ -	\$ -	\$ 50.00	\$ -	\$ 200.00
3	Sewer Lateral Cleanout(s) Exploratory Excavation/Restoration, As Directed	each	110	\$ 75.00	\$ 8,250.00	\$ -	\$ -	\$ -	\$ -	\$ 7,500.00	\$ -	\$ 125.00
4A	Dye, Test and Evaluate Sanitary Lateral, As Directed	each	110	\$ 125.00	\$ 13,750.00	\$ -	\$ -	\$ -	\$ -	\$ 2,500.00	\$ -	\$ 100.00
4B	Dye, Test and Evaluate Storm Lateral, As Directed	each	110	\$ 125.00	\$ 13,750.00	\$ -	\$ -	\$ -	\$ -	\$ 2,500.00	\$ -	\$ 100.00
5	Exploratory Excavate & Restore Around Home Foundation For Verification of Footer Drain Tile Connection to Sanitary Sewer, As Directed	each	110	\$ 130.00	\$ 14,300.00	\$ -	\$ -	\$ -	\$ -	\$ 10,000.00	\$ -	\$ 50.00
6	Sewer Lateral Sounding, Sanitary and/or Storm, As Directed.	each	110	\$ 50.00	\$ 5,500.00	\$ -	\$ -	\$ -	\$ -	\$ 500.00	\$ -	\$ 25.00
<b>Engineer's Estimate</b>						\$ -	\$ -	\$ -	\$ -	\$ 3,311,000.00	\$ -	\$ 93,500.00
10% above engineer's estimate						\$ -	\$ -	\$ -	\$ -	\$ 331,100.00	\$ -	\$ 2,750.00
bid bond						\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Informalities						\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
total bid						\$ -	\$ -	\$ -	\$ -	\$ 3,311,000.00	\$ -	\$ 93,500.00
10% contingency						\$ -	\$ -	\$ -	\$ -	\$ 331,100.00	\$ -	\$ 2,750.00
total+conting						\$ -	\$ -	\$ -	\$ -	\$ 3,642,100.00	\$ -	\$ 96,250.00
lateral (san / stm) unit bid cost each						\$ -	\$ -	\$ -	\$ -	\$ 780.00	\$ -	\$ 875.00

10% add. #1(\*\*\*)  
 10% no  
 10% add. #1(\*\*\*)  
 10% no  
 10% add. #1(\*\*\*)  
 10% no

Lowest and Best Bid  
 2nd Bid, over 10% Engineer's Estimate



*John N...*  
 11/02/18

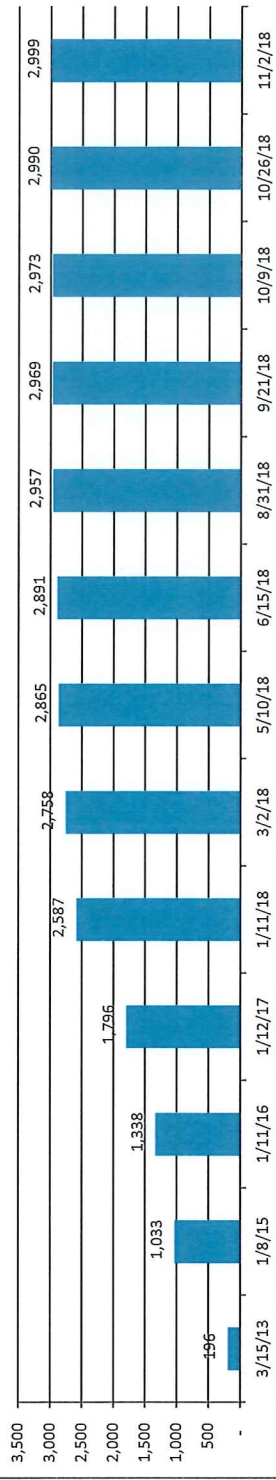


# Sewer Lateral Program Summary

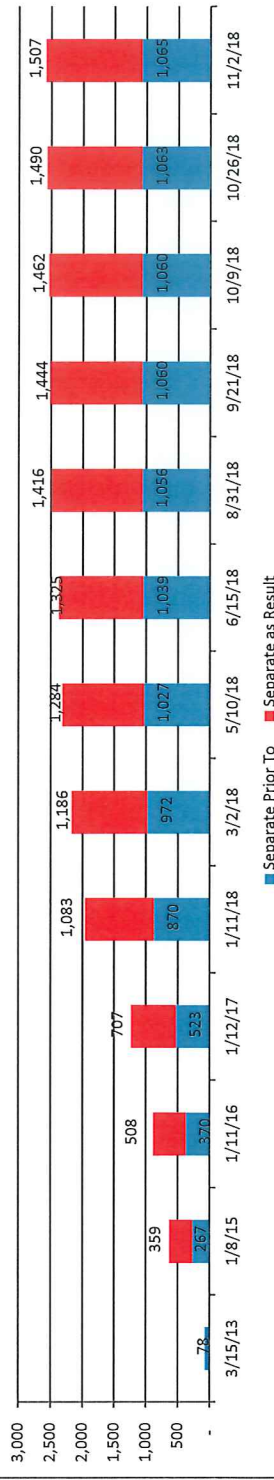
Date	3/15/13	1/8/15	1/11/16	1/12/17	1/11/18	3/2/18	5/10/18	6/15/18	8/31/18	9/21/18	10/9/18	10/26/18	11/2/18
Total Letters Sent	2,866	2,733	2,810	2,915	3,015	3,032	3,043	3,047	3,056	3,059	3,059	3,067	3,067
Total Inspections Made	196	1,033	1,338	1,796	2,587	2,758	2,865	2,891	2,957	2,973	2,990	2,990	2,999
Houses Separating Laterals	359	508	707	972	1,083	1,186	1,284	1,325	1,416	1,462	1,490	1,490	1,507
Houses w/ No Further Action Needed	78	267	370	523	870	972	1,027	1,039	1,056	1,060	1,060	1,063	1,065
Problems - Need Correction	104	407	369	566	634	600	554	527	485	465	451	437	427
Houses Receiving \$1,000 Credit													
Total Houses with Executed Loan Agmts			28	248	271	283	292	292	311	320	321	334	335
Houses with Contractor Loan Payments													

Homes with deadlines	
Group A	1,588
Groups B&C	1,224
Later	255
Total Letters Sent	3
Needing Inspections	65
Needing Correction (known)	159
	223
	45

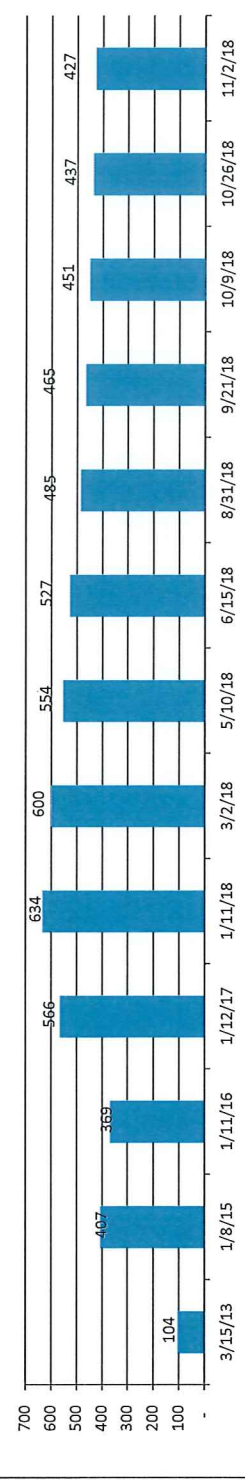
## Total Inspections Made



## No Further Action Needed

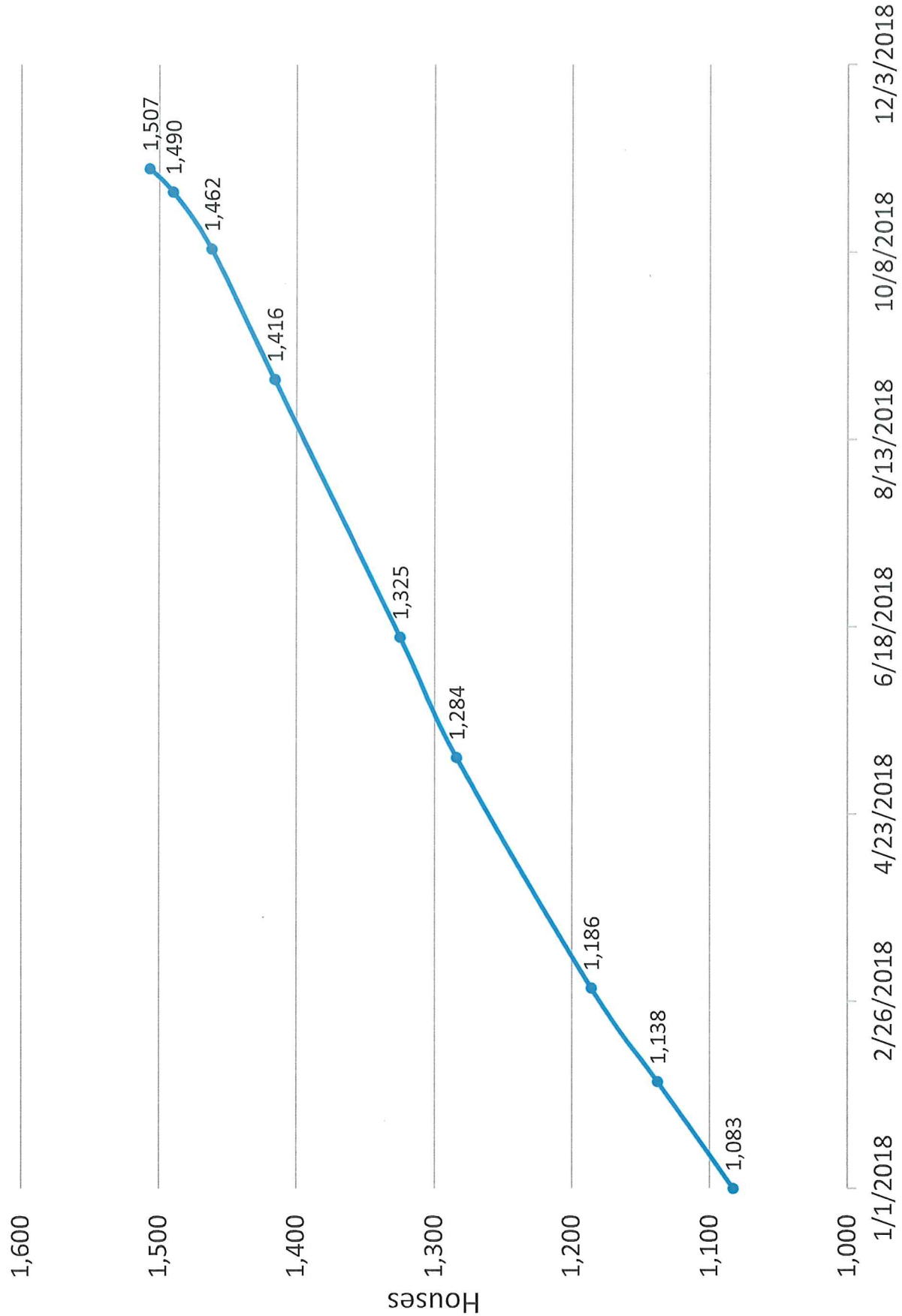


## Problems Identified

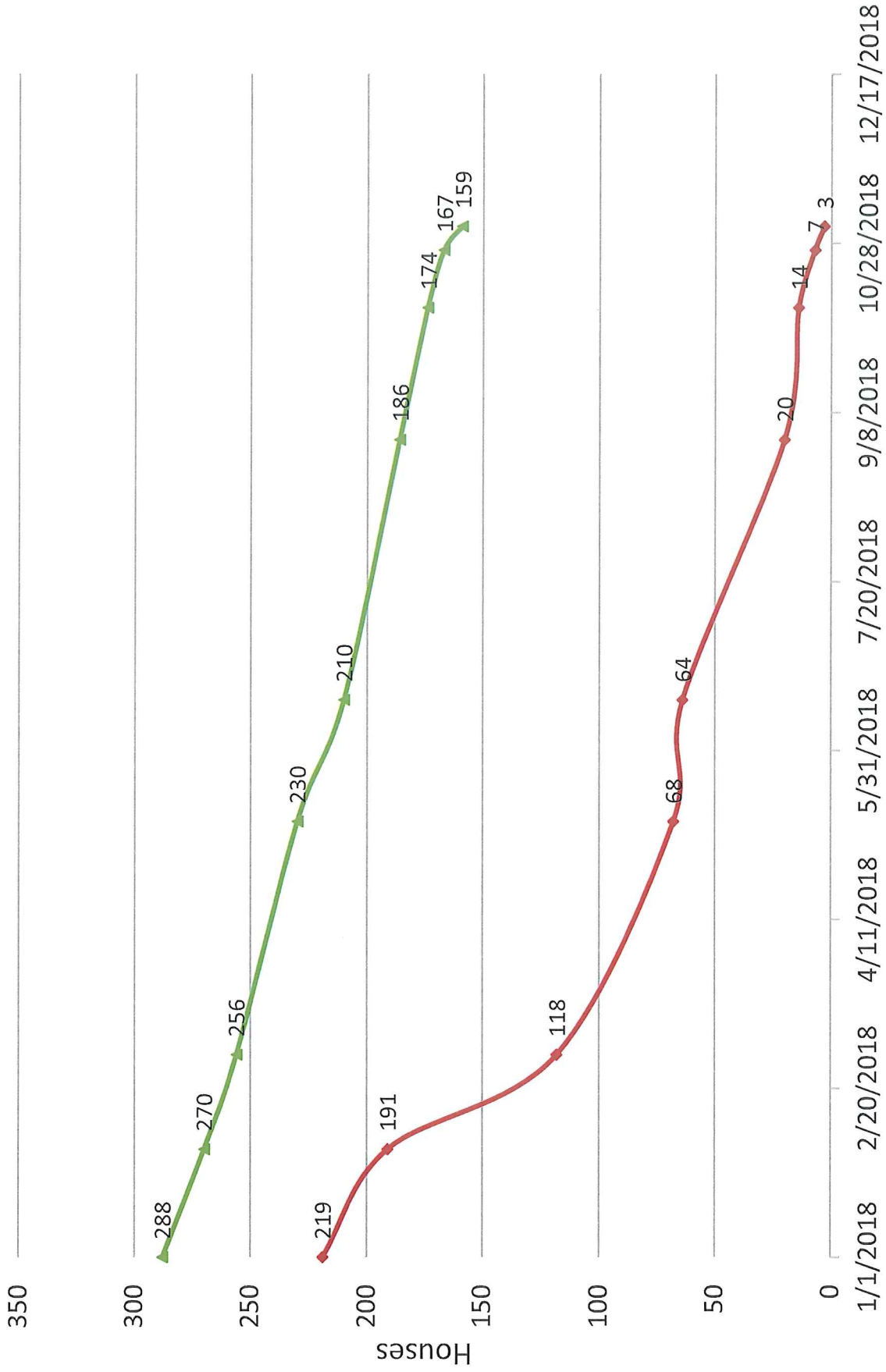


Note: Dec '15 - Apr '16 data does not include homes with assumed tied in footers.

# Total Houses Completed Work to Comply



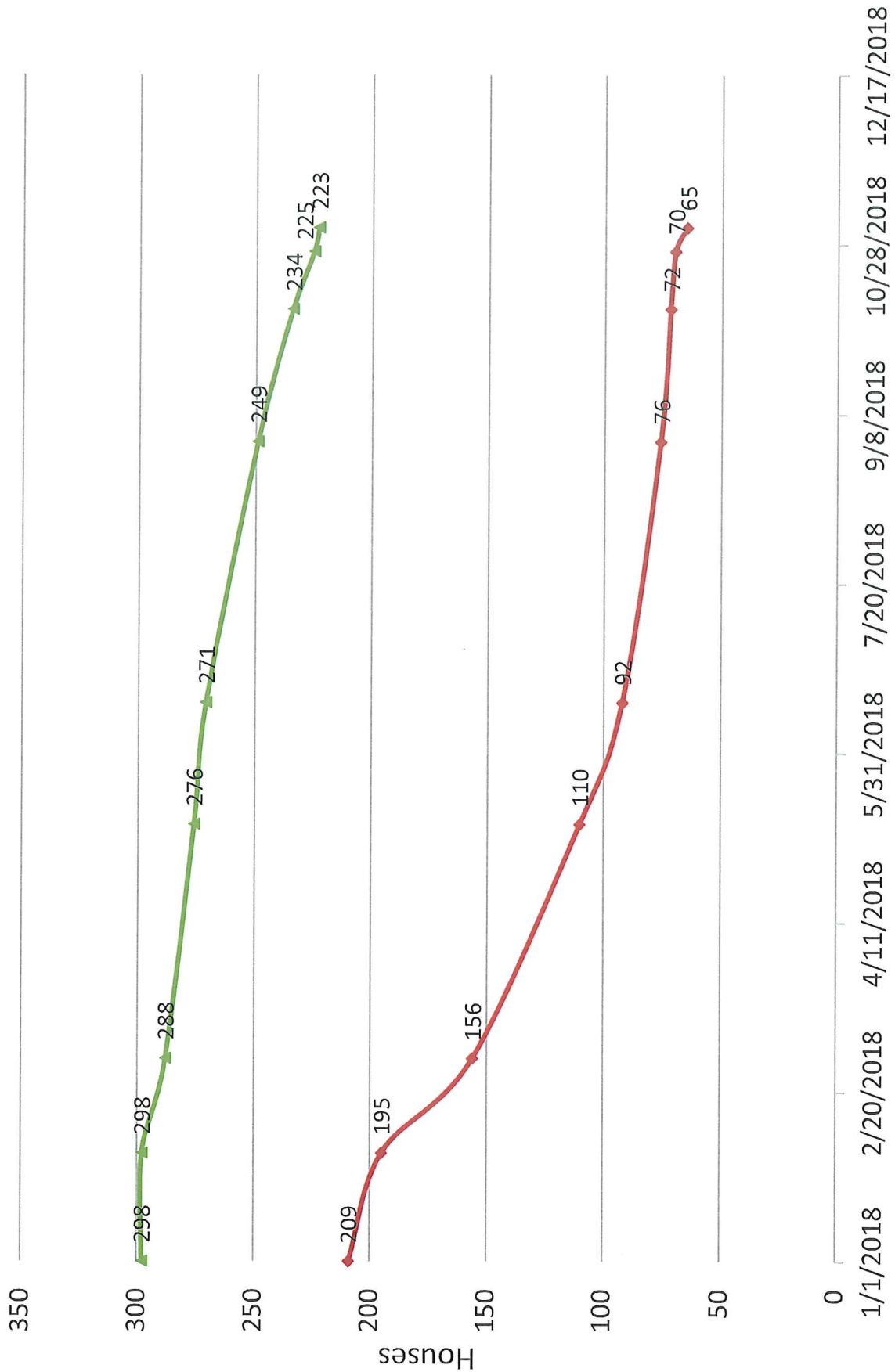
# Group A Houses Still Needing Inspections or Correction



◆ Needing Inspections    ■ Needing Correction (known)



# Group B&C Houses Still Needing Inspections or Correction



● Needing Inspections    ● Needing Correction (known)

**ACTION ITEMS FROM BOARD MEETINGS**

DATE	CATEGORY*	TOPIC	SOLUTION	STATUS
10/16/2018	Financial	Chairman would like us to analyze purchase versus rental regarding uniforms.	Staff is reviewing data. Initial numbers seem to indicate that overall uniform expenses are lower now due to a significant reduction in rental expenses from before purchasing part of the uniforms. Staff is developing a uniform purchase policy.	Open
10/16/2018	Misc.	Chairman asked if Brakey can be extended to residential customers.	CUE has contacted Brakey. Because Avon Lake is a NOPEC community, we need to understand the NOPEC contract details. The CUE has requested NOPEC contract information from S. Presley.	Open
10/9/2018	Financial	Why can we not pay Republic Services with a check?	CUE has contacted Republic Services' account manager and learned that Republic Services is intending to end the ability for credit card payments (at least for commercial accounts).	Open
10/9/2018	Financial	Why so much overtime pay?	Much of the overtime pay can be attributed to LORCO callouts. Additionally, there were call-ins to staff the plants due to sick time and time associated with the Big Trucks event..	Open
9/18/2018	Financial	Chairman would like to see the costs for digester cleaning.	MWHC is currently negotiating a contract with the digester cleaning company.	Open
8/21/2018	Misc.	Provide a training session for Board dashboard. A webinar based meeting would be acceptable.	Considering providing individual training but will look into ability to provide webinar.	Open
6/5/2018	Misc.	Members asked what majority is needed to rescind legislation		Open
5/1/2018	Financial	Bank fees – CUE to talk to S. Presley.	Steve P. talking to Avon Lake banks.	Open
10/16/2018	Lateral Project	Chairman would like Outreach Specialist to get a message to the residents that it is best to do the work while the streets are torn up.	This has been stated during community meetings and in community update emails. Staff will assure this information is included in letters, as well.	Answer
10/16/2018	Financial	Board inquired about IT charges and effectiveness.	CUO is looking at various options, which will be part of an IT strategic plan.	Answer
10/16/2018	Financial	Chairman asked about the LORCO reimbursement.	LORCO has an area (Barrington) that discharges to Grafton. We collect the money on LORCO's behalf and transfer it to LORCO's account (LORCO2) every month.	Answer

\*Categories: Financial, Lateral Project, Personnel, Education/CI, Strat. Plan or Misc.



## ACTION ITEMS FROM BOARD MEETINGS

DATE	CATEGORY*	TOPIC	SOLUTION	STATUS
10/9/2018	Misc.	Put "application fees must be paid" in plan review.	Will be included, as appropriate, during plan review process.	Answer
10/9/2018	Financial	Change water bill wording to reflect minimum usage.	Will incorporate into any rate updates the December.	Answer
10/9/2018	Lateral Project	New letter to be composed and sent to non-compliant residents.	Mr. Phillips and CUO composed and sent letter	Answer
9/4/2018	Lateral Project	Board is interested in our path forward for Avondale.	CUO will follow up with our engineer.	Answer
5/1/2018	Lateral Project	Lateral separation - Keep pushing out names of available contractors on FB, emails and letters.	Preparing updated information to customers based upon Board discussions regarding deadlines.	Answer
9/18/2018	Financial	There were errors in the financials which affected the dollar amounts for Jones & Henry for mercury testing. These were caused by a staff formatting error and should have been \$150.00 and \$170.00.	Staff is working with NWS and Steve Presley to create a customized report to save time and reduce the possibility of human error.	Answer
9/4/2018	Misc.	Percentage completion on projects	The CUO will include completion percentage on a regular basis.	Answer
8/21/2018	Misc.	SOP for inspections needs to be written.	Initial draft is complete.	Answer
8/21/2018	Lateral Project	CUE working with law director in getting contractor paid more quickly. Could be a loophole homeowners are taking advantage of in regard to returning the final signoff letter.	Law Director drafted change to the lateral loan agreement for path-forward.	Answer
8/21/2018	Financial	Ask Steve Presley what he needs to cut checks for expenses. Would like to move toward the way Council approves expenses.	Finance Director will be providing CUE purchasing procedures and approval requirements for City Staff & Council. From there, will determine what, if anything, must be adopted by Board.	Answer
8/21/2018	Financial	Provide all requested materials on Kopf to Calfee.	CUE has provided all currently-requested information.	Answer
8/21/2018	Misc.	Follow up on inspection of 229 Fay to determine whether to pursue previous owner.	Working with Law Director	Answer
7/10/2018	Lateral Project	Chairman asked about the correlation between habitual delinquent customers, special needs and CRS	Cross-referencing shutoff lists with inspection lists and CRS.	Answer
6/19/2018	Misc.	Deadline for backflow testing discussed. Members would like the date later in the year.	Staff will present a path forward in November.	Answer
6/5/2018	Financial	CUE to calculate Kopf interest.	Addressing with Calfee assistance.	Answer

\*Categories: Financial, Lateral Project, Personnel, Education/CI, Strat. Plan or Misc.