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MEMORANDUM

DATE: July 2, 2010
TO: Allen Robtoy, City of St. Albans
FROM: Wayne Elliott, PE *WEL*
RE: Wastewater Treatment Facility
 Uncommitted Reserve Capacity
 FA&A Project 10028

This Memo is in response to the email from James Tischler requesting an update on the available wastewater treatment capacity for the Downtown Board. The questions he asked are as follows:

- Existing wastewater system processing & hydraulic capacity;
- Current usage within the Downtown area;
- Calculation of available capacity for future Downtown growth;

I will provide the information on the wastewater treatment facility hydraulic and organic capacity, but I am unable to address the comments specific to the Downtown area. The current wastewater usage specific to the Downtown area is not readily available. It could be developed by an assessment of metered water usage for the existing properties within this service area but would be a significant effort. To address the question on available capacity for the Downtown growth, the types of new development and uses (residential, commercial, etc.) needs to be provided based on a potential build-out analysis before wastewater flows could be estimated.

The existing treatment facility has a permitted flow (hydraulic) capacity of 4,000,000 gpd. For 2009, the annual average flow is 2,350,000 mgd, and information provided by the City indicated 253,500 gpd for committed allocations. As part of the ongoing study, we are evaluating the current operating conditions and I have attached the actual flow data. As summarized below, approximately 65% (2,350,000 gpd + 253,500 gpd) of the hydraulic capacity is utilized, indicating approximately 1,396,500 gpd in uncommitted reserve capacity.

Permitted Capacity:	4,000,000 gpd
2009 Actual Flows:	2,350,000 gpd
Committed Capacity:	<u>253,500 gpd</u>

Uncommitted Reserve Capacity: 1,396,500 gpd

It should be noted that the actual flows vary from year to year based on weather conditions and that once the treatment capacity approaches 80% of the permitted capacity, then the State can require additional monitoring and future planning for the next level of expansion. If this 80% limit was used as a more conservative approach, then approximately 596,500 gpd is available in uncommitted reserve capacity.



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Upgrades are being completed at the treatment facility to increase the organic capacity of the treatment facility due to recent assessments that indicated that the facility has connected and committed approximately 100% of the 8,000 lbs/day of organic capacity (biochemical oxygen demand). Once these upgrades are completed, the organic capacity will increase from 8,000 to 11,000 lbs/day and will better align with the available hydraulic capacity.

Please call with any questions.