



MEETING NOTES

subject: **LWMP - Combined Committee Meeting**
date: April 18, 2011
meeting date: March 16, 2011
location: Vernon City Hall - Okanagan Room
file: 1085.0027.01
prepared by: Megan Rave
distribution: all attendees and Committee Members

attendees

City of Vernon

Greg Thompson (GT)
Brooke Marshall (BM)
Shirley Koenig (SK)
Mark Dowhaniuk (MD)
Andrew Marr (AM)

company

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City of Vernon
City of Vernon
City of Vernon

Consultants

Dan Huang (DH)
Ehren Lee (EL)
Peter Gigliotti (PG)
Joanne de Vries (JdV)
Megan Rave (MRa)

Urban Systems Ltd.
Urban Systems Ltd.
Urban Systems Ltd.
Alliance Communications
Urban Systems Ltd.

Technical Advisory Committee

Mary Joe O'Keefe(MjOK)
Alanna Dean (AD)
Casey Neathway (CN)
Edwin Chan (EC)
Vic Jensen (VJ)
Mike Reiner (MRe)
Mike Carlson (MC)
Dale Danellanko (DD)

City of Vernon Councillor
District of Coldstream
Interior Health
Interior Health
Ministry of Environment
Ministry of Environment
Ministry of Forest and Range
Regional District of North Okanagan

Local Advisory Committee

Garry Haas (GH)
Harold Sellers (HS)
Huguette Allen (HA)
Jaime Dickinson (JD)
Jennifer Miles (JM)
Jim Bodkin (JB)
Les Townsend (LT)
William Morrison (WM)

North Okanagan Naturalists Club
SENS
City of Vernon Envir. Adv. Comm.

Okanagan Spring Brewery

Absent

Martin Collins
Ted McRae
Catriona Weidman
Frank Gelinis
Kevin Murphy
Bruce Runciman
Chris Van der Molen
Jason Kelder

Agricultural Land Commission
Ministry of Forests and Range
Ministry of Community and Rural Affairs
Okanagan Indian Band
Ministry of Agriculture and Lands
Department of Fisheries and Oceans
Grass Hoppers Lawn and Garden Centre
Urban Development Institute



<u>ITEM</u>	<u>DISCUSSION</u>	<u>ACTION BY</u>
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1.0	MEETING FORMAT	
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A series of slide presentations were conducted under 5 categories:

1. Sewage Collection System
2. Sewage Treatment System
3. Biosolids Processing
4. Reclaimed Water Reuse System
5. Stormwater System

Each category was presented with the Overview of Concerns, as well as the Ideas for dealing with the concerns which were expressed in previous TAC / LAC meetings. The Committee members were asked to comment on the concerns and the ideas, and bring forward any additional concerns and ideas.

The slides for each section are included in these notes for the benefit of those who did not attend, followed by the members' comments under each category.

Sewage Collection System



Overview

- Over 220 km of piped system (gravity and forcemain) throughout the City
- Current system services majority of residents / businesses in Vernon
- Includes parts of the District of Coldstream – shared services agreement

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Sewage Collection System



Concerns

1. Age and condition of collection system
2. Contribution of Inflow and Infiltration (I & I)
3. Hydraulic capacity of collection system to accommodate projected growth
4. Submarine trunk sewer in Okanagan Lake
5. Efficiency of the pumping system and its energy consumption
6. Potential for gas/odour formation in the collection system
7. Sewer agreement with the District of Coldstream
8. Timing and potential costs to connect properties currently on septic systems
9. Sewer extensions to new areas through/adjacent to ALR lands

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Sewage Collection System



Ideas

- Current system is best for collecting community sewage and protecting environment; however, water conservation/reuse should be encouraged
- Asset Management program to address age/condition issues through long-term capital replacement and refurbishment
- Monitoring program (e.g. flow meters, video camera) to manage flow, determine and fix I&I issues, address collection system odour issues, and measure and improve energy efficiency
- Hydraulic capacity issues to accommodate growth to be addressed through the Sewer DCC (Development Cost Charge) program, upgraded as required

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Sewage Collection System



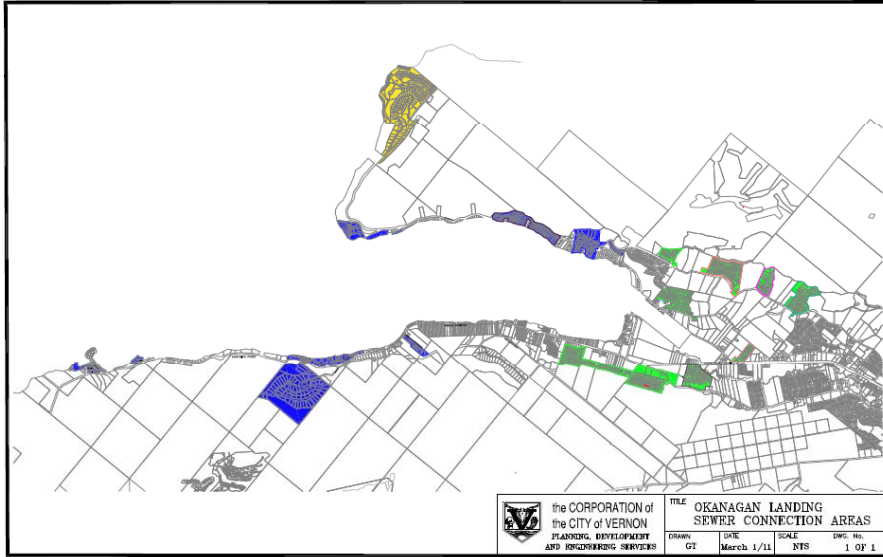
Ideas

- Submarine trunk in Okanagan Lake being addressed by City, eventually to be replaced by Tronson Road forcemain
- Sewer agreement with Coldstream recently updated; monitor flows and continue dialogue regarding land use to ensure that the collection system can accommodate future growth in Coldstream
- Create long-term plan to connect existing non-sewered areas, as appropriate; priority areas would be developed areas with relatively high environmental impact (e.g. near watercourses or environmentally sensitive areas)

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Sewage Collection System

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2.0 COMMENTS ON SEWAGE COLLECTION SYSTEM

2.1 Additional Concerns

There is currently no time limit for hooking up to a sewage collection system in new Local Service Areas.

Canadian Lakeview Estates status is unknown – is it hooked up to a central plant?

What are the environmental risks of areas that are currently on septic tank systems.

Infiltration and Inflow from service connections – is it significant?

2.2 Additional Ideas

Establish and enforce time limits for hook-up in new Local Service Areas.

City will negotiate with Canadian Lakeview Estates at time of potential ownership.

Enforce low flow fixtures bylaw in new developments.

Prioritize service areas based on risk.

Examine RDNO Regional Growth Strategy for areas of potential growth.

Install inspection chambers in new service connections. Consider retrofit of inspection chambers in existing services to facilitate video inspection.

Sewage Treatment System

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Concerns

- | | |
|------------------|------------------------|
| 1. Brewery Waste | 5. Cost of BNR |
| 2. Trucked Waste | 6. Odours |
| 3. Sani-Dumps | 7. Standby Power |
| 4. "The Rise" | 8. Long Term Expansion |

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Sewage Treatment System

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1. Brewery Waste

Ideas

- Raise Tariffs
- Pre-treat at Brewery
- Pre-treat at VWRC
- Dedicated pipe to separate treatment

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Sewage Treatment System



2. Trucked Waste

Ideas

- Improve Vigilance
- Require manifest
- Relocate to VWRC
- Relocate to Ogo-Grow site

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3. Sani-Dumps

Ideas

- Improve Vigilance
- Search for new location

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4. "The Rise"

Ideas

- Investigate supply from McKay Reservoir

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5. Cost of BNR

Ideas

- Convert back to conventional
- Consider periodic lake discharge without P removal

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Sewage Treatment System



6. Odours

Options

- Ensure continued management



Sewage Treatment System



7. Standby Power

Options

- Add generators
- Increase storage



Sewage Treatment System



8. Long Term Expansion

Options

- Reduce water consumption
- In-house re-use
- Smaller footprint reactors
- New site at Marshall fields

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3.0 COMMENTS ON SEWAGE TREATMENT SYSTEM

3.1 Additional Concerns

No additional concerns.

3.2 Additional Ideas

Work with the brewery to separate re-usable products such as hops for cattle feed (possibly already being done).

City has embarked in a joint study with the brewery to examine options for dealing with brewery wastewater.

Some members favour re-location of the trucked waste facility to the VWRC site for improved supervision and operation.

Some members favour a single supervised Sani-Dump site at a convenient location

What is the potential to increase treatment levels to return effluent to the potable water system? There is currently no legislation which would allow this. MoE will consider proposals for return of effluent to a non-potable water network.

MoE will consider options for lake discharge. One option could include a specified period of discharge for all the flow if this could guarantee that no other discharges would occur for the remainder of the year.

The cost of re-configuring the plant process to conventional (non-BNR) is considered wasteful.

Examine more efficient processes in the long term to avoid moving to a new site. Make the best use of the existing VWRC site.

Biosolids Processing

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Liquid Waste Management Plan - Stage 1



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Biosolids Processing


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Concerns

1. Diversion to Landfill
2. Acceptability of Product
3. Odours
4. Costs
5. Long-term Security
6. Visual Screening

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Biosolids Processing




1. Diversion to Landfill

Ideas

- Diversion has stopped





Biosolids Processing




2. Acceptability

Ideas

- Ensure conformance to feedstock requirements
- Discussion with City of Vernon




Biosolids Processing




3. Odours

Ideas

- Conduct odour survey
- Formalize odour management




Biosolids Processing




4. Costs

Ideas

- Optimize operations
- Increase marketing efforts




Biosolids Processing



5. Long-term Security


Ideas

- Partnering with Kelowna for product promotion



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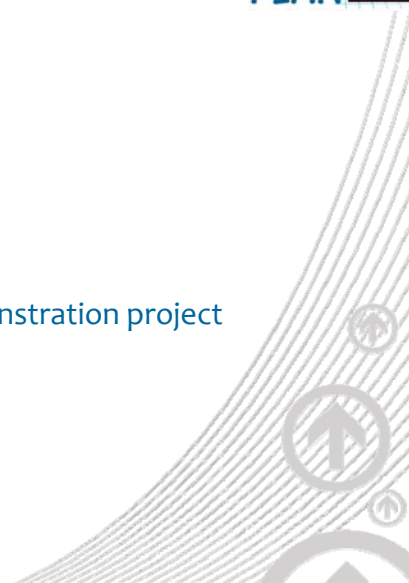
Biosolids Processing



6. Visual Screening

Ideas

- Tree Planting – demonstration project



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Biosolids Processing

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4.0 COMMENTS ON BIOSOLIDS PROCESSING

4.1 Additional Concerns

Transportation and the issues relating to truck traffic and for potential spills.

Lack of public education on the compost product (Ogo-Grow).

Is there an issue with micro-constituents (heavy metals, pharmaceuticals) in the compost product?

4.2 Additional Ideas

Can yard waste be used for composting biosolids? Not recommended – only woody material (chips) with a high Carbon content is recommended. Soft yard waste such as grass clippings are composted separately.

Provide biosolids education in school programs.

Promote wider use of Ogo-Grown in gardens.

Stop using water to convey waste – promote composting toilets; avoid pharmaceuticals in the wastewater stream.

Is it possible to integrate solid waste processing and biosolids processing?

Consider broader resource recovery strategies.

What are the GHG emissions from the composting process?

Use the compost product to plant and grow trees around the site.

Reclaimed Water Reuse System

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Overview

- The Spray Irrigation Program has 33 years of experience
- Annual effluent production is 4.66 Billion liters
- Applied to land through Agreements (primary)
- Some loss of land in recent years
- “Beneficial reuse of water”

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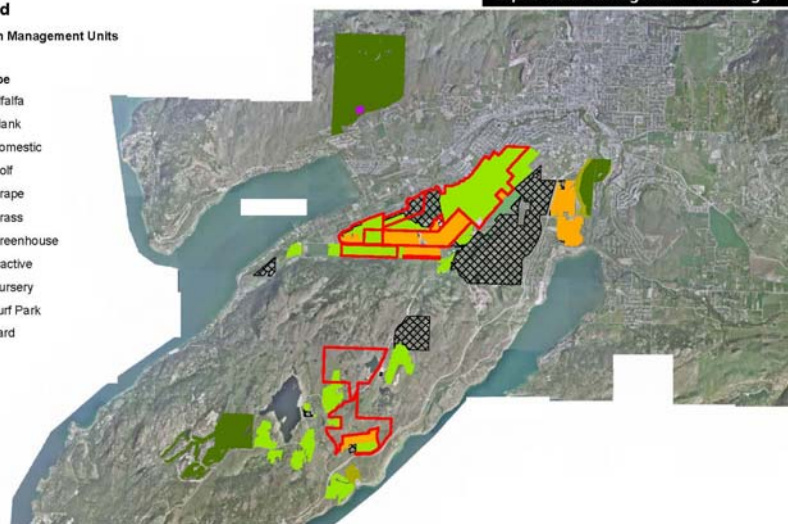
Reclaimed Water Reuse System

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Legend

Irrigation Management Units

- | | |
|---|------------|
|  | Blank |
|  | Alfalfa |
|  | Domestic |
|  | Golf |
|  | Grape |
|  | Grass |
|  | Greenhouse |
|  | Inactive |
|  | Nursery |
|  | Turf Park |
|  | Yard |



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Reclaimed Water Reuse System

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Concerns

1. Operating Costs
2. Land Base Requirements
3. Over Application Risks
4. Long-term effects on soils
5. Mackay Reservoir
6. Standby Power
7. Lake Discharge

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Reclaimed Water Reuse System

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1. The Operating Costs (Energy and Infrastructure)

Ideas

- More irrigation at lower levels
- Multiple grades of effluent (reduce treatment)
- Grey water reuse
- Allow for greater portion of lake discharge
- Develop a separate Utility (self sufficient)

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Reclaimed Water Reuse System

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2. Land Base Requirements

(more needed and how much is uncertain)

Ideas

- Conservation / Reuse
- Lake Discharge
- Change crop type to increase need (strategy)
- New land agreements e.g. Coldstream Ranch
- Create wetlands

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Reclaimed Water Reuse System

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3. Over Application Risks


(seepage and erosion)

Ideas

- Investigate hydrology and hydrogeology
- Closely monitor application and climate

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Reclaimed Water Reuse System


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4. Long-term Effects on Soils

(salts and nutrient loss)


Ideas

- Monitor soils
- Create remediation plans
- Additives to Reclaimed Water



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Reclaimed Water Reuse System


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5. Mackay Reservoir

(size and reliability of storage)


Ideas

- Review condition and determine risks
- Confirm long term storage needs



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Reclaimed Water Reuse System


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6. Standby Power

(pumps down)


Ideas

- Determine costs of standby power
- Increase storage near VWRC to store through an event
- Develop on-site power



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Reclaimed Water Reuse System

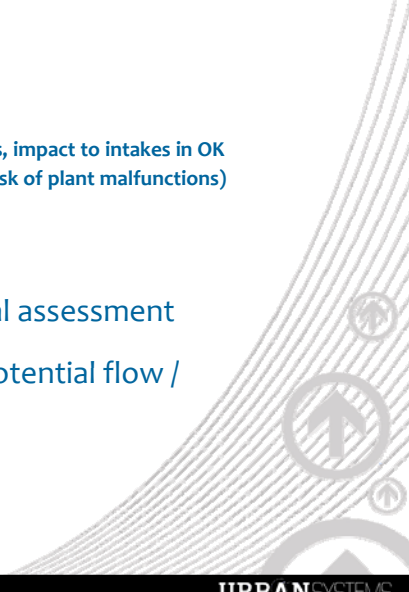
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7. Lake Discharge

(“unknowns”: fish, pharmaceuticals, impact to intakes in OK Lake, loss of beneficial re-use and risk of plant malfunctions)

Ideas

- Complete environmental assessment
- Determine amount of potential flow / discharge



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5.0 COMMENTS ON RECLAIMED WATER REUSE SYSTEM

5.1 Additional Concerns

Is reclaimed water priced properly?

Is there sufficient land (for irrigation) for the long term?

Is there any concern over aquifer contamination?

Quality of water on McKay reservoir shoreline; is it a concern?

What are the impediments to outfall use?

Is there sufficient monitoring to identify problems before they become serious?

5.2 Additional Ideas

Review reclaimed water pricing (Council has endorsed an increase of 6 to 7% per year).

Investigate further the Coldstream Ranch option for irrigation expansion.

Investigate connection to the Duteau Creek raw water pipeline (the pipeline plan is completed and should be available from Al Coxworth).

MoE suggested that the Operating Certificate (O.C.) could be modified to allow all the flow through the outfall for a limited time seasonally. Consider amending the O.C. accordingly.

Recommend greater collaboration with RDNO and Coldstream regarding irrigation opportunities.

Stormwater System

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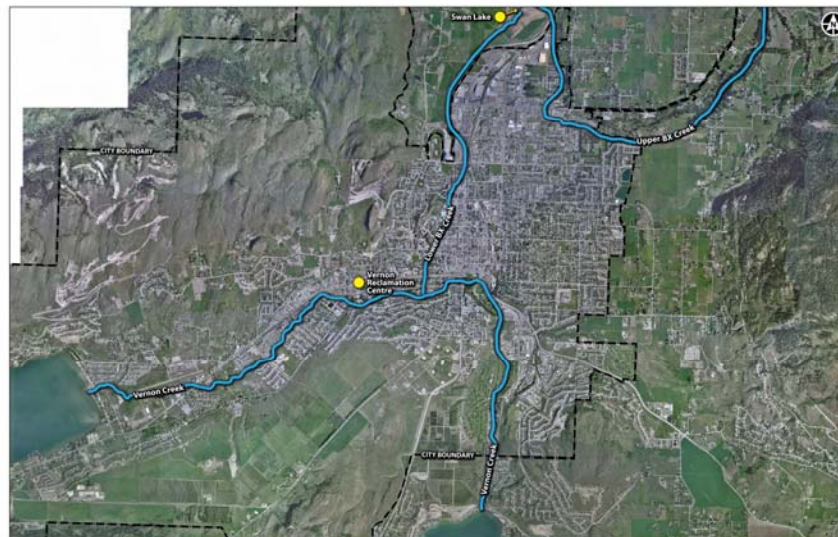
Overview

- LWMPs are to manage liquid wastes and reduce pollutant loading
- 2 lenses include sanitary and stormwater
- Best practices implemented pre-LWMP
- Runoff issues have been grouped into 3

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Stormwater System

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Stormwater System



Concerns

1. Relatively unknown sources and amounts of contamination
2. High runoff and volumes
3. Pollution of lakes and creeks

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1. Relatively Unknown Sources & Amounts of Contamination

(bacteria, total suspended solids, phosphorous, CL_2 , metals)

Ideas

- Reduce hard surfaces
- More quality monitoring
- Hold back runoff & infiltrate
- Store & treat on-site
- More street sweeping and maintenance
- More BMPs for Construction

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Stormwater System



2. High Runoff and Volumes

(impervious surface and direct discharge)

Ideas

- Reduce hard surfaces
- Use porous paving
- Disconnect roof leaders
- More BMPs for Construction
- Holdback runoff and infiltrate
- Store / attenuate on-site
- Update City's Bylaws and Building Standards
- Urban Re-use

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Stormwater System



3. Pollution of Lakes and Creeks

(contaminants, loss of riparian areas and fish habitat issues)

Ideas

- “All of the Above, Plus...”
- Bylaw updates
- Increase awareness by all citizens
- Create incentive programs for innovation during development
- Develop new ways to fund environmental improvements
- Enhance existing Riparian Areas
- Restore Riparian Areas over time

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6.0 COMMENTS ON STORMWATER SYSTEM

6.1 Additional Concerns

Is street sweeping adding to the problem?

Are there standards for site vegetation and site development?

Is there a risk to application of salt on the roads during the winter?

Are pesticides a problem with runoff?

How do capital works get funded?

6.2 Additional Ideas

Create a landscape standards bylaw.

Ban pesticide use.

Review and update the City's salt management plan.

Create a stormwater utility.

MoE has new guidance documents for stormwater.

Reference to provincial "water bucket" and provincial standards and tools.

Use a vacuum for street sweeping.

The preceding is the writer's interpretation of the proceedings and any discrepancies and/or omissions should be reported to the writer.

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Megan Rave

/mr

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