

## Rhonda Miller - MVLWB

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**From:** Kathleen Graham [kgraham@mvlwb.com]  
**Sent:** June-17-11 4:26 PM  
**To:** permits@mvlwb.com  
**Subject:** FW: Data for Town of Fort Smith water licence EMAIL #1 of 2- Application of Board Policy to EQC  
**Attachments:** Slave River at Fort Smith Surface Water Quality Data (116 KB); Town of Ft Smith - Sewage data from 567-2 - Oct 2006 to Dec 2009.xls; Slave River at Fitzgerald and Fort Smith Example of Objective Calculations.xls; ph vs ammonia SNP 567-2.xlsx; Town of Fort Smith - picture of sewage outfall 4.jpg; Town of Fort Smith - picture of sewage outfall 1.jpg; Town of Fort Smith - picture of sewage outfall 2.jpg; Town of Fort Smith - picture of sewage outfall 3.jpg; Town of Fort Smith - Quantity of Sewage Discharge from 567-2 - 2006-2009.pdf

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**From:** Kathy Racher - WLWB [mailto:racherk@wlwb.ca]  
**Sent:** Friday, June 17, 2011 3:35 PM  
**To:** 'screeningofficer@eastarm.com'; 'scellis@eastarm.com'; 'jbrennan@yellowknife.ca'; 'rlong@yellowknife.ca'; 'lmandeville@denenation.com'; 'Carolc.lands@gmail.com'; 'imadenegurl@hotmail.com'; 'Rick.Walbourne@dfo-mpo.gc.ca'; 'Sao\_enterprise@northwestel.net'; 'ec.ea.nwt@ec.gc.ca'; 'Frmc53@yahoo.ca'; 'fortsmithmetiscouncil@northwestel.net'; 'Gnwt\_ea@gov.nt.ca'; 'Rhonda\_Batchelor@gov.nt.ca'; 'Patrick\_Clancy@gov.nt.ca'; 'Duane\_Fleming@gov.nt.ca'; 'K\_Johnson@gov.nt.ca'; 'Mark\_Davy@gov.nt.ca'; 'Glen\_Mackay@gov.nt.ca'; 'hrmc@northwestel.net'; 'intergov@inac-ainc.gc.ca'; 'norrissa@inac.gc.ca'; 'consultationsupportunit@inac.gc.ca'; 'james.lawrance@inac.gc.ca'; 'Lorraine.Seale@inac-ainc.gc.ca'; 'Scott.Stewart@inac.gc.ca'; 'Charlene.Coe@inac-ainc.gc.ca'; 'Robert.Jenkins@inac.gc.ca'; 'landsnresources@katlodeeche.com'; 'doraenzoe@yahoo.ca'; 'vchristensen@reviewboard.ca'; 'permits@mvlwb.com'; 'lands@nsma.net'; 'Matthew.Spence@cannor.gc.ca'; 'Kate.Witherly@cannor.gc.ca'; 'ima.nwtmn@northwestel.net'; 'Katherine.Cumming@pc.gc.ca'; 'Gordon.Hamre@pc.gc.ca'; 'ceo@srfn195.com'; 'bblack@fortsmith.ca'; 'molenkamp@hayriver.com'; 'SusanA@wcb.nt.ca'; 'wpfn@northwestel.net'; 'environment@ykdene.com'; 'tslack@ykdene.com'; 'esangris@ykdene.com'; 'ttsetta@ykdene.com'  
**Cc:** 'Amanda Gauthier - MVLWB'; 'permits@mvlwb.com'; 'Angela Plautz - MVLWB'; 'Kathleen Graham'  
**Subject:** Data for Town of Fort Smith water licence EMAIL #1 of 2- Application of Board Policy to EQC

As discussed, here is all of information/data that will be needed for Golder Associates to complete its recommendations (as per request from the MVLWB dated June 15, 2011) regarding application of the Water and Effluent Management Policy to the water licence of the Town of Fort Smith. If you require anything further, please contact Kathy Racher at 867-765-4591. Please note that there are 9 attachments to this email. A tenth attachment will follow in a second email.

1. Water and Effluent Quality Management Policy: [http://www.mvlwb.ca/WGDocs/MVLWB-Water\\_Effluent\\_Quality\\_Policy-Mar2011.pdf](http://www.mvlwb.ca/WGDocs/MVLWB-Water_Effluent_Quality_Policy-Mar2011.pdf)
2. Current Town of Fort Smith Water Licence (MV2003L3-0006):  
[http://www.mvlwb.ca/mv/Registry/2003/MV2003L3-0006/MV2003L3-0006\\_TypeA\\_WL\\_FortSmith-Dec03.pdf](http://www.mvlwb.ca/mv/Registry/2003/MV2003L3-0006/MV2003L3-0006_TypeA_WL_FortSmith-Dec03.pdf)
3. Current Town of Fort Smith Water Licence Reasons for Decision:  
[http://www.mvlwb.ca/mv/Registry/2003/MV2003L3-0006/MV03L3-06\\_Reasons\\_For\\_Decision.pdf](http://www.mvlwb.ca/mv/Registry/2003/MV2003L3-0006/MV03L3-06_Reasons_For_Decision.pdf)
4. Town of Fort Smith Water Licence Renewal Background Report (summarized description of municipal infrastructure): <http://www.mvlwb.ca/mv/Registry/2011/MV2011L3-0001/MV2011L3-0001%20-%20Water%20Licence%20Renewal%20-%20Background%20Report%20-%20Vol.1%20-%20Feb04-11.pdf>
5. Water Quality Data for Slave River at Fort Smith (station is upstream of sewage outfall, but downstream of the Rapids of the Drowned) from INAC in Excel format: see attached
6. Sewage outfall water quality (SNP station 567-2) – raw data for TSS, pH, BOD, NH3, and Fecal Coliforms from 2006 to present plus graphs of data by parameter: see attached
7. pH versus Ammonia at SNP station 567-2: see attached
8. Summary of water quality data for Slave River at Fitzgerald and at Fort Smith: see attached
9. Quantity of sewage discharged from SNP 567-2 into Slave River from 2006-2009: see attached

10. Pictures of the sewage outfall for the Town of Fort Smith: see attached
11. Hydrometric Data for Slave River from INAC in Excel format: Attached to EMAIL #2 of 2

Kathleen Racher, Ph. D.,  
Technical Director  
Wek'eezhii Land and Water Board  
Tel: 867-765-4591  
Fax: 867-765-4593  
[racherk@wlwb.ca](mailto:racherk@wlwb.ca)



The effluent from the Waste Water Lagoon station 567-2 measured from the discharge weir.

| Date      | Volume / m3 |
|-----------|-------------|
| January   | 20,630 m3   |
| February  | 19,299 m3   |
| March     | 20,630 m3   |
| April     | 19,964 m3   |
| May       | 20,630 m3   |
| June      | 15,487 m3   |
| July      | 20,630 m3   |
| August    | 26,014 m3   |
| September | 19,624 m3   |
| October   | 23,209 m3   |
| November  | 19,964 m3   |
| December  | 23,209 m3   |

2009  
For + Smith

- \* Total - 249,209 m3
- \* 4.2 % Increase from 2008.

Laboratory reports for station 567-2 are as follows;

| Date         | P.H  | TSS     | Ammonia as N | Fecal Coliform   | BODS     |
|--------------|------|---------|--------------|------------------|----------|
| January 05   | 7.03 | 20 mg/l | 45.7 mg/l    | 142000 cfu/100ml | 128 mg/l |
| February 10  | 6.96 | 28 mg/l | 51.0 mg/l    | 116000 cfu/100ml | 172 mg/l |
| March 02     | 6.88 | 30 mg/l | 46.6 mg/l    | 119000 cfu/100ml | 146 mg/l |
| April 06     | 6.92 | 28 mg/l | 45.7 mg/l    | 104000 cfu/100ml | 159 mg/l |
| May 05       | 6.96 | 22 mg/l | 40.9 mg/l    | 61000 cfu/100ml  | 138 mg/l |
| June 02      | 7.62 | 46mg/l  | 30.6 mg/l    | 1900 cfu/100ml   | 45 mg/l  |
| July 07      | 7.82 | 65 mg/l | 17.6 mg/l    | 2000 cfu/100ml   | 46 mg/l  |
| August 11    | 7.53 | 68 mg/l | N/A mg/l     | 850 cfu/100ml    | 29 mg/l  |
| September 09 | 7.49 | 36 mg/l | N/A mg/l     | 4100 cfu/100ml   | 28 mg/l  |
| October 05   | 7.60 | 20 mg/l | 16.2 mg/l    | 7400 cfu/100ml   | 33 mg/l  |
| November 17  | 7.16 | 26 mg/l | 34.7 mg/l    | 122000 cfu/100ml | 76 mg/l  |
| December 15  | 6.98 | 26 mg/l | 46.5 mg/l    | 122000 cfu/100ml | 144 mg/l |

The amount of treated water produced from station 567-1 which was used by the community of Fort Smith and raw water taken from the Slave River.

| <b>Raw Water</b>     | <b>Potable Water</b> |
|----------------------|----------------------|
| Jan - 24,618 m3      | Jan. - 23,993 m3     |
| Feb - 23,176 m3      | Feb - 22,687 m3      |
| Mar - 23,846 m3      | Mar - 23,145 m3      |
| Apr - 29,245 m3      | Apr - 22,857 m3      |
| May - 32,927 m3      | May - 26,060 m3      |
| June - 40,228 m3     | Jun - 26,825 m3      |
| July - 46,958 m3     | Jul - 29,738 m3      |
| Aug - 44,024 m3      | Aug - 25,916 m3      |
| Sept - 29,913 m3     | Sep - 21,217 m3      |
| Oct - 23,502 m3      | Oct - 22,073 m3      |
| Nov - 20,313 m3      | Nov - 20,095 m3      |
| Dec - 22,199 m3      | Dec - 22,492 m3      |
| * Total = 360,949 m3 | * Total = 286,744 m3 |

\* 6.7 % Decrease from 2007

\* 9.5 % Decrease from 2007.

The effluent from the Waste Water Lagoon station 567-2 measured from the discharge weir.

Jan - 20,630 m3  
 Feb - 19,299 m3  
 Mar - 20,630 m3  
 Apr - 19,964 m3  
 May - 20,630 m3  
 Jun - 15,487 m3  
 Jul - 18,203 m3  
 Aug - 18,203 m3  
 Sep - 19,964 m3  
 Oct - 23,209 m3  
 Nov - 22,460 m3  
 Dec - 20,630 m3  
 \* Total - 239,309 m3

Fort Smith  
2008

\* 8.1 % Decrease from 2007.

Laboratory reports for station 567-2 are as follows



The amount of treated water produced from station 567-1 which was used by the community of Fort Smith and raw water taken from the Slave River.

| Raw Water            | Potable Water        |
|----------------------|----------------------|
| Jan - 24,216 m3      | Jan. - 22,962 m3     |
| Feb - 24,404 m3      | Feb - 22,473 m3      |
| Mar - 24,694 m3      | Mar - 23,102 m3      |
| Apr - 29,107 m3      | Apr - 24,370 m3      |
| May - 31,587 m3      | May - 30,090 m3      |
| June - 49,439 m3     | Jun - 39,716 m3      |
| July - 48,030 m3     | Jul - 32,433 m3      |
| Aug - 37,733 m3      | Aug - 24,870 m3      |
| Sept - 39,794 m3     | Sep - 22,966 m3      |
| Oct - 26,051 m3      | Oct - 24,328 m3      |
| Nov - 25,726 m3      | Nov - 24,644 m3      |
| Dec - 24,703 m3      | Dec - 24,993 m3      |
| * Total = 385,484 m3 | * Total = 316,887 m3 |

\* .01 % increase from 2006

\* 1.6 % increase from 2006.

The effluent from the Waste Water Lagoon station 567-2 measured from the discharge weir.

|                      |
|----------------------|
| Jan - 26,014 m3      |
| Feb - 23,963 m3      |
| Mar - 26,014 m3      |
| Apr - 24,175 m3      |
| May - 20,630 m3      |
| Jun - 19,964 m3      |
| Jul - 18,197 m3      |
| Aug - 16,003 m3      |
| Sep - 19,950 m3      |
| Oct - 20,630 m3      |
| Nov - 19,964 m3      |
| Dec - 23,209 m3      |
| * Total - 258,713 m3 |

Fort Smith  
2007

\* 1.6 % increase from 2006.

Laboratory reports for station 567-2 are as follows

The amount of treated water produced from station 567-1 which was used by the community of Fort Smith and raw water taken from the Slave River.

| <b>Raw Water</b>     | <b>Potable Water</b> |
|----------------------|----------------------|
| Jan - 23,241 m3      | Jan. - 21,346 m3     |
| Feb - 21,190 m3      | Feb - 19,655 m3      |
| Mar - 25,394 m3      | Mar - 23,768 m3      |
| Apr - 29,971 m3      | Apr - 23,395 m3      |
| May - 32,826 m3      | May - 27,494 m3      |
| June - 48,554 m3     | Jun - 34,867 m3      |
| July - 48,030 m3     | Jul - 34,561 m3      |
| Aug - 41,524 m3      | Aug - 28,386 m3      |
| Sept - 43,777 m3     | Sep - 29,020 m3      |
| Oct - 24,857 m3      | Oct - 23,575 m3      |
| Nov - 22,378 m3      | Nov - 21,980 m3      |
| Dec - 23,700 m3      | Dec - 23,130 m3      |
| * Total = 385,445 m3 | * Total = 311,577 m3 |

\* 1 % decrease from 2005

\* 1.8 % decrease from 2005.

The effluent from the Waste Water Lagoon station 567-2 measured from the discharge weir.

|                      |
|----------------------|
| Jan - 20,630 m3      |
| Feb - 23,497 m3      |
| Mar - 20,630 m3      |
| Apr - 23,175 m3      |
| May - 20,630 m3      |
| Jun - 19,964 m3      |
| Jul - 18,203 m3      |
| Aug - 23,188 m3      |
| Sep - 25,175 m3      |
| Oct - 20,630 m3      |
| Nov - 24,038 m3      |
| Dec - 23,209 m3      |
| * Total - 262,969 m3 |

\* 9 % increase from 2005.

Laboratory reports for station 567-2 are as follows

Fort Smith  
2006















