

Update on Proposed Expansion of Millbrook Municipal System Servicing Area

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**Source Protection Committee Meeting
March 10, 2010**



***Fraserville Water Supply
Master Plan Review, 2010
(February, 2010)***

Posted on Township of Cavan Monaghan website:

<http://www.cavanmonaghan.net>



Background

2006 Master Plan (Class Environmental Assessment) completed

- Identified need for a Municipally-owned and operated well to supply water for growth in Fraserville
- Master Plan identified a site for a new municipal well (lot 17, Con 8, Cavan Ward) (Note: one of two Planned systems in TCC Terms of Reference)
- Municipality has since determined that the well is not satisfactory (Note: this Planned system was removed from the SPC's required work)

Township initiated Fraserville Water Supply Master Plan Review (2010) to choose a different water source

- Does not revisit other items identified in 2006 Master Plan (e.g. Planned System on Lansdowne Street identified in the Terms of Reference)

Notice of Filing of Addendum

- The 2010 Review was made available to the public and agencies for a 30-day review period (February 10 to March 12, 2010)
 - If concerns regarding the proposed projects cannot be resolved in discussions with the Municipality within the specified review period, any party may request that the Minister of Environment issue a Part II Order
 - Minister of Environment makes decisions on whether or not to issue Part II Order
 - A Part II Order could require the Municipality to comply with some or all of the provisions of Part II of the Environmental Assessment Act which addresses individual environmental assessments
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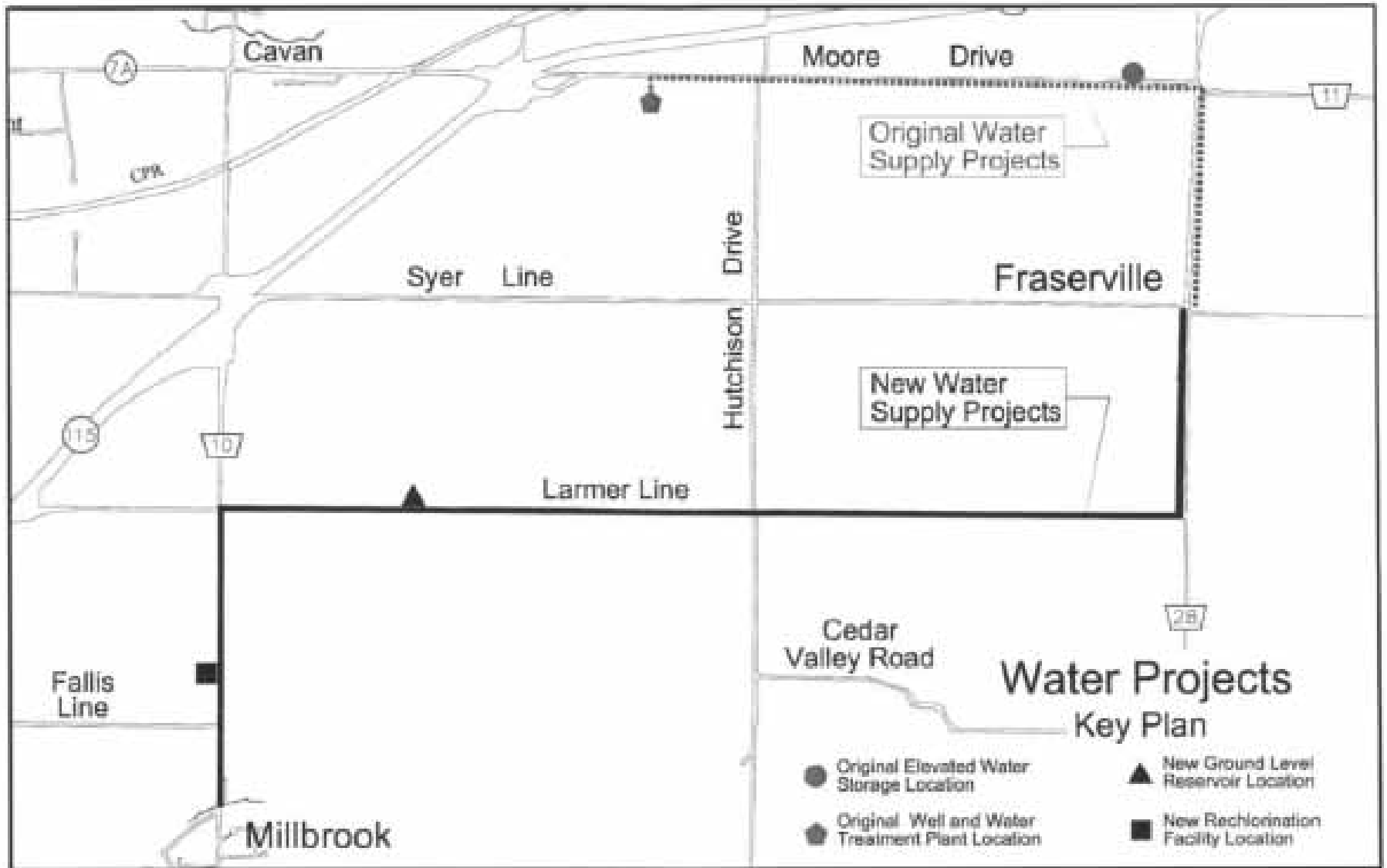
Options Considered

- Otonabee River
- New Well Sites in Study Area
- City of Peterborough
- Municipal Wells in Millbrook
- Do Nothing



Preferred Option Recommended in Study

- Expand the water taking of the existing Municipal wells at Millbrook from their current permitted use of 3,000 m³/day to 5,374 m³/day
- Construct watermain on the selected Larmer Line route to transmit treated water to Fraserville
- Construct an on-ground water reservoir along the watermain route on Larmer Line with a storage volume of 2,273 m³
- Construct a re-chlorination station along the watermain route on County Road 10, when needed
- Expand the existing Municipal water treatment plant at Millbrook from the current permitted capacity of 4,320 m³/day to treat to 5,374 m³/day in the future, as demand requires



Source Protection Considerations: *Increased Pumping Rates*

Water demand for Fraserville & Millbrook	Average day demand	Maximum day demand
Millbrook (2008)	656 m ³ /day	1,147 m ³ /day
Increase for future Millbrook (2031)	415 m ³ /day	727 m ³ /day
Total for Millbrook (2031)	1071 m³/day	1874 m³/day
Increase for future Fraserville (2031)	2,000 m ³ /day	3,500 m ³ /day
Total (2031)	3,071 m³/day	5,374 m³/day

Proposal would expand maximum daily water taking of existing wells from **1874 m³/day** (projected 2031 use) by **3,500 m³/day** to **5,374 m³/day**

Water Quality Risk Assessment

- Potential increase in size of Wellhead Protection Area Zones (B,C, D)
- Potential increase on number of significant threats

Potential Impact on Assessment Report

- Will not be included in Draft Proposed Assessment Report (anticipated this spring)
- Approvals to move forward would be required within next few months to make this change in the updated Assessment Report (June 2011)

Water Quantity Risk Assessment

TIER 1 WATER BUDGET RESULTS: Rice Lake 1 subwatershed	ANNUAL STRESS CALCULATIONS* (Moderate Stress Threshold = 10%)
Water takings (Future condition) for subwatershed used in water budget	5369 m ³ /day
Subwatershed Stress @ Future Condition	2% (<i>water takings would need to increase by 5x or 500% to reach moderate stress</i>)
Amount of projected increase in water taking (+3500 m ³ /day) for subwatershed (due to Fraserville proposal)	5369 m ³ /day to 8869 m ³ /day (up 65%)
*Monthly maximum stress calculations show similar results	

Potential Impact on Assessment Report – *No changes required*

Water takings (across entire subwatershed) will have to increase by 5 times (500%) for this subwatershed to trigger the “moderate stress” threshold. Only a 65% increase anticipated.

No evidence to suggest that the increased in pumping rate would cause a moderate or high stress for the subwatershed in a Tier 1 Water Budget; therefore no Tier 2 study required