Village of Carol Stream

SPECIAL WORKSHOP MEETING

May 18, 2015

6:00 PM

GREGORY J. BIELAWSKI MUNICIPAL CENTER
500 N. GARY AVENUE
CAROL STREAM, ILLINOIS 60188

LOWER LEVEL TRAINING ROOM

AGENDA

1. **CALL TO ORDER**
2. **ATTENDANCE**
3. **DISCUSSION ITEMS**
   A. Discussion of WRC Operating and Management Contract
   B. IEPA NPDES Wastewater Treatment Plant
4. **OTHER BUSINESS**
5. **ADJOURNMENT**

AGENDA ITEM
3-A.

Village of Carol Stream

Interdepartmental Memo

TO: Joe Breinig, Village Manager

FROM: Philip J. Modaff, Director of Public Works

DATE: May 14, 2015

RE: Management and Operation of the Water Reclamation Center (WRC)

BACKGROUND

In 1997 the Village switched from in-house operation of the Water Reclamation Center (WRC) to contract operation and management. Since that time the Village has used the Request for Proposal (RFP) process on three occasions to select the contract operator. Each time CH2MHill/OMI has been selected following the competitive process.

The current contract year, which started May 1, 2015, marks the fifth and final year of the initial five-year term that was awarded following an extensive RFP process in 2011. The contract document allows for negotiation of an extended term if both parties are willing. CH2MHill has expressed an interest in extending the current contract for an additional five-year term.

The other option is to conduct another RFP process. This process can take up to six months and involve staff, Village Board, legal counsel and perhaps an industry consultant to provide assistance. In 2011 staff utilized the services of a consultant (Baxter & Woodman) and the Village Attorney to collaborate on the process of reviewing and updating the operating contract and conducting a Request for Proposals (RFP). This process included:

- Identifying Village goals and expectations for contract operations and management
- Preparing the RFP, solicitation notice and identifying potential contract operators.
- Conducting a tour of the WRC facilities with RFP respondents.
- Responding to questions and requests for information during the proposal preparation stage and preparing and issuing any addendums to the RFP.
- Reviewing submitted proposals for completeness and compliance with the RFP.
- A panel made up of staff, two Board members and the consultant interviewed the two firms that submitted proposals.
- Conducting reference checks and verifying statements made in proposals.
- Negotiating a final agreement on contract terms, including costs.

At the Village Board workshop on May 18, I will provide the Village Board with the history of contract operations at the WRC, the status of the current contract and their options for either negotiating an extended term to the existing contract or conducting another RFP process.

Water Reclamation Center

Operating & Management Contract

History

- Carol Stream staff operated the WRC until switching to contract operation and management in 1997
  - Initial contract was for five years
  - Contract was extended for another term
- In 2006 a Request for Proposal (RFP) process was conducted to select an operator
- In 2011 another RFP process was completed

History

- Since going to contract operation in 1997 CH2MHill/OMI has been the only operator at the WRC
- Current contract with CH2MHill/OMI is in the final year of a five-year term that expires April 30, 2016
- Contract term provision allows the parties to agree to negotiate term extensions

WRC Contract Facts

- Value of current contract: $1,765,000
  - includes $125,000 annual CapEx program
  - Includes Industrial Pre-Treatment (new 2011)
  - does not include major capital project costs
- New operating permit expected soon
  - Will require phosphorous monitoring for 1 – 2 permit cycles (permit cycle = 5 years)
- 2014 IEPA annual inspection yielded no negative feedback or guidance

Extension vs. RFP (Request for Proposal)?

- If the Village is satisfied with current contract terms and performance:
  - Direct staff to initiate negotiations
    - Conduct a review of contract terms and industry best practices
    - Initiate negotiations (with time limit)
      - Target October 1, 2015 for execution of negotiated contract extension
    - If negotiations do not produce desired results begin RFP in October

Extension vs. RFP?

- If Village elects to move directly to RFP:
  - Appoint a work group (staff, Board, legal)
  - Conduct a review of contract terms and industry best practices
  - Develop RFP documents
  - Solicit proposals

RFP Process and Schedule

- Final Steps
  - Conduct interviews with the top-ranked firms
  - Conduct reference checks on the top-ranked firms
  - Negotiate final contract terms with selected firm
  - Recommend award of contract to Village Board (February/March 2016)
- New contract term begins May 1, 2016

Questions?

NEXT WRC OPEN HOUSE SATURDAY, OCTOBER 3, 2015

AGENDA ITEM
3-B

DuPage River Salt Creek Workgroup

Stephen McCracken
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May 11, 2015

What is aquatic life and how is it measured?

Aquatic life refers to the fish, insects, fresh water mussels, crustaceans and other organisms that inhabit waterways. The health of a waterbody is best reflected in the number and diversity of those inhabitants. The State determines whether waterways are impaired by assessing the biodiversity of fish and insect populations. A healthy waterway meets certain standards for both of these populations. All river segments in the Upper DuPage River and Salt Creek watersheds, with the possible exception of the southern parts of the West Branch DuPage River, are not supporting adequate fish and/or insect populations. Illinois EPA places river segments not supporting aquatic life on the List of Impaired Waters, otherwise known as the 303(d) List, which increases scrutiny of municipal NPDES permit limits.

Walleye, East Branch DuPage River. Most water quality restrictions in stormwater and wastewater permits are there to protect or improve aquatic communities.

Why should County and Village Boards be concerned about aquatic biodiversity?

Waterways not supporting aquatic life must come into compliance with state and federal laws. The majority of the requirements found in both stormwater and wastewater NPDES permits are there to improve conditions in local waterways for aquatic life.

Wastewater - Limits on Biological Oxygen Demand (BOD), ammonia-N, Dissolved Oxygen (DO), pH, chlorine residual and suspended solids in wastewater discharges are all there to protect aquatic life.

Phosphorous limits are currently being imposed on publicly owned treatment works (POTWs) throughout the state in hopes of reducing nuisance algae and improving aquatic life. Future nutrient requirements on wastewater quality will also primarily be driven by shortcomings in area aquatic life. At this time, DRSCW data analysis suggests that such limits will do little to effect nuisance algae or improve aquatic life in local streams.

Total Maximum Daily Loads (TMDLs) - The 2004 TMDLs for chloride and DO were developed to improve aquatic life.

Stormwater Quality- Current requirements for public works departments and construction sites are focused on improving and protecting aquatic life. While these requirements are currently quite conservative, anticipated future national restrictions on stormwater discharge rates and quality will be driven by the ability of urban waterways to support adequate aquatic life.

Why aren't local waterways supporting aquatic life?

This is a complex question. A study carried out by the DRSCW over the last 4 years found that the principle reasons were the presence of low head dams, which create a barrier for fish passage, and a mixture of physical habitat and water pollution.

- Low head dams – Dams create conditions unsuitable for riverine fish and insects by impounding sections of river. Survey after survey shows that local low head dams cut off many fish species from upstream river segments. The local distribution of fish species shows that the water quality in the majority of our waterways could support much higher diversity but physical barriers (dams) account for the absence of these high value species. Such barriers exist, or have recently been removed, on all three waterways.
- Physical pollution- After dams, the clearest relationships to not supporting aquatic life were found with "physical pollution," that is the alteration of the physical form of the waterway. More specifically, physical pollution that contribute to a lack of aquatic life include: a lack of riparian buffers (vegetated areas adjacent to the stream); a lack of pools and riffle runs; a lack of natural river forms; and a lack of gravel and stony bottoms.
- Chemical pollution – The pollutants that best explained fish and insect declines in local waterways were chlorides (from winter snow-fighting operations), some forms of nitrogen (ammonia –N, TKN), and biological oxygen demand (BOD).

While fixing all of these items would not necessarily guarantee a full recovery of aquatic life, the study suggests that if reduced or eliminated, they are expected to elicit the greatest increase on aquatic biodiversity and numbers.

So let's fix those things!

Many of the improvements needed in area waterways are not presently covered by NPDES permits. State and federal laws tend to be prescriptive and focus nearly exclusively on chemical pollution in wastewater effluent. Even imminent increases in stormwater regulations are unlikely to include improving a waterway's physical form or dam removal/modification.

The Special Conditions

The proposed DRSCW special conditions will change this scenario by allowing participating agencies to invest in dam removal/modification and improving physical habitat constraints rather than spending precious dollars on untargeted interventions with uncertain outcomes. There are a number of benefits to this approach:

- Dam removal/modification and habitat improvement will result in a much better improvement per dollar invested to fish and insect biodiversity than phosphorous removal. We will get more environmental and regulatory compliance "bang" for our bucks.
- Dam removal/modification and habitat improvement have limited maintenance and operation costs.
- The DRSCW's data analysis predicts substantial improvements to both indicators of aquatic life on all three waterways if our special conditions are implemented.
- Improvements to waterways will generate benefits beyond Clean Water Act compliance, such as improved aesthetics and making our local waters a more valued resource for fishing and paddling.
- Improvements in aquatic life will strengthen the position of local agencies in future permit negotiations in two ways. First, improving local aquatic biodiversity will potentially lessen the need for future regulations. Second, showing demonstrable improvements in aquatic life indicates we can improve local aquatic resources through stakeholder-led initiatives. As wastewater and stormwater regulations become increasingly restrictive, a strong history at producing measurable outcomes will better position efforts such as ours to improve the most critical deficiencies for aquatic life rather than being limited to a regulatory program focused on wastewater chemistry alone.

In order to meet the aquatic life goal of the Clean Water Act it will be necessary to resolve the issues identified here. The special conditions represent a rare chance to use our resources to resolve some of those issues and exert some local control on how we proceed in the future.

IEPA NPDES Wastewater Treatment Plant Permit

IEPA NPDES Wastewater Treatment Plant Permit

Regulations

- IEPA 303 (d) List of Impaired Waterways
- TMDLs – Chlorides & Fecal Coliform
- NPDES Permits – MS4s & POTWs

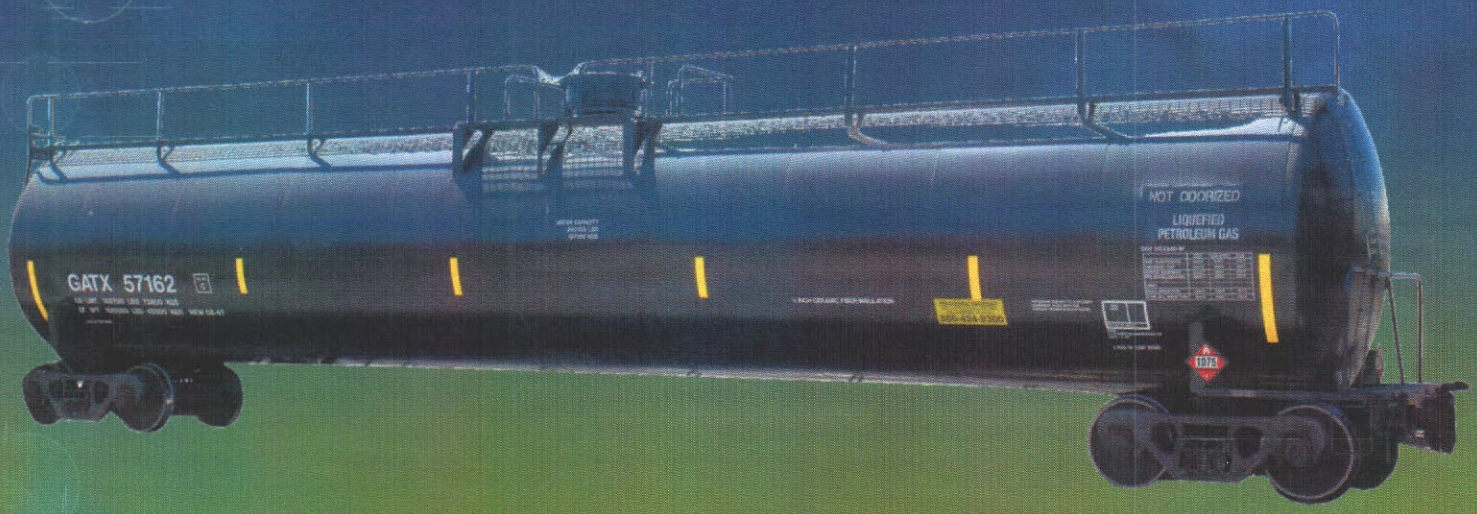
IEPA NPDES Wastewater Treatment Plant Permit

Phosphorous Limit in Standard Permit

- 1 mg/L

IEPA NPDES Wastewater Treatment Plant Permit

Phosphorous Limit in Standard Permit



IEPA NPDES Wastewater Treatment Plant Permit

Phosphorous Limit in Standard Permit

- 1 mg/L
- Capital Cost: $750K - $1M
- O & M Cost: $250/Year
- Over 15 Year Period - $4.8M to $5.1M Total Cost

IEPA NPDES Wastewater Treatment Plant Permit

Phosphorous Limit

- Problem – Very Little to No Improvement at All
- Why, What's the Real Cause?
  - Fish Passage Barriers – Low Head Dams
  - Physical Pollution – Waterway Alterations
  - Chemical Pollution – Chlorides, Nitrogen & BOD

IEPA NPDES Wastewater Treatment Plant Permit

Option

- Delay Imposing Phosphorous Limit 8 Years
- Permit Special Conditions

IEPA NPDES Wastewater Treatment Plant Permit

Special Conditions

- Participate in the DRSCW
- Complete 11 DRSCW Implementation Plan Projects

IEPA NPDES Wastewater Treatment Plant Permit

Special Conditions - Projects

- Oak Meadows Golf Course Dam Removal & Stream Restoration
- Fawell Dam Modification
- Spring Brook Restoration & Dam Removal
- Fullersburg Woods Dam Modification & Stream Restoration
- Southern West Branch Physical Enhancement
- Southern East Branch Physical Enhancement
- QUAL 2K East Branch & Salt Creek
- NPS Phosphorous Feasibility Study

IEPA NPDES Wastewater Treatment Plant Permit

Special Conditions

- Participate in the DRSCW
- Complete 11 DRSCW Implementation Plan Projects
- Participate in Implementation of the DRSCW Chloride Reduction Program
- Submit Annual Project Progress Report
- Develop & Implement a Phosphorous Discharge Optimization Plan
- Submit a Phosphorous Discharge Limit Feasibility Study
- Implement Phosphorous Discharge Limits
- Monitor Wastewater Effluent
- Submit a Nutrient Implementation Plan (NIP) & Trading Analysis

IEPA NPDES Wastewater Treatment Plant Permit

DRSCW Special Condition Permit Costs

PROJECT NAME	ESTIMATED COST
Oak Meadows	$2,250,000
Fawell Dam	687,500
Spring Brook	1,000,000
Fullersburg Woods	2,500,000
Southern West Branch	1,000,000
Southern East Branch	1,500,000
QUAL 2K Model Update	200,000
NPS Phosphorous Feasibility Analysis	150,000
NIP & Trading Analysis	500,000
Subtotal	$9,787,500
Contingency (5%)	489,400
Total Estimated Costs	$10,276,900

IEPA NPDES Wastewater Treatment Plant Permit

VOCS Special Condition Permit Costs

ITEM	15 YEAR ESTIMATED COST
Annual Dues	$119,681
Funding Assessments	541,646
Treatment Plant Upgrade	1,000,000
O & M	1,528,471
Total Estimated Costs	$3,189,797

IEPA NPDES Wastewater Treatment Plant Permit

VOCS Standard Permit Costs

ITEM	15 YEAR ESTIMATED COST
Annual Dues	$119,681
Funding Assessments	0
Treatment Plant Upgrade	1,000,000
O & M	4,093,038
Total Estimated Costs	$5,212,719

IEPA NPDES Wastewater Treatment Plant Permit

Estimated Savings

ITEM	15 YEAR ESTIMATED COST
Standard Permit Costs	$5,212,719
Special Condition Permit Costs	3,189,797
Total Estimated Savings	$2,022,922

IEPA NPDES Wastewater Treatment Plant Permit

Funding

- FY16 $36,000 Expenditure Funded in GCF
- Identified as a Budget Reduction – Governor's Sweeps
  - Identify Other Cuts to GCF
  - Charge to W&S Fund