Region of Waterloo

Engineering and Environmental Services

Water and Wastewater Infrastructure Management

To:	Regional Council
Meeting Date:	June 3, 2026
Report Title:	Mannheim Service Area – Recommended Interim Risk Management Framework

---

1. Recommendation

a) That the Region adopt Scenario 2 from the interim risk management approach to defer planned shutdowns of water supply facilities until Mannheim Water Treatment Plant sidestream treatment is fully in service and allow a phased in approach to the operational resiliency target, in accordance with the recommendations and mitigation measures identified through the Interim Risk Management Framework Study, and as outlined in Council report EES-WIM-26-012, dated June 3, 2026.

b) That the Region of Waterloo, at Council's direction, allocate an additional 15 L/s from Wilmot Centre on an interim basis and that be reassessed at the time of side stream capacity being added.

2. Purpose / Issue:

An interim risk management framework was developed to assess how staged development could proceed under certain risk-based conditions in the Mannheim Service Area. This report presents the recommended approach identified though the Interim Risk Management Framework Study. The purpose of the framework was to assess how much water could potentially be made available. Approximate timing was also determined for water that could be made available to support staged development, however, the timing is linked to the completion of key milestones. Through a parallel initiative, the Water Capacity Allocation Policy for the Mannheim Service Area was developed to determine how available water will be allocated once it becomes available (approved by Council May 6, 2026).

3. Strategic Plan:

The provision of drinking water to the residents and businesses of the Region of Waterloo is a fundamental underpinning of all the pillars of the Region's Strategic Plan – including Homes for All, Climate Aligned Growth, Equitable Services and Opportunities, and Resilient and Future Ready Organizations.

4. Report Highlights:

- Under the recommended managed risk scenario (Scenario #2), it is anticipated that growth would be supported by the end of September 2026 (upon confirmation of key milestones). The amount of growth that could proceed is aligned with the short-term growth forecasted by Watson & Associates Economists Ltd for the Mannheim Service Area (PDL-GDS-26-013).
- The framework would provide capacity to area municipalities to allocate to development in accordance with allocation policies and bylaws.
- The scenario does not include a fixed percentage protected for operational resiliency. Instead, the amount of reserved capacity is fluid based on protecting for unplanned shutdowns (emergencies) as well as planned critical shutdowns.
- The Interim Risk Management Framework Study was facilitated by Yates Water Management and completed in collaboration with the Area Municipalities, with representatives from the City of Cambridge, City of Kitchener, City of Waterloo, Township of Woolwich, and Region of Waterloo.
- The Interim Risk Management Framework Study identified measured risks that could be taken to support staged development while the Region works to restore sustainable operations and meet the minimum operational resiliency buffer target.
- Evidence-based data collection and technical analysis was carried out to properly identify and assess risk. This included optimization for capital program planning, hydrogeological modeling and analysis, root cause analysis of historical unplanned shutdowns, short-term growth forecasts, assessment of financial impacts for potential delays in development, and leveraging outcomes from parallel initiatives and working groups.
- As a guiding principle, any proposals for changes to the operation of the drinking water system that would result in the Region breaching the provisions of the Safe Drinking Water Act were not considered. Safety of the drinking water supply for residents and businesses remains the Region’s top priority.
- The recommended approach balances risk across sectors and stakeholders. It provided the lowest overall risk for the community and balanced restoring sustainable operation of supply wells as a high priority, facilitation of staged growth, and protection of a portion of the system capacity to manage emergency situations.
- Successful implementation of the interim risk management framework will require on-going monitoring, mitigation measures, and resourcing. The framework was built to be flexible and adapt to changes in real time. This

allows staff to consider the most up to date and relevant data before allocating water to support development, while protecting the system.

- Reporting for the interim risk management framework is initially recommended on a quarterly basis. Risk reporting can be integrated into the Council updates for Work Underway for the Mannheim Service Area Water Capacity Constraint.

- As directed by Regional Council, staff are exploring all opportunities to increase or reallocate water capacity, to help address the capacity constraint. One opportunity is to direct an additional 15 L/s of water from the K50s well field [in Wilmot] to bridge the gap until Mannheim Side Stream Phase 2 is online and Greenbrook repairs and enhancements are complete.

5. Background:

Introduction

As part of the work underway on the Region's Water Supply Strategy Update, a water capacity constraint was identified in the Mannheim Service Area. As a result, the Region is currently not entering into any new servicing agreements, until such time that sufficient capacity becomes available.

An interim risk management framework is required to provide an approach for how staged development could proceed based on acceptable risk thresholds and evidence-based decisions. It can be noted that through a parallel initiative, the Water Supply Capacity Allocation Policy for the Mannheim Service Area was developed to determine how available water would be allocated (approved by Council May 6, 2026).

Interim Risk Management Framework Study Process

The Interim Risk Management Framework Study was facilitated by Yates Water Management and completed in collaboration with representatives from the City of Cambridge, City of Kitchener, City of Waterloo, Township of Woolwich, and Region of Waterloo. Area Municipal staff with a strong background in the Integrated Urban System, an understanding of the process for approving water capacity for development, asset management, and water operations participated in a Focus Group. Weekly meetings were conducted with the Focus Group members to establish a framework to support water service delivery in the Mannheim Service Area over the next 5 years. A 5-year timeline was selected to align with the approach for identifying new water supply projects in the short to medium term. The ongoing Water Supply Strategy Update will provide recommendations beyond the 5-year planning period.

Data collection and technical analysis was required to properly identify and assess risk in an evidence-based approach and included:

- In-depth review of Region planned capital projects, required water facility shutdowns, and assessment of potential project deferrals;
- Hydrogeological modeling to assess elevated pumping rates at each well field in the Mannheim Service Area for a 3-year period, in consideration of groundwater levels, potential interference with adjacent well fields, and Permit to Take Water conditions;
- Detailed review and root cause analysis of historical shutdowns was undertaken for the last 2-years to identify what capacity was offline for unplanned shutdowns (i.e. emergency shutdowns);
- Growth forecasts through to 2031 to estimate additional water supply needed based on building permits issued but not occupied, servicing commitments, and market conditions;
- Review of estimated development charges to be collected based on short term growth forecasts, and the potential impacts if development is delayed or paused.

In addition to the above, information was leveraged from other ongoing initiatives and working groups. This included outcomes from the Technical-Focused Water Servicing Capacity Working Group regarding new water supply projects, feedback from Development Stakeholders Group and Council delegations regarding economic risks from development delays and considerations for a phased approach to operational resiliency, and outcomes from the Review of Water Conservation Measures study related to water efficiency, conservation, and water use restrictions.

Three alternate scenarios were developed to complete a risk assessment and identify the approach with the lowest overall risk:

- Scenario 1: Optimized planning to reliably supply water
- Scenario 2: Deferral of planned shutdowns until Mannheim Water Treatment Plant (WTP) sidestream treatment is fully operational
- Scenario 3: Temporary extended pumping of supply sources until Mannheim WTP sidestream treatment is fully operational

The scenarios were developed based on factors that could be managed and monitored by the Region and Area Municipalities. All three scenarios were developed with due diligence and a mandate to safeguard the drinking water supply, in accordance with the Safe Drinking Water Act.

A risk register was developed through discussion with Focus Group members. It was identified that thirteen risks need to be managed to determine how much supply could be made available to support staged development. Short to medium term risks were selected based on the 5-year focus for this risk management framework. Enterprise risks were not included as they are common to all potential scenarios and outside of project scope (e.g. cyber-security, climate change, etc.).

A risk scoring workshop was conducted on May 1, 2026. Key representatives attended from City of Cambridge, City of Kitchener, City of Waterloo, Township of Woolwich, and Region of Waterloo. Voting rights were assigned to 14 attendees to provide balanced representation of stakeholders. The three scenarios were anonymously assessed against the risk register, with overall risk scores derived from the probability of a risk occurring times the consequences should the risk be realized, based on established criteria.

Recommended Interim Risk Management Framework Approach

The lowest overall risk score was associated with Scenario 2: Deferral of planned shutdowns until Mannheim Water Treatment Plant (WTP) sidestream treatment is fully operational. This approach balances restoring sustainable operation of supply wells as a high priority, facilitation of staged growth, and protection of a portion of the system capacity to manage emergency situations. This scenario also introduces a phased approach to reaching the minimum operational resiliency buffer. To support the deferral of planned shutdowns until Mannheim WTP sidestream treatment is fully operational, an in-depth review of the capital program was completed for the next 5 years. The protected capacity for unplanned shutdowns in this managed risk scenario was based on historical shutdown records and a root cause analysis for each shutdown.

Under this managed risk scenario, growth would be supported within the third quarter of 2026 (upon confirmation of key milestones). The amount of growth that could proceed would be aligned with the anticipated growth forecasted by Watson & Associates Economists Ltd for the Mannheim Service Area. The short-term forecast recognizes that growth is expected to be offset by changing demographics such as declining student population from 2026 to 2028.

The recommended approach would allow the operational resiliency target to be met by mid 2027 while still supporting forecasted growth. However, the amount of water identified for allocation beyond 2027 will continue to be based on a practice of using planned shutdowns and the minimum protected supply rather than a set percentage. This should continue to be assessed as part of the ongoing monitoring to confirm the timing for incorporating a permanent protection of the 20% operational resiliency into the process for allocating water for growth.

Table 1 provides an overview of the estimated capacity for allocation (as per the Mannheim Allocation Policy), approximate timing, and required milestones. The estimates are based on the information available at this time, however, it should be noted that refinements will be made as new information becomes available.

Table 1: Recommended Approach (Scenario 2) Estimated Capacity Available for Water Allocation (as per the Mannheim Allocation Policy)

Year	Quarter	Estimated allocation amount (L/s)		Estimated cumulative allocation amount (L/s)		Milestone(s) required for capacity release	Description
		Average day	Maximum week	Average day	Maximum week		
2026	Q3[1]	5	20	5	20	1) Repeal 1980 Water Policy (complete) 2) Mannheim WTP stress testing (complete) 3) Verification for Parkway WS temporary extended pumping (complete) 4) Mannheim WTP - Sidestream pilot phase 1 (in progress)	New capacity allocated to restore sustainable operations and planned shutdowns already in progress. Approximately 5 L/s remaining for water allocation.
2026	Q4	40	40	45	60	1) Greenbrook WS - repair and optimization 2) Mannheim WTP - Sidestream pilot phase 2	Greenbrook WS repair and optimization and Mannheim WTP – Sidestream pilot phase 2 add 40 L/s new supply, all of which is anticipated to be available for water allocation.
2027	Q1	60	55	105	115	1) Confirmation that Greenbrook WS is reliably operating (30-day run time post substantial completion)	After confirming Greenbrook WS is reliably operating, it is estimated that 60 L/s will be available for water allocation. The allocation is related to the deferral of planned shutdowns. Note more water is available for allocation for average day than maximum week conditions based on the peaking capacity of facilities for future planned shutdowns. This will continue to be assessed to verify.
2027	Q2	0	0	105	115	2) Check-point - Mannheim WTP sidestream treatment fully operational	No additional water capacity available for allocation at the time of completion for Mannheim WTP sidesteam treatment. A portion is needed to make up for the deferral of planned work and the temporary increased pumping at Mannheim WTP (based on stress testing) and Parkway WS.

Year	Quarter	Estimated allocation amount (L/s)		Estimated cumulative allocation amount (L/s)		Milestone(s) required for capacity release	Description
		Average day	Maximum week	Average day	Maximum week		
							The remaining capacity is required for future planned shutdowns.
2027	Q3	0	0	105	115		No additional capacity released based on future planned shutdowns.
2027	Q4	0	0	105	115		No additional capacity released based on future planned shutdowns.
2028	Q1	0	0	105	115		No additional capacity released based on future planned shutdowns.
2028	Q2	0	0	105	115		No additional capacity released based on future planned shutdowns.
2028	Q3	25	25	130	140	1) Well W7 upgrade	Completion of planned work for a high producing supply source (Well W7) is estimated to allow 25 L/s for water allocation. This releases a portion of the Mannheim WTP sidestream project that was being protected for this planned work.
2028	Q4	50	50	180	190	1) Laurel WS upgrades	Completion of planned work for a high producing supply source (Laurel WS) is estimated to allow 50 L/s for water allocation. This releases a portion of the Mannheim WTP sidestream project that was being protected for this planned work.
2029	Q1	0	0	180	190		No additional capacity released based on future planned shutdowns.
2029	Q2	0	0	180	190	1) Check-point - Parkway WS - Well K32 sidestream treatment	No additional capacity available at the time of completion for the Parkway WS – K32 sidestream treatment. This capacity is required for future planned shutdowns.
2029	Q3	0	0	180	190		No additional capacity released based on future planned shutdowns.
2029	Q4	0	0	180	190		No additional capacity released based on future planned shutdowns.
2030	Q1	0	0	180	190	1) Check-point - New Maple Grove WS	No additional water capacity available for allocation at the time of completion for the

Year	Quarter	Estimated allocation amount (L/s)		Estimated cumulative allocation amount (L/s)		Milestone(s) required for capacity release	Description
		Average day	Maximum week	Average day	Maximum week		
							Maple Grove WS. This capacity is required for future planned shutdowns.
2030	Q2	0	0	180	190		No additional capacity released based on future planned shutdowns.
2030	Q3	45	45	225	235	1) New Pumping Station (Cam 2W PS)	Completion of the new pumping station between the Middleton and Mannheim Service Areas (referred to as the Cam 2W PS) is estimated to allow 45 L/s for water allocation.
2030	Q4	60	205	285	440	1) Well W7 replacement	Completion of planned work for a high producing supply source (Well W7) is estimated to allow 60 L/s to be available for water allocation for average day conditions and 205 L/s for maximum week conditions. This releases a portion of the Mannheim WTP sidestream project, the capacity from the Parkway WS – K32 sidestream project, and a portion of Maple Grove WS project that was protected for planned shutdowns.
2031	Q1	20	0	305	440	1) Greenbrook WS - facility plan	Completion of upgrades at the Greenbrook WS is estimated to allow 20 L/s for water allocation under average day conditions. Based on planned shutdowns, the Greenbrook WS estimated capacity is not available for allocation under maximum week conditions until 2031 Q3 (10 L/s) and 2031 Q4 (10 L/s)
2031	Q2	0	0	305	440		No additional capacity released based on future planned shutdowns.
2031	Q3	0	10	305	450	1)Well W6B upgrades	Estimated capacity for allocation under maximum week conditions is related to completion of Greenbrook WS facility plan (2031 Q1) and completion of planned work at Well W6B.
2031	Q4	100	110	405	560	1) Grand WS	Completion of the Grand WS is estimated

Year	Quarter	Estimated allocation amount (L/s)		Estimated cumulative allocation amount (L/s)		Milestone(s) required for capacity release	Description
		Average day	Maximum week	Average day	Maximum week		
						2) Well K13 upgrades	to allow 100 L/s for water allocation. An additional 10 L/s is estimated to be available for maximum week conditions based on the completion of Greenbrook WS facility plan (2031 Q1) and completion of planned work at Well K13B.

Note 1: This estimated capacity for allocation is based on an incremental increase from 2025 baseline conditions. An adjustment will need to be made for development connections made between January and June 2026 if they resulted in additional water demand. The adjustment would be based on an observed average day demand for the most recent 12 month period.

Note 2: An estimated capacity available for water allocation of 0 L/s indicates new capacity for allocation is not anticipated for that quarter.

Note 3: All estimated capacities are rounded to the nearest 5 L/s based on the accuracy of forecasting. In addition, on-going monitoring is required to confirm key milestones are met prior to the release of capacity for interim development

Note 4: There is a greater uncertainty for planned shutdowns and evolving needs for unplanned shutdowns as we progress further into the future. As a result, estimated capacities available beyond 2029 has a lower certainty, and is likely to be refined as ongoing monitoring is completed and new information becomes available. The greatest amount of uncertainty for planned shutdowns has been identified for 2031.

Note 5: When assessing the capacity that can be allocated, both the average day and maximum week demand conditions must be considered and documented. The more protective condition shall apply as the system must meet both conditions to provide reliable servicing.

The implementation of the risk management framework will require new resources and processes to support the recommendation and associated mitigation measures. As a starting point, this includes the development of an IRMF governance structure to confirm resource requirements.

Interim Risk Management Framework Mitigation Measures

Mitigation measures were identified for the interim risk management framework. The risk universe relates specific mitigation measures to each named risk. An overview of the mitigation measures is provided below:

- New water supply capacity projects
    - Implement new supply projects identified through the Technical-focused Water Servicing Working Group
    - Continue to review additional new supply and capacity opportunities
    - Optimize project implementation schedules
    - Prioritize completion of the Water Supply Strategy Update
- Focused initiatives to continue to use water wisely
    - Enhanced water loss programs
    - Enhanced water efficiency and conservation
    - Water use restrictions if necessary
- Operational monitoring and emergency response
    - Enhanced monitoring/reporting for capacity and demand
    - Enhanced review and update for emergency management plans
- Funding opportunities
    - Reserve accounts and water rates
    - Provincial and federal programs
- Staff attraction and retention
    - Human resources strategies
    - Recruitment strategies
- Alternative project delivery
    - Opportunities to expedite capital delivery
    - Optimize project selection for well rehabilitation
    - Optimize asset renewal capital delivery
- Enhanced watershed monitoring and protection planning
    - Official plans
    - Grand River source protection plan
    - Hydrogeological studies and monitoring
    - Source water programming
- Communications

Interim Risk Management Framework Monitoring and Reporting

Successful implementation of the interim risk management framework will require on-going monitoring. The framework was built to be flexible and adapt to changes in real time. This allows staff to consider the most up to date and relevant data before allocating water to protect the system.

It is recommended that the Region monitor and report on the risk status of the top priority risks to Council, initially on a quarterly basis. Any significant issues impacting risks outside of the top priority risks should also be reported to Council, as required. On an annual basis, the top risks should be formally reviewed to determine where shifts in risk prioritization exist and if new risks should be considered.

Risk reporting will be integrated with ongoing updates and reporting for the Mannheim Service Area.

Additional water capacity considerations

As directed by Regional Council, staff are exploring all opportunities to increase or reallocate water capacity, to help address the capacity constraint. One opportunity is to direct an additional 15 L/s of water from the K50s well field [in Wilmot] to bridge the gap until Mannheim Side Stream Phase 2 is online and Greenbrook repairs and enhancements are complete. The timing of transferring the 15 L/s back would be confirmed when these milestones are completed. This would not impact the ability to meet the demands for growth or proceed with development approvals in Baden and New Hamburg.

Transferring the water will allow the Region to increase the release of allocation capacity in Q3 of 2026. This would allow for additional development to proceed forward at an earlier stage (this includes developments that are registered but unbuilt). Given the Interim Risk Management Framework relies on an iterative approach that constantly monitors and adapts to changes in real time, staff will continue to explore further opportunities that can be integrated into the framework as they become available, including transfers of water.

Path Forward

The Interim Risk Management Framework provides a balanced path forward that allows development to proceed while identifying and mitigating anticipated risk. The capacity estimates presented in the framework demonstrate the ability to meet the demand for forecasted growth while continuing to build capacity into the system for future growth.

The next steps will be the completion of the milestone activities to release capacity in Q3. Staff have completed three of the four milestones to date. The final milestone is the commissioning and testing of Phase 1 of the Mannheim Sidestream treatment process. The anticipated timeline for completion of this phase of the project is end of September.

The testing and validation of the treatment process will allow the Region to finalize the quantity of water that can be released for allocation through the Council approved Allocation Policy.

Safety of the drinking water supply for residents and businesses remains the Region's top priority. The above noted milestones are required to be met to introduce capacity into the system that will protect for unplanned shutdowns (emergencies), critical planned work underway and to reduce the stress on the aquifers. The introduction of this capacity into the system allows the current operation to be stabilized prior to the release of capacity for growth as outlined in the IRMF.

Table 2 shows the total estimated capacity that could be released in Q3 based on each of the recommendations within this report. Following endorsement by Council of the recommendations the Interim Risk Management Framework will be updated if required.

Table 2: Potential Q3 allocation based on recommendations for endorsement

	Capacity Released for Allocation in Q3 2026
Adoption of the Interim Risk Management Framework (Scenario 2)	5 L/s
Adoption of the IRMF and allocation of additional water (15 L/s)	20 L/s

Table 3 demonstrates the potential allocations by Area Municipality for Q3 based on the 5 L/s estimate in the Interim Risk Management Framework. Table 4 demonstrates the potential allocations with the inclusion of the additional transfer of 15 L/s as described in this report for a total of 20 L/s. Both tables include a reserved component for registered plans with existing servicing agreements that allows developments already in progress within the municipalities to proceed forward.

These tables are included for illustrative purposes only. Under the Council approved Water Supply Capacity Allocation Policy, Area Municipalities are responsible for decisions regarding the allocation of available water supply to development.

Table 3: Potential Q3 Allocation by Area Municipality – based on current Interim Risk Management Framework

Mannheim Area Municipalities	Percentage Breakdown by Municipality	Allocation of Water (l/s)	Population Potential	Employment Potential	Potential Housing Unit Mix			
					Low Density	Medium Density	High Density	Total Units
Kitchener	51.1%	1.21	423	222	21	21	179	221
Waterloo	24.0%	0.57	199	104	10	10	84	104
Woolwich	14.8%	0.35	123	64	6	6	52	64
Cambridge	10.1%	0.24	83	44	4	4	35	43
Wilmot	0.01%	0.00	0	0	-	-	-	-
Area Municipal Total		**2.36**	**828**	**434**	**41**	**41**	**350**	**432**
Registered Unbuilt Reserve		2.64	927	486	46	46	391	482
Total		**5.00**	**1,755**	**920**	**87**	**87**	**741**	**914**

*The unit mix aligns with the breakdown of residential permits issued in 2025

Table 4: Potential Q3 Allocation by Area Municipality – incorporation of opportunity for interim transfer

Mannheim Area Municipalities	Percentage Breakdown by Municipality	Allocation of Water (l/s)	Population Potential	Employment Potential	Potential Housing Unit Mix			
					Low Density	Medium Density	High Density	Total Units
Kitchener	51.1%	8.87	3,115	1,633	153	154	1,313	1,620
Waterloo	24.0%	4.16	1,462	766	72	72	616	760
Woolwich	14.8%	2.57	902	473	44	44	380	468
Cambridge	10.1%	1.75	613	322	30	30	259	319
Wilmot	0.01%	0.00	1	0	-	-	-	-
Area Municipal Total		**17.36**	**6,093**	**3,194**	**299**	**300**	**2,568**	**3,167**
Registered Unbuilt Reserve		2.64	927	486	46	46	391	482
Total		**20.00**	**7,020**	**3,680**	**345**	**346**	**2,959**	**3,649**

*The unit mix aligns with the breakdown of residential permits issued in 2025

6. Communication and Engagement with Area Municipalities and the Public

Area Municipalities: Representatives from the City of Cambridge, City of Kitchener, City of Waterloo, and Township of Woolwich worked collaboratively with the Region in the Interim Risk Management Framework Focus Group to develop the framework together. The Township of Wilmot was approached for a representative but chose not to delegate a formal member to the Focus Group. The Region hosted a meeting with the Technical-focused Water Servicing Capacity Working Group on May 14, 2026, to present information on the Interim Risk Management Framework Study.

Public: A meeting was conducted with the Development Stakeholders Group on May 8, 2026, to provide a status update on the Interim Risk Management Framework Study. The public was kept up to date on the progress of the framework through Progress Updates and the Region's website.

7. Financial Implications:

The need for resourcing to support the framework will be reviewed as part of the development of the IRMF governance structure. In addition, the financial impacts associated with the expedited capital projects will also be assessed. Financial implications related to these factors will be brought to council in a future financial report.

8. Conclusion / Next Steps:

The Interim Risk Management Framework Study identified measured risks that could be taken to support staged development while the Region works to restore sustainable operations and taking a phased approach to meet the minimum operational resiliency buffer target. The recommended approach balances risk across sectors and stakeholders. It provided the lowest overall risk for the community and balanced restoring sustainable operation of supply wells as a high priority, facilitation of staged growth, and protection of a portion of the system capacity to manage emergency situations. Under the recommended managed risk scenario, it is anticipated that growth would be supported within the third quarter of 2026 (provided key milestones are completed). The amount of growth that could proceed is aligned with the anticipated growth forecasted by Watson & Associates Economists Ltd for the Mannheim Service Area.

Reporting for the interim risk management framework is initially recommended on a quarterly basis. Risk reporting can be integrated into the Council updates for Work Underway for the Mannheim Service Area Water Capacity Constraint.

9. Attachments:

Appendix A: Interim Risk Management Framework – Final Draft Report

Appendix B: Interim Risk Management Framework Presentation

Prepared By: Nicole Sapeta, Senior Engineer (Water), Water and Wastewater Infrastructure Management

Reviewed By: Pam Law, Director, Projects (Water Capacity)

Approved By: Kenneth Brothers, Interim Commissioner, Water and Wastewater Services