Agenda

- 7:30 – Surcharge hearing
- 7:35 – FY2012 surcharge
- 7:45 – Schedule of surcharges
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Factors Affecting FY2012 WWMDC Budget

- Operating costs continue to be less with new contractor (Whitewater)
  - Savings of 10% over last year
- Original betterments continue
- Borrowing for new Waste Water Treatment Facility completed
  - Finance Director deemed the borrowing climate best
  - WWMDC agrees to borrow for 20 years
  - New betterments cannot be charged until WWTF completed
  - Certified retained earnings applied as budget offset
  - Surcharge for FY2012 required
- Bottom line
  - Fees (operating cost + surcharge) will be greater for FY2012
  - Effectively, payments for the new WWTF start in FY2012
- Mitigation
  - For next couple years, more retained earnings will be used to offset betterment cost
- Town Meeting passed budget for FY2012 (see next slide)

Wayland Wastewater Management District FY2012

WAYLAND WASTEWATER MANAGEMENT DISTRICT COMMISSION			
FY2012 BUDGET			
INCOME	**Account**	**Approved FY2011**	**Requested FY2012**
CATEGORY			
Receipts	42105	232,170.00	203,210.00
Old betterment			
Principal	47501	24,180.00	24,180.00
Interest	47502	12,090.00	10,881.00
New betterment			
Principal	47501		
Interest	47502		
Bank interest	48210	8,400.00	2,400.00
Retained Earnings			200,000.00
Surcharge			120,504.00
Penalties	41750	1,500.00	
Total		278,340.00	561,175.00
Expenses			
Prof. Services	52101	70,000.00	70,000.00
Operating expenses	52151	68,000.00	68,000.00
Maint./repair	52115	10,000.00	10,000.00
Capital enpenses	58504	0.00	0.00
Old debt			
Principal	59100	25,990.00	23,518.00
Interest	59150	4,350.00	6,657.00
New debt			
Principal	59100		175,000.00
Interest	59105	100,000.00	208,000.00
Other			
Total		278,340.00	561,175.00
William R. Prendergast			
February 10, 2011			

10% decrease in operating cost

Continuing original betterments

Use of certified retained earnings

Required surcharge due to new loan interest and principal

First year of principal and interest for new WWTP bond

Surcharge for FY2012

		ADDRESS	Surcharge	Capacity (gpd)	Collect capacity	Collect betterment?
		TOTAL	$120,504	76787	72687	39
Public Safety	38	BPR	$0	1100	0	0
George Parada	231	BPR	$332	200	200	1
Carapezza	233	BPR	$995	600	600	1
Bensons	234	BPR	$1,658	1000	1000	1
Jonathan Buchman	241	BPR	$1,459	880	880	1
NYNEX	244	BPR	$469	283	283	1
Ulbrich	264	BPR	$332	200	200	1
Vacant Lot-Town	267	BPR	$514	310	310	1
Shep Mobil	268	BPR	$663	400	400	1
Shepard House	274	BPR	$547	330	330	1
U S Post Office	277	BPR	$703	424	424	1
FLEET BANK	289	BPR	$441	266	266	1
Somerbys	292	BPR	$1,326	800	800	1
Wegner-kabloom	298	BPR	$249	150	150	1
Wegner-cleaners	298	BPR	$249	150	150	1
Poisson Wegner-Prudenti	300	BPR	$567	342	342	1
304 B P LLC	304	BPR	$332	200	200	1
311 B P TRUST	311	BPR	$995	600	600	1
Mehrez-Bread & Circus	317	BPR	$6,631	4000	4000	1
SOVERIGN BANK	326	BPR	$550	332	332	1
Starmer-Minimart	334	BPR	$332	200	200	1
Starmer-pizza	336	BPR	$1,989	1200	1200	1
Starmer	338	BPR	$539	325	325	1
Ralph Osmond	364	BPR	$332	200	200	1
Russell House	372	BPR	$547	330	330	1
Russells	397	BPR	$4,846	2923	2923	1
Congress Group	400	BPR	$74,603	45,000	45000	1
State Road Auto	292R	BPR	$332	200	200	1
Nails/Olgas-KOSIVAS	310A	BPR	$178	107.5	107.5	1
KOSIVAS	310B	BPR	$178	107.5	107.5	1
Collins	21	Coch	$426	257	257	1
Thomas Duffy	25	Coch	$332	200	200	1
Secore	30	Coch	$547	330	330	1
LIN, PEI HUI	31	Coch	$431	260	260	1
Town Hall	41	Coch	$0	3000	0	0
Phoenix Vet.	9	PIR	$497	300	300	1
Kaplan, Leno & Mccarthy	13	PIR	$332	200	200	1
D'ALLEVA Cont Hair	19	PIR	$1,658	1000	1000	1
Tim Skehan	101	PIR	$729	440	440	1
Lew Russell	105	PIR	$729	440	440	1
Wayland Meadows		Rte27	$11,937	7200	7200	1
		TOTAL	$120,504	76,787	72,687	39

2011-09-07

Explanation: Public Safety excluded from paying betterment or surcharge.

Note: These figures do not include the operating expenses for FY2012.

		Surcharge FY2012
total to raise		$120,504
total capacity		72,687
total water usage		11,017
capacity %		100%
water usage %		0%
PenaltyFactor		0%
pacityRate ($/gpd)	$	1.66

Still to be determined:

1. **Number of payments (presume 3 in Nov, Feb, May)**
2. **Hearing on this in 7 Sep 2011**

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Schedule of Surcharges

- One-third due in
  - November 2011
  - February 2011
  - May 2011
- Billing will be in your normal quarterly bill
- Bill will be itemized

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Water Conservation

- **Two handouts**
  - **Guidelines for conservation**
  - **Proposed regulations**

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Options for More Capacity

1. **Add outflow capacity using the closed Wayland-Sudbury Septage Facility.**
   - Costly due to crossing the Sudbury River. Requires vote at Wayland's Town Meeting.
2. **As a back-up provide for trucking of outflow from the new Waste Water Treatment Facility (WWTF) to remote facility.**
   - Very costly and only would be used in a temporary situation.
3. **Add outflow capacity via more surface water discharge via the Sudbury River.**
   - Requires new NPDES permit.
4. **Add more outflow capacity via ground water discharge north to conservation land called Cow Common.**
   - Requires Conservation Commission permission and is inside Zone II Wellhead Protection Area
5. **Add more outflow capacity via ground water discharge south to a new leaching field under playing fields near the Town Building.**
   - Uses existing area outside Zone II Wellhead Protection. Requires design that could be accomplished in two months. See figure 1.

Option 5

FIGURE 1
GROUNDWATER DISCHARGE

LEGEND

- Proposed Valve Chamber
- Proposed Force Main
- Proposed Groundwater Discharge
- 3' Wide Leaching Trench
- WWTP Parcel
- Effluent Distribution Box

LOCUS MAP

N W E S

0 200 400
Feet

1:4,800

NOTES

1. Based on MassGIS Color Orthophotography (April 2008) Orthophoto Sheet ID # 21179020

Wayland Town Offices
Wayland, Massachusetts

August 2011

11

Tighe&Bond

G:\GIS\MA\Wayland\avproj\pipeline_GroundwaterDischarge.mxd

W-3993

Update on DEP Matters

- **Letter sent to DEP**
  - **Copy on web site**
  - **Telephone contact trying to be made**
  - **DEP's desire to have a face-to-face meeting**
  - **DEP's proposed date is 26 Sep 2011**
- **Then have the WWMDC consider design fees for leaching field for groundwater discharge at the Town Building.**

Date: 25 August 2011
To: Eric Worrall, Kevin Brander, MassDEP Northeast Region
CC: Zach Crowley, MassDEP - Boston
From: Fred Knight, chair of Wayland Waste Water Management District Commission (WWMDC)
Subject: Proposal for Additional Capacity for Wayland Waste Water Management District

Motivation for Additional Capacity

The developers of the Twenty-Wayland Town Center in Wayland, MA want to move forward with their second phase of development while building their first phase. In order to secure financing, 20W needs permitted waste water treatment capacity up to their 45,000 gpd. Currently, DEP's permit calls for delaying the increase from 28,000 gpd, which was granted on 7 June 2011, to the full 45,000 gpd until after a demonstration that the first phase of their development, which will contain approximately 28,000 gpd of Title V capacity, actually produces flow within Title V limits.

In addition, Wayland's Board of Selectmen and Economic Development Committee would like more waste water disposal capacity to spur economic development near the town center. The desire is to not have the limitation be the current value of the NPDES permit, namely 52,000 gpd average annual outflow, but instead the limit of the treatment capacity of the new Waste Water Treatment Facility (WWTF) that is now in construction.

Finally, the current users of the WWTF will be charged significant new betterments in 2013. The Waste Water Management District Commission (WWMDC) wants to spread the cost of these betterments among as many users as possible and with the highest possible aggregate capacity.

So there are three reasons to add outfall capacity to the WWMD

1. To speed the development of the Town center
2. To encourage economic development
3. To spread infrastructure costs among as many users as possible.

These are discussed more fully in the next section.

Background

As you are aware, Wayland's Waste Water Management District (WWMD) has a Federal NPDES surface water discharge permit to the Sudbury River of 52,000 gallons per day (gpd) of annualized average flow. In addition, the aggregate Title V capacity of current users of the WWMD is 77,000 gpd, which, if interpreted according to **310 CMR 15.203(6),** is equivalent to a Title V capacity of half this value or 38,500 gpd Title V capacity. However, MassDEP, using Title V tables for predicted wastewater discharge,

consider the WWMD “oversubscribed,” that is, connected users have capacity in excess of the Federal NPDES permit. While Wayland has provided aggregate data showing actual water use under 50% of Title V capacity for users generating flow (only a portion of the users), DEP lacks the regulatory discretion to issue connection permits using any other basis than Title V. The Northeast Regional Office has included in the connection permit for Twenty Wayland the ability to demonstrate through individual meters actual water use over a demonstration period (likely 1 year) to show input less than expected Title V flows for the 28,000 gpd permit. Based on such demonstration, MassDEP would release the permit for the remaining 17,000 gpd. That option is appreciated, but still leaves the Town without a demonstration option for the remaining connections and Twenty Wayland with considerable delays to access requested capacity and unable to respond to market forces.

We much prefer the proposal that is part of the broader regulatory reform effort shared with me by Zach Crowley. It follows our meeting a couple of months ago with Rep. Tom Conroy and representatives of the economic development team and DEP headquarters staff. Under a new proposal, the conceptual design is that MassDEP would permit just the wastewater treatment plant, and not each individual connection. The municipality would manage the connections from new developments, using if they prefer the actual flows demonstrated by the plant to govern decision-making. We believe MassDEP shares our frustration concerning the limitations of Title V as a predictor of wastewater discharge to resource areas. Water conservation measures, improved fixtures, and modifications in business practices have eroded the degree of accuracy of current Title V standards as a credible and reliable predictor of treated wastewater. As long as our Federal and MassDEP permit for operating the wastewater treatment plant is based on outfall to surface resource, there will always be a degree of imprecision in measures based on water use. Our shared goal, then, is to improve the accuracy and predictive value of these other measures used to evaluate additional permits.

The developers of the Wayland Town Center want to move forward with their second phase of development while building their first phase. Market demand for the residential component, as well as additional interest in the retail space, suggests a need for the remaining capacity requested in their permit application by the summer of 2012. More importantly, leasing and development financing requires a commitment to capacity well in advance of the actual need for wastewater treatment. In addition, the adjacent Wayland Commons residential development has experienced robust sales and wishes to construct additional units that require wastewater capacity. A number of properties currently connected to the facility are considering renovations, expansions or alternative uses that will impact wastewater flows. We would like to utilize the capabilities of the new treatment plant.

Finally, the current users of the wastewater treatment facility will be charged significant new betterments in 2013 for the $5.2M facility. The Wayland Wastewater Management District Commission (WWMDC) wants to spread the cost of these betterments among as many users as possible and with the highest possible aggregate capacity. For capacity, economic, financial and equity reasons, we want MassDEP approval our

proposal to address the capacity issues of concern to the department.

Options Considered for Additional Capacity

The options to create more waste water capacity in Wayland center are the following.

1. **Add outflow capacity using the closed Wayland-Sudbury Septage Facility.** Costly due to crossing the Sudbury River. Requires vote at Wayland's Town Meeting.
2. **As a back-up provide for trucking of outflow from the new Waste Water Treatment Facility (WWTF) to remote facility.** Very costly and only would be used in a temporary situation.
3. **Add outflow capacity via more surface water discharge via the Sudbury River.** Requires new NPDES permit.
4. **Add more outflow capacity via ground water discharge north to conservation land called Cow Common.** Requires Conservation Commission permission and is inside Zone II Wellhead Protection Area
5. **Add more outflow capacity via ground water discharge south to a new leaching field under playing fields near the Town Building.** Uses existing area outside Zone II Wellhead Protection. Requires design that could be accomplished in two months. See figure 1. A rough calculation indicates that a leaching field of this magnitude could possibly double the outflow capacity. Of course, detailed design is required to assess the true impact.

Given these considerations, option 5. is preferred.

Proposal for Additional Capacity

Wayland is prepared to apply for a groundwater (GW) discharge permit to provide an alternative, additional means of discharge. The amount of the GW permit request will be determined by the permitting process. We discussed with Tighe & Bond the feasibility of constructing leaching fields beneath soccer and baseball field adjacent to the Town Building (see attached exhibit/map) sufficient to meet the Title V predicted flow from current connections, any additional predicted flows based on expansion or change in use of existing connections, and new development that could be constructed under current zoning and within the design capacity of the new treatment facility. We have received an estimate of $30,000 to $40,000 to complete the permitting process. Unlike the septage facility, which had the advantage of being permitted, the land adjacent to the Town Building is under the jurisdiction of the Board of Selectmen.

We request that MassDEP advise whether it is willing to expedite review of the permit application, and if a groundwater discharge permit is granted, it would release the remaining 17,000 gpd requested by Twenty Wayland in its sewer connection permit based on the availability of an alternative, additional discharge location. The Town is prepared to immediately commence the application process if such assurance can be offered. It will take necessary steps to construct the groundwater discharge site if outflows approach the NPDES limit.

FIGURE 1
GROUNDWATER DISCHARGE

LEGEND

- Proposed Valve Chamber
- Proposed Force Main
- Proposed Groundwater Discharge
- 3' Wide Leaching Trench
- WWTP Parcel
- Effluent Distribution Box

LOCUS MAP

N W E S

0 200 400
Feet

1:4,800

NOTES

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Wayland Town Offices
Wayland, Massachusetts

August 2011

Tighe&Bond

WAYLAND WASTEWATER MANAGEMENT DISTRICT COMMISSION

WATER CONSERVATION GUIDELINES

Whereas, the conservation of fresh water resources is the critical goal throughout the Commonwealth of Massachusetts and in the WWMDC service area in particular;

Whereas, recent innovations have produced significant reductions in the amount of potable water required for certain plumbing fixtures and other water using devices without significant cost;

Whereas, the purpose of these guidelines is to foster water conservation throughout the WWMDC service area;

The following recommendations are suggested for water conservation:

1. When washing dishes by hand, do not let the water run while rinsing.
2. Run clothes washer and dishwasher only when they are full.
3. For cold drinks keep a pitcher of water in the refrigerator instead of running the tap.
4. Shorten your shower by a minute or two.
5. Do not use running water to thaw food. Thaw in the refrigerator.
6. Repair leaky faucets and toilets.
7. Use a water-efficient shower head.
8. Turn off water while brushing your teeth.
9. Place a plastic bottle filled with water in your toilet tank.
10. Choose water-efficient appliances.
11. Insulate hot water pipes.
12. Install low-flow toilets.
13. For businesses, consider water recycling and reuse.
14. Instruct maintenance personnel to regularly check your facilities for leaks, drips, and other water waste.
15. Install sub-meters, monitor water use, and determine where water conservation is feasible.
16. Shut off water to unused areas of your facility.

Adopted on _____

Fred Knight _____

David Schofield _____

Shawn Fennelly _____

WAYLAND WASTEWATER MANAGEMENT DISTRICT COMMISSION

WATER CONSERVATION GUIDELINES

Adopted on _____

Fred Knight _____

David Schofield _____

Shawn Fennelly _____

The following water conservation measures shall be required for new construction or significant renovation:

1. All users requiring a connection permit under Article III, section 1 of the Rules and Regulations of the Wayland Wastewater Management District Commission that meet the applicability criteria defined in paragraph 2 of this Section shall be subject to the Water Conservation Performance Standards listed in Table 1.

2. The requirement to comply with the Water Conservation Performance Standards applies to all New Construction or Significant Renovation over the threshold size that has not received a Certificate of Occupancy as of the effective date of these guidelines.
   (i) New Construction or Significant Renovation is defined as (1) the construction of a new building for which a Certificate of Occupancy is required or (2) an increase in the square footage of a building or structure of greater than or equal to 25 percent or (3) an increase in design flow of a building or structure, as calculated by 310 CMR 15.203, of greater of greater than or equal to 25 percent or (4) the addition of one or more bedrooms to an existing building.

   (ii) The Threshold Size is defined as the peak day flow of 100 gallons per day for commercial uses and 440 gallons per day for residential uses. In calculating the peak day flow, the user must consider the entire building or structure and not just the addition or renovation. For users with evaporative cooling systems, estimated peak day flow must include estimated cooling tower blow down volumes.

3. The Water Conservation Performance Standards apply only to new plumbing fixtures or water using devices installed in New Construction or Significant Renovation. The Standards do not apply to existing plumbing fixtures or water

using devices in the same building or structure. The user shall demonstrate compliance with the Water Conservation Performance Standards to the satisfaction of the WWMDC at the time of issuance of the Certificate of Occupancy for the New Construction or Significant Renovation.

4. All users requiring a connection permit under Article III, Section 1 of the Rules and Regulations that install a new evaporative cooling system shall be prohibited from using a single pass cooling system. In addition, such users are subject to the following requirements:

    (i) At least10 days prior to the installation of a new cooling system, the user shall submit a written estimate of the daily volume of tower blow down for the new evaporative cooling system to the WWMDC. This estimate of the daily volume of tower blow down shall be based on seasonal periods when the largest monthly blow down volumes are expected and should be calculated and stamped by a Massachusetts Professional Engineer.

    (ii) All new evaporative cooling system towers shall have separate blow down metering systems to monitor and record blow down water volumes. Blow down water volumes shall be reported to WWMDC on a monthly basis.

    (iii) At least 10 days prior to installation of a new heating or cooling system, the user shall submit a list of any chemical additives to be used in the system as well as the estimated amount of their use. All chemical additives used in the new heating or cooling systems shall be approved by the WWMDC prior to their use to ensure compatibility with the treatment system and effluent limits.

5. For the purposes of evaluating the effectiveness of this Article and the Rules and Regulations generally, the WWMDC may require any user requiring a connection permit under Article III, Section 1 of the Rules and Regulations, whether the connection is existing or new, to meter actual flow to the Wastewater System.

6, If in the sole discretion of the Commission, full compliance with this article represents an unreasonable hardship to the user, as measured by costs disproportionate to the benefits of full compliance, the Commission may waive any requirement imposed pursuant to paragraphs 1 through 5 of this article.

Table 1

Water Saving Fixtures

	Residential		Commercial	
Appliance/Fixture	**Baseline Water Usage**	**Water Conservation Performance Standard**	**Baseline Water Usage**	**Water Conservation Performance Standard**
Toilet	1.6 gal/flush	1.3 gal/flush	1.6 gal/flush	1.3 gal/flush
Urinal			1.0 gal/flush	0.5 gal/flush
Shower	2.5 gpm (showerhead)	2.0 gpm (showerhead)		
Residential Clothes Washer	Varies	6.0 Water Factor (See Note 3)	Varies	5.0 Water Factor (See Note 3)
Lavatory Faucet	2.2 gpm	1.5 gpm	2.2 gpm	1.5 gpm
Commercial prerinse spray valves			1.6 gpm	1.4 gpm
Residential Dish Washer	Varies	5.0 gal/cycle		
Dishwasher Single Tank Rack Conveyor - High Temp			1.13 gal/rack	0.700 gal/rack
Dishwasher Single Tank Rack Conveyor - Low Temp			1.23 gal/rack	0.790 gal/rack
Dishwasher Multi-Tank Rack Conveyor - High Temp			1.1 gal/rack	0.540 gal/rack
Dishwasher Multi-Tank Rack Conveyor - Low Temp			0.99 gal/rack	0.540 gal/rack
Ice Machine			<25 gal/100 lbs ice	20 gal/100 lbs ice
Ice Machine Self Contained Unit			<35 gal/100 lbs ice	20 gal/100 lbs ice

Notes:

1) Baseline values are based on the Massachusetts State Plumbing Code and values published by the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Program. These values are presented for reference only.

2) Water Conservation Performance Standard values are based on the U.S. Environmental Protection Agency, Water Sense and Energy Star programs, and LEED documents.

3) The Water Factor is a water performance metric published by the U.S. Environmental Protection Agency Energy Star Program that allows the comparison of clothes washer water consumption. WF=Q/C, where Q is the quotient of the total weighted per-cycle water consumption, and C is the capacity of the clothes washer.