

Watershed-wide Wastewater Optimization Pilot Project For the Grand River

Presented at the A. D. Latornell Conservation Symposium

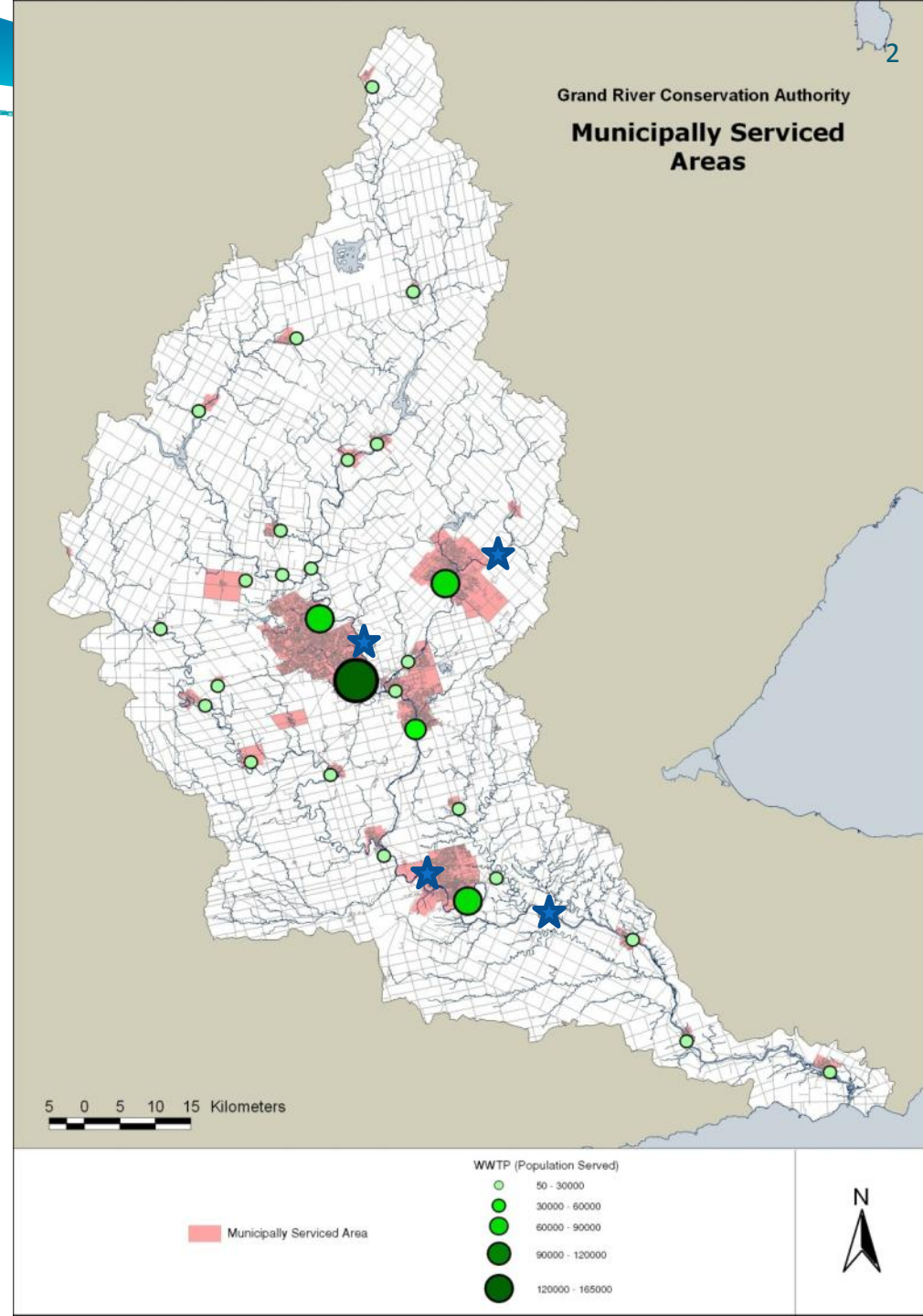
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Grand River Conservation Authority

17 November 2011

Background

- Best Practices for Spills & Bypasses report recommendation
- Funding from Source Protection ODSF



What is optimization?



Continuous improvement process to make effective use of existing resources and infrastructure to meet defined goals, e.g. improved effluent quality to reduce environmental impact.

Composite Correction Program

Optimized Performance Goals
e.g. economical, high quality effluent

Operations (Process Control)

Capable Plant

Administration

Design

Maintenance



CCP Leaders in Our Watershed

- City of Guelph (started CCP in 2005)
 - Numerous performance limiting factors but significant latent capacity
 - Cultural shift to focus on performance and bridging the knowing-doing gap
 - Deferral of \$20 million expansion



CCP Leaders in Our Watershed

- Haldimand County (started CCP in 2008)
 - Quantified industrial loads to some WWTPs, latent capacity was found, redirected \$20m in capital upgrades
 - County staff gained understanding of WWTP operation and capabilities, better position for strategic planning



Watershed Wastewater Optimization Pilot

- Steering Committee was formed
 - GRCA
 - City of Guelph
 - Haldimand County
 - City of Hamilton
 - MOE Program Services Section
- Dave Chapman, CPO Inc. was hired as the Optimization Steward



Pilot Project Objectives

- Enhance collaboration and knowledge sharing
- Conduct workshops on the goals and benefits of optimization
- Develop facilitation skills through hands-on learning
- Identify candidate WWTPs for optimized performance



Collaboration and knowledge sharing

- Workshops engaged operators, supervisors and managers from across the watershed
- Performance-based training model
- Peer facilitation support provided
- Created a watershed community of practice
- MOE / EC Staff Briefing

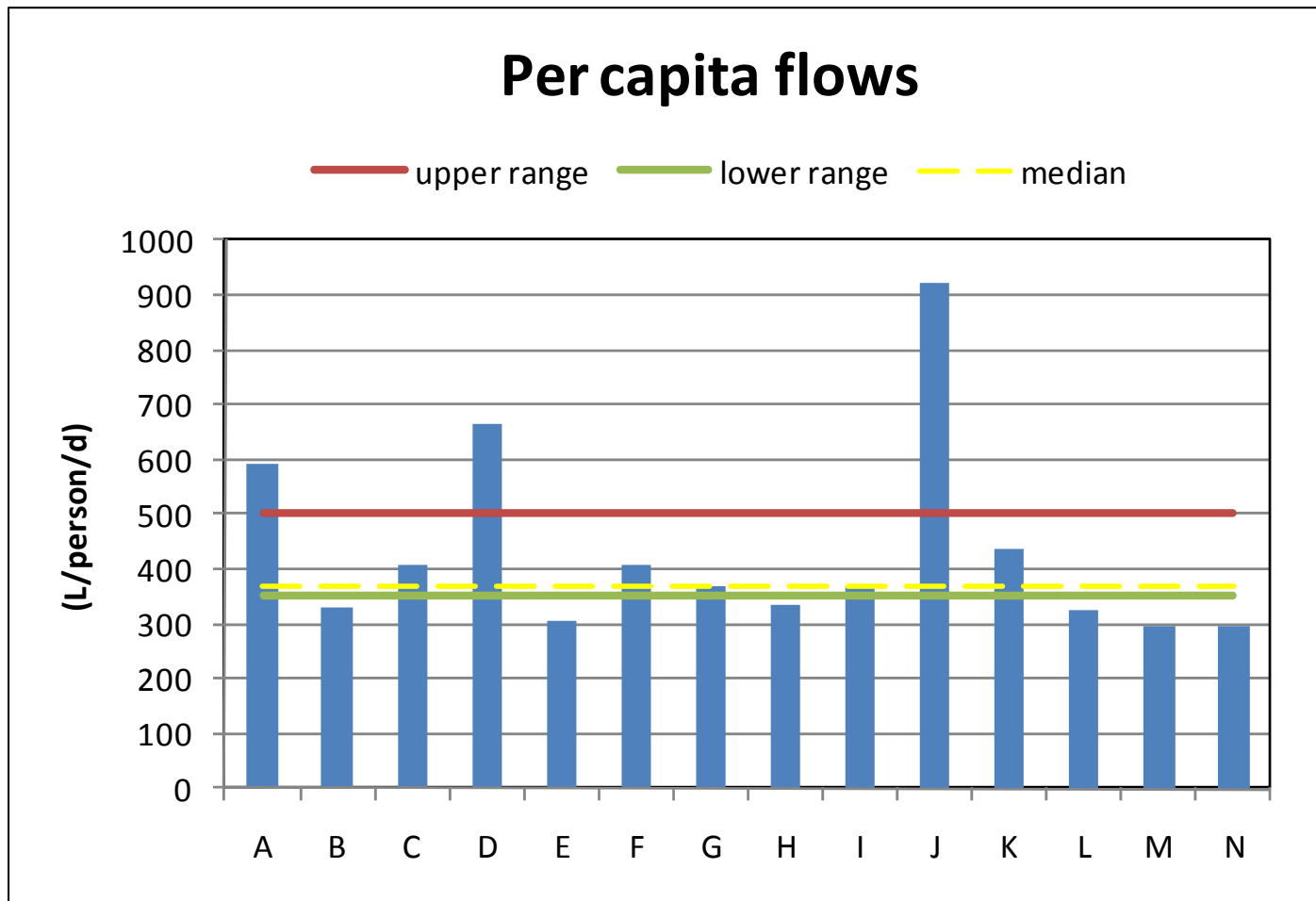


Workshop Participation

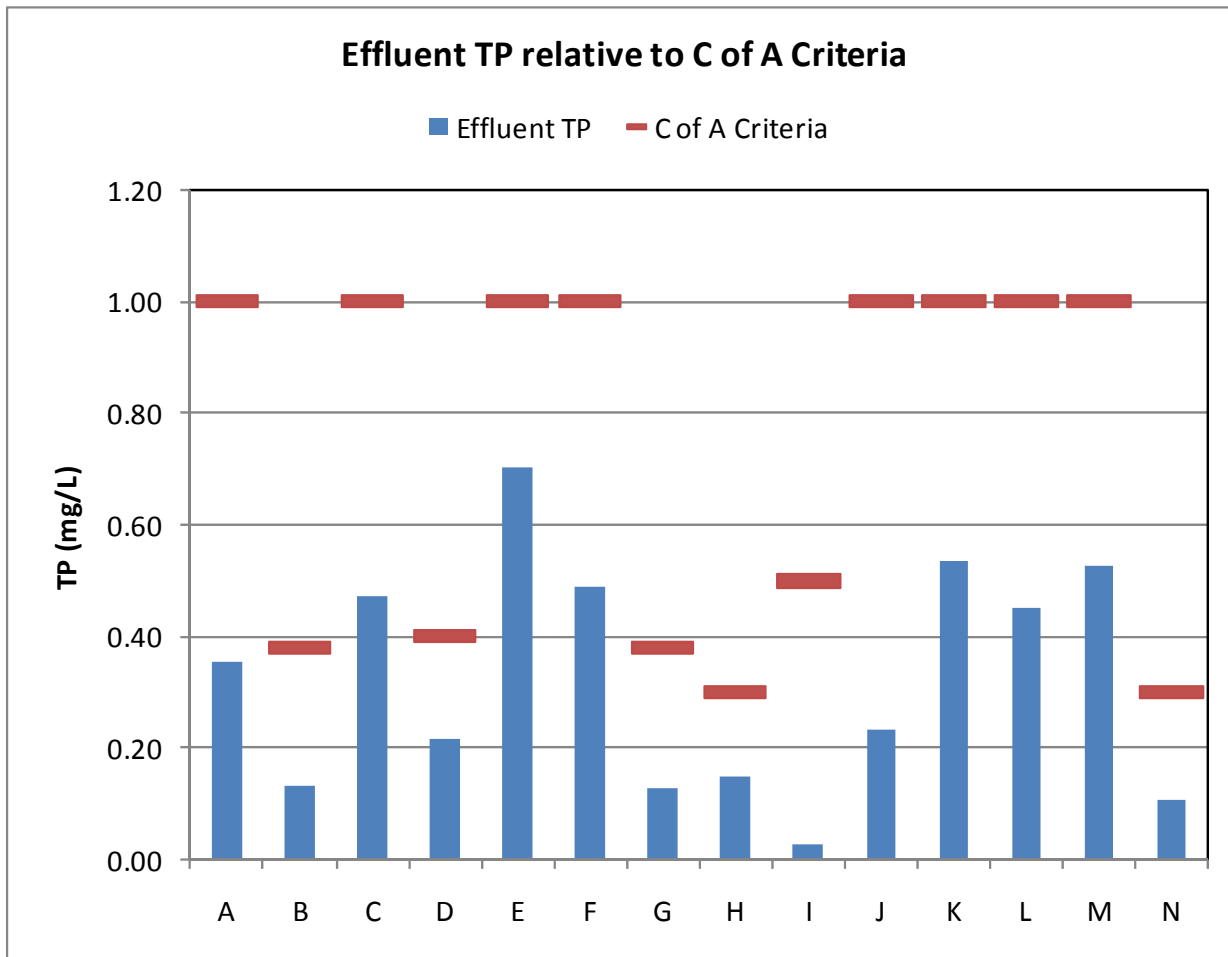


- 12 of 13 watershed communities were represented
- 28 WWTP operators/managers
- 7 site visits
- 14 + 1 WWTPs evaluated
- 7 peer facilitators trained

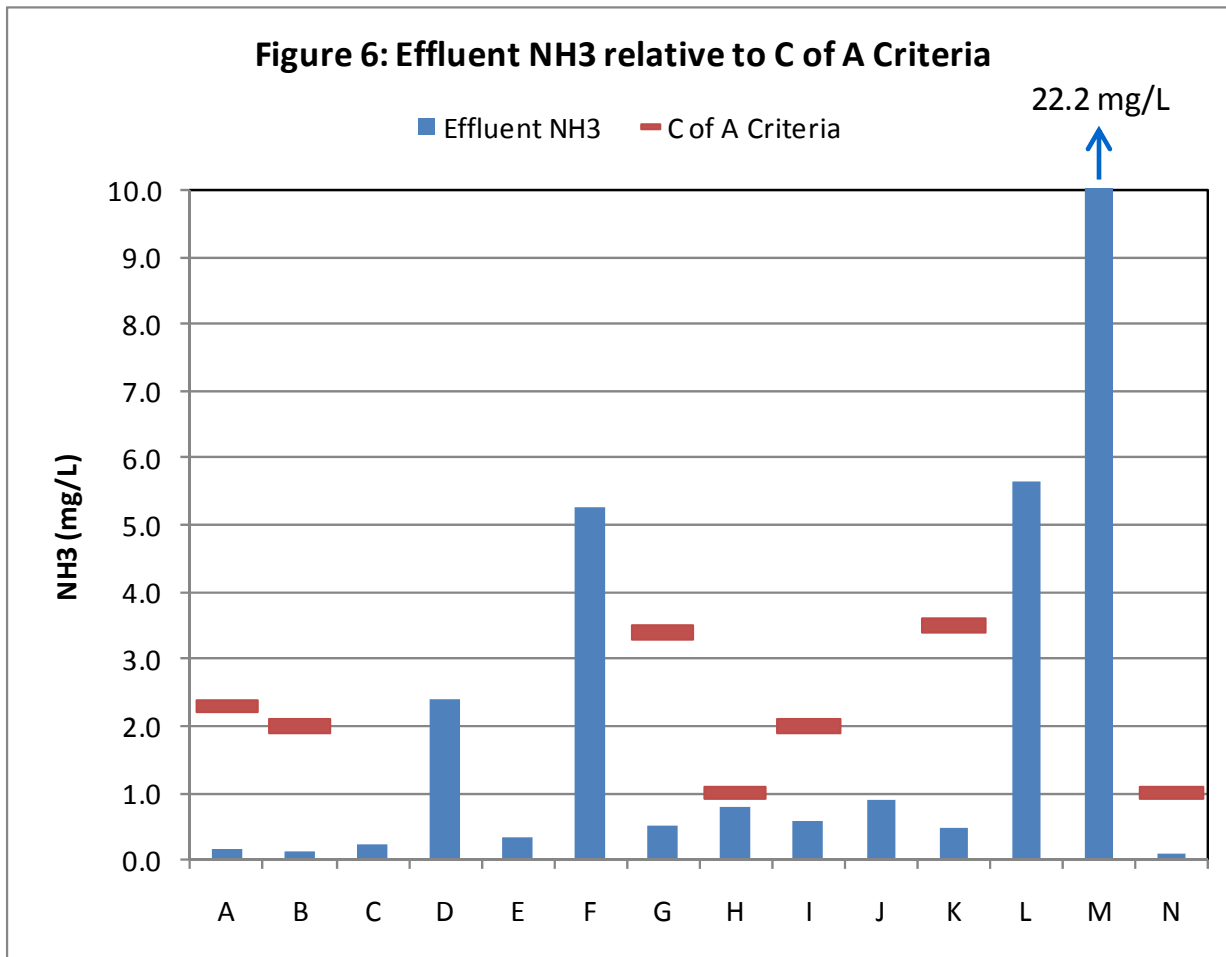
Examples of Data Collected



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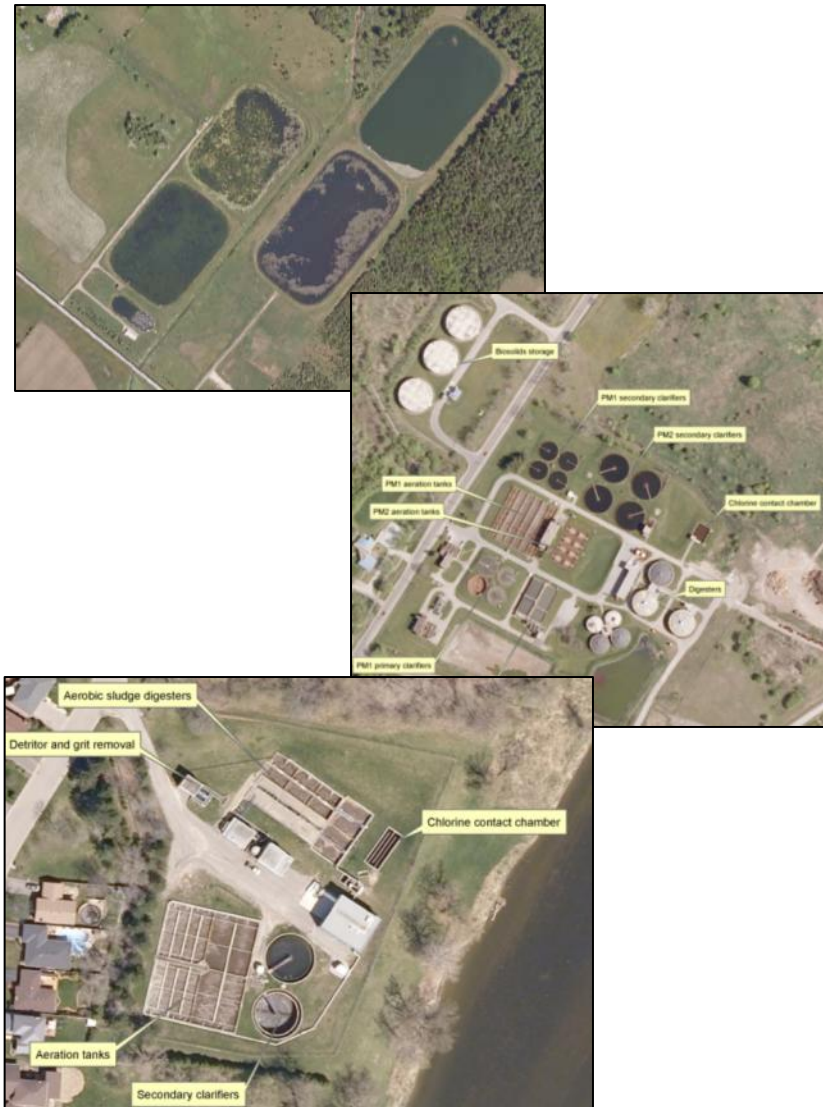


Examples of Data Collected



Feedback from participants

- “It’s good to do better” J. Ellis
- Many participants liked networking, interaction, case studies and information sharing aspects, want to see follow up reporting & more workshops
- Participants least liked the lack of participation from some municipalities

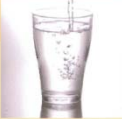


Getting the word out there

- Presentations to:
 - GRCA Board
 - LERSPC
 - GRCA Water Forum, WEAO, CWWA
- Articles in Grand Actions newsletter, Wellington Advertiser, Influents magazine
- Profiled in Chief Drinking Water Inspectors report

RECOGNIZING EXCELLENCE

Grand River Watershed Wastewater Optimization Pilot: a Source Protection Stewardship Project



In the Grand River watershed there are 30 wastewater treatment plants upstream of four drinking water intakes.

Wastewater management plants typically operate as separate entities, each one ensuring their treated out-flowing wastewater meets regulatory requirements. For the 30 wastewater treatment plants in the 13 municipalities along Ontario's Grand River, they are undertaking a very innovative partnership — they are working collectively to optimize their wastewater performance through a pilot project with the Grand River Conservation Area funded by the Ontario Drinking Water Stewardship Program.

"Our pilot is to engage, educate and create awareness among the wastewater community — what optimization is and what it could mean for their plants," says Sandra Cooke, Senior Water Quality Supervisor with the Grand River Conservation Authority. "It is also to create a community of wastewater operators."

"The target we're all going towards is high quality effluent coming out of the plants, not to just achieve compliance — it's not good enough anymore to just meet compliance," emphasises Cooke.

The Grand River wastewater optimization project is a pilot project of 2010 with a series of activities that will be the fundamental building blocks of the program," explains Cooke. "The project is a partnership between the Grand River Conservation Authority and the Grand River Conservation Authority, explaining the frustration of operators as they work to improve their wastewater treatment plants."

Cooke is more than just a supervisor. She is also a conservation authority representative, explaining the frustration of operators as they work to improve their wastewater treatment plants."



Lessons Learned

- Workshop format was well received
- Assignments provided valuable learning opportunities
- Facilitation skills were developed
- Data gathered was useful to identify potential candidates for future phase
- Strong desire exists to maintain watershed community of practice



Moving Forward

- It is anticipated that the pilot project will evolve into a program including:
 - additional hands-on training on specific technical tasks
 - establishing plant-specific performance targets
 - demonstration projects



More information on the WWOP project
can be found on GRCA website at:

www.grandriver.ca/water/wwop.cfm

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