Summary of Winnipeg's Plan to Improve Wastewater Treatment

Summary of Plan

Outline

- Plan to Improve
- Major Considerations
- Plan Elements
- Financial Considerations
- Options and Implementation

Summary of Plan

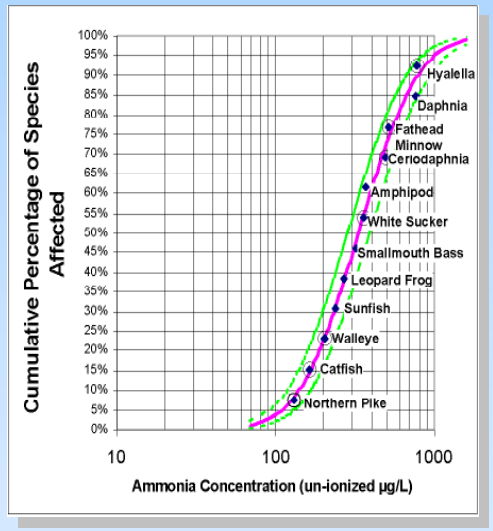
Plan to Improve

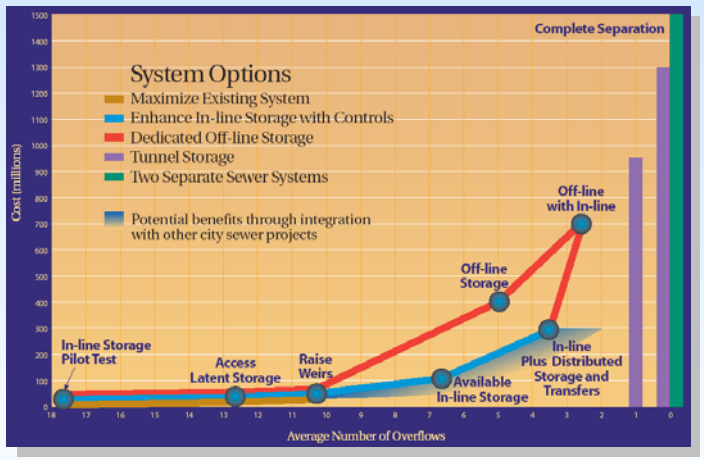
- City has presented plans on:
  1. Effluent Limits for the Water Pollution Control Centres
  2. Effluent Ammonia Reduction
  3. Combined Sewer Overflow Control
  4. Nutrients in Effluent Discharges
  5. Wastewater System Reliability

Summary of Plan

Major considerations

- Address the issues of disinfection, CSOs, Ammonia, nutrients, effluent limits, reliability.
- Provide a scientific basis for action.
- Provide a schedule of implementation.
- Provide for the operation, maintenance and eventual replacement of assets.
- Provide the required financial resources to carry out the plan.





Summary of Plan

Plan Elements:

- Disinfection and ammonia reduction (centrate) are priorities.
- Disinfection at the WEWPCC can be deferred indefinitely.
- Long-term CSO control strategy to achieve a target of 4 overflows.
- Allows for a new biosolids management system.
- 40 to 45 year program must be flexible to deal with major uncertainties with future program.
- Allows for long-term nutrient control
- Additional research, studies, monitoring, dialogue with the Regulator, and public consultation to be conducted in next 10 years to better assess needs, timing, and costs of future actions.

Summary of Plan

Plan Elements:

Component	Capital $ (Million)	Year Started	Year Completed
NEWPCC Disinfection	**$ 15**	2003	2004
Centrate Ammonia Treatment at NEWPCC	**$ 10**	2003	2004
CSO Control Program			
(Stage Ia) - SCADA, Demo, Weirs	**$ 14**	2003	2005
(Stage Ib) - Integrate with BFR	**$ 26**	2005	2043
(Stage II) - In line storage	$ 50	2028	2033
(Stage III) - Additional storage	$ 181	2033	2050
WEWPCC Disinfection	$ 3	2050	2051
Effluent Nutrient Control			
NEWPCC	$ 127	2019	2022
SEWPCC	$ 47	2022	2025
WEWPCC	$ 7	2025	2026
Sub-Total	**$480**		
Biosolids Program			
(Stage I) - Pelletization and Storage	**$ 30**	2007	2010
(Stage II) - Thermophilic conversion	$ 20	2012	2014
TOTAL	**$530**		

- Approximately **$75 Million** to be supported by EPR in next 10 years

Summary of Plan

Financial Considerations

- Capital funding from EPR, $7 million/year for first 10 years
- Preserves “pay-as-you-go” as much as possible for first 10 years
- Wastewater improvements will not delay water treatment plant
- Increase to the EPR will be necessary after ten years
- Need to add inflation to meet timeframes

Annual EPR (Millions)	Timeframe (Years)
$7.0	2003 to 2012
$14.0	2013 to 2022
$21.0	2023 to 2032

Summary of Plan

Options and Implementation

- A commitment to a higher (or lower) degree of control for:
  - Ammonia
  - CSOs
  - Nutrients
- Make improvements at a faster (or slower) rate
  - Increase EPR sooner to $14 or $21 Million per year