

K. Devlin #851
TOWN OF ORLEANS
TOWN CLERKS OFFICE

**MEETING OF THE ORLEANS
BOARD OF WATER/SEWER COMMISSIONERS**

10 MAY 28 PM 4:04

March 3, 2010

A meeting of the Board of Water and Sewer Commissioners was held Wednesday, March 3, 2010 in the Nauset Room, Town Hall:

Those present were Robert Rich, Judith Bruce and Ann Hodgkinson of the Board, associate member Ken Rowell, Mark Carron, Board of Selectmen liaison, Ed Barr, Finance Committee liaison, Lou Briganti, Water Superintendent. Absent were Jimmy Dishner and Kenneth McKusick of the Board and associate member Leonard Short. Kenneth Rowell was asked to vote in the absence of Jimmy Dishner and Kenneth McKusick.

Robert Rich called the Board of Water and Sewer Commissioners meeting to order at 1:30 p.m.

OPEN SPACE

Alan McClennen, Chairman of the Open Space Committee came before the Board seeking support for the purchase of 22.5 acres of land off Route 39 in Brewster. This purchase previously came before the Board in July 2009 with a purchase price of \$750,000.00 with 50% being paid by the State, 25% paid by the Town of Brewster and 25% or \$187,500.00 being paid by the Town of Orleans.

With the State denial of 50% of the purchase price, the Open Space Committee is seeking support for 50% of the purchase price or \$375,000.00 in exchange for a conservation restriction of 39 acres in Brewster within the Zone II's of Orleans.

The Board requested that the purchase be placed on the March 17th agenda in order to discuss financing options for the \$375,000.00.

MINUTES

Ann Hodgkinson made a motion seconded by Robert Rich to approve the minutes of the meeting of February 3, 2010 as written. The vote by the Board was 4-0-0.

SUPERINTENDENT'S REPORT

- See attached report
- Rate Increase to be voted by the Board of Selectmen March 17, 2010

OLD BUSINESS

NSTAR HERBICIDE USE IN THE WATERSHED

The Board was given copies of letters to NSTAR from the Board of Selectmen and the Conservation Commission regarding herbicide use in the watershed.

Robert Rich would like to see a written request to NSTAR to recognize the Zone II's as

sensitive areas.

WATER BILLING PROCEDURES

On a motion by Judith Bruce seconded by Ann Hodgkinson, the revised SOP for past due billing dated 3/1/2010 was adopted. The vote by the Board was 4-0-0.

NEW BUSINESS

COMMITMENTS/ABATEMENTS/REFUNDS

A motion was made by Ann Hodgkinson seconded by Judith Bruce to commit for the month of February 2010 to rate \$940,630.52, to services \$240.00, to usage \$0.00, to installations \$0.00 and to added billing \$1,686.81. The vote by the Board was 4-0-0.

A motion was made by Ann Hodgkinson seconded by Judith Bruce to abate \$2,512.95 from account #4027 as a result of a meter reading error. The vote by the Board was 4-0-0.

A motion was made by Ann Hodgkinson seconded by Judith Bruce to abate \$748.48 from account #1250 as a result of an error in manually entering the meter reading. The vote by the Board was 4-0-0.

A motion as made by Kenneth Rowell seconded by Judith Bruce to abate \$67.82 from account #2215 belonging to the Massachusetts Highway Department as they are exempt from interest. The vote by the Board was 4-0-0.

ADJOURNMENT

At 2:57 p.m., a motion was made by Robert Rich and seconded by Ann Hodgkinson to adjourn the meeting. The vote by the Board was 4-0-0.

The next regular meeting is scheduled for March 17, 2010 at 1:30 p.m.



Secretary, Board of Water/Sewer Commissioners

Board of Water & Sewer Commissioners

03Mar2010

NSTAR Right of Way

The Water Supt. collaborated with the Health Agent to prepare a letter of response for the BOS. The letter was signed after their 02/17 meeting and is included in the Board's packet.

From: Bob Rich [robert.rich4@verizon.net]
Sent: Tuesday, January 12, 2010 4:20 PM
To: Kenneth McKusick M.D.; Louis Briganti
Cc: Ann Hodgkinson; Gen. Jimmy Dishner; Judith Bruce; Kenneth Rowell; Leonard Len Short; Myra Suchenicz; Sue Brown
Subject: NStar Herbicide Use-- Summary Comments

Dear Ken et al.,

I have reviewed NStar's 2009 Operational Plan regarding their use of herbicides on power line rights of way and offer the following summary notes:

1. There is no herbicide use permitted in a Zone 1-- i.e. within 400 feet of a public water supply well.
2. "Limited Spray Areas", which apply to Sensitive Areas such as Zone 2's for public water supply wells-- Lower doses of herbicide are applied in such areas.
3. Herbicides have the following key characteristics: mobility (whether and how a herbicide moves in the environment after application); half life (how rapidly a herbicide bio-degrades); toxicity of herbicide and its breakdown products to non-target species of plants and animals.
4. NStar lists the use of a number of commercially available herbicides, which contain one of the following active ingredients: Glyphosate, Fosamine, Metsulfuron-Methyl, Imazapyr, Triclopyr.
5. Of the active ingredients, Fosamine appeared to me to provide the most advantageous characteristic: Low mobility & short half life. Fosamine is the active ingredient in the herbicide Krenite S.

Note: NStar's 2009 Operation Plan did not involve any of the Orleans watershed. The Commission should watch for and review NStar's Plan for 2010 when it becomes available to make sure that our Zone 1's and 2's are being properly treated.

Board of Water & Sewer Commissioners

Regards,
Bob

Rate Increase

A public hearing on the proposed 5% rate increase was held on February 24 at the BOS meeting. A copy of the Supt.'s presentation is included in the Board's packet.

Silent Springs

The Silent Springs Institute will be releasing a report of testing conducted on 20 public supply wells located throughout the Cape. Water samples were collected in October 2009 and tested for 92 organic compounds including personal care products, pharmaceuticals and hormones. There were 9 water districts that participated in the study; Barnstable, Hyannis, Brewster, Buzzards Bay, Centerville/Osterville/Marstons Mills, Chatham, Cotuit, Dennis and Falmouth.

Tanks 1 & 2

A meeting to discuss the Tank nos. 1 & 2 - inspection reports with the author (Leo R. Yuskus, Sr VP Haley and Ward, Inc.) was held on Feb. 4th.

The results of the 2-reports and the meeting with Leo R. Yuskus are tabulated;

Board of Water & Sewer Commissioners

Meeting with Haley & Ward, 02/04/2010
Re: Inspection Reports, December 2009

Tank #1

Corrosion holes discovered in finial; these need immediate attention. - Temporary repair performed on openings during inspection (rubber cap installed on coupling, caulking and duct tape). Dome cover needs fill welding to permanently close corrosion related openings.	Obtaining price quotes (<i>no one responded Dec 2009</i>).
Exterior coating system fair to good, still offering good protection of the steel. - Top coat delaminating from intermediate coat, one full drop and other scattered areas. - Minor spot corrosion breakthrough on underside of balcony, delamination of top and intermediate coating from primer from outside of balcony full height kick plate.	Capital Plan schedule for new coating systems is acceptable at this time.
This tank is not a candidate for a spot rehabilitation; it needs complete removal of the coating system and replacement. Active spot corrosion on ladder cage and overflow piping.	<i>This is not news & it was not news 5 years ago.</i> <i>Not a concern.</i>
Was not able to view the interior surfaces. - Staff inspected and cleaned the interior of tank no. 1 (3 years ago).	<i>Not a concern at this time.</i>
There is no safety climb system; should install a cable type unit. - Possible regulatory issue in the future.	Obtaining price quotes, but is this really necessary? Expensive.
Due to the condition and potential age of the coating system, we recommend a full engineering inspection to better be able to determine the life remaining of the coating system.	Is this necessary at this time?

Tank #2

Finial supports have failed coating system and serious metal loss due to corrosion. Need immediate attention including welding repairs and new screen. Mildew and emissions buildup on tank, bottom 1.5 rings previously cleaned, next 4.5 need cleaning.	Obtaining price quotes (<i>no one responded Dec 2009</i>). Staff with Town Ladder Truck.
Exterior coating system fair to good, still offering good protection of the steel. - Spot delamination of top and intermediate coatings from about 2% on the shell area, some corrosion on floor lip. - Pin point corrosion bleed through on roof plates.	Capital Plan schedule for new coating systems is acceptable at this time.
This tank is not a candidate for a spot rehabilitation; it needs complete removal of the coating system and replacement.	<i>This is not news & it was not news 5 years ago.</i> <i>Not a concern at this time.</i>
Corrosion and metal loss in spots on ladder connection, and corrosion bleed through on overflow piping. Ladder gate is not locked; a new locking mechanism should be installed. Control boxes on shell have corrosion and substantial metal loss.	Complete Staff to repair.
Interior coatings appeared satisfactory for the small areas that could be observed.	Same as previous inspection.
Due to the condition and potential age of the coating system, we recommend a full engineering inspection to better be able to determine the life remaining of the coating system.	Expensive. Is this necessary at this time?

Board of Water & Sewer Commissioners

WQ Lab

- The application for MASDEP Lab certification was mailed on 02/24. The package included our *Laboratory Manual* and *QC Plan*.
- On February 4th we participated in a 10-sample Proficiency Test for Enterococcus. This is required in order to be certified to test for Enterococcus in ground water and recreational waters.

Town of Orleans
Water Department

Lou Briganti
3/1/2010

Board of Water & Sewer Commissioners

Orleans Water Quality Laboratory

19 School Road
Orleans, MA 02653
phone (508) 240-3700 ext. 345 or 346
fax (508) 240-3702

Louis A. Briganti, Lab Manager
Susan N. Brown, Principal Analyst

February 23, 2010

Director, Laboratory Approval Program
Massachusetts Department of Environmental Protection
Wall Experiment Station
37 Shattuck St.
Lawrence, MA 01843

Re: Orleans Water Quality Laboratory

Dear Sir or Madam,

Please accept this letter and the enclosed documentation as an application for Laboratory certification for Microbiology for the Orleans Water Quality Laboratory (MA01133).

Enclosed;

1. MASS DEP *Transmittal Form for Permit Application and Payment* (transmittal #X231921).
2. MASS DEP *Application for Initial Certification of Laboratory for Environmental Analysis – Microbiology*.
3. Orleans Water Quality Lab – Laboratory Manual.
4. Orleans Water Quality Lab – QC Plan.

A copy of the *Transmittal Form* with a check for \$350.00 has been forwarded to MASS DEP (P.O. Box 4062, Boston, MA 02211).

The Laboratory has participated in 3-rounds of Proficiency Testing. The results are forwarded directly to MASS DEP by the service provider.

Thank you for your kind attention and please feel free to contact me at (508) 240-3700 ext. 345 or (508) 962-2658

Sincerely,

Lou Briganti

Board of Water & Sewer Commissioners

WTP (& Membrane Status)

• **CIP**

On January 26 to 28 an Aggressive CIP was performed on rack no. 1. This is the annual chemical cleaning that each rack receives before peak season. The rack was cleaned with citric acid followed by KOH/Chlorine followed by a final citric acid CIP.

The results were very good. We achieved a permeability of 6.22 GFD – the target being 6.0.

• **Membrane Fiber Breaks**

The number of fiber breaks seems to have stabilized. The total is now 19 as of February 1st – only 2 breaks since 12/30/2009.

For what it is worth - Pall Corp. is being kept aware through email (below). Included was a spreadsheet with a map of the fiber breaks across the 3-racks. Since the wtp was placed in service there have been 17 fiber breaks – 9 breaks have occurred since Nov. 11th.

• **Membrane Replacement**

The timeline for the project to replace the wtp-membranes has been agreed upon with Wright-Pierce;

Draft RFP to Water Department	February 26, 2010.
Draft Copy of RFP to Town Counsel	March 12, 2010
Final Draft for Review	March 26, 2010
Advertise in the Central Register	@April 7, 2010
Bids due	@May 1, 2010 (TBD)

Information to date:

After meeting with the Town Administrator and Town Counsel on 12/08 and 12/15 it has been concluded that replacement membranes will need to be publicly bid. Jeffrey P. Musich, P.E., Vice President of Wright-Pierce provided the best approach and price to assist the Town in this effort.

- 1. Replacement membranes must be publicly bid -Town Counsel.*
- 2. Pall UF membranes (LOV5210) would only require that MA DEP be notified. The membrane material is PAN –Polyacrilonitrile.*
- 3. For Pall MF membranes (UNA-620A), MA DEP will require a demonstration test with the first rack in lieu of a pilot study. This is a verbal commitment (2009.06.09, DEP SERO). These MF membranes are made of PVDF - Polyvinylidene fluoride.*

Board of Water & Sewer Commissioners

4. *Any other membranes will need to be piloted and also be listed on MA DEP's Approved Technologies List.*
5. *Layne Christensen Company could supply Toray UF membranes and are willing to conduct a free pilot study (2009.06.30, WTP). The Toray PVDF membranes have a larger pore size than the Pall UF membranes. Layne could provide some level of ongoing support.*
6. *Technology Sales Associates with General Electric Co. can supply ZeeWeed 1500 UF membranes (PVDF) along with a free pilot study (2009.07.09, WTP). Ongoing support is not provided.*

Miscellaneous

• **GWR**

We continue to optimistically await DEP's decision (4-log approval for the wtp and approval pending modifications for Facility no. 1 and Well no. 7).

• **Well no. 8**

We are still waiting for DEP's inspection (since November 13th).

Orleans Water Department

Best Water on the Cape



Town of Orleans
Water Department

Orleans Water Department

Scheduled Rate Increase

2009 DATA

- Excessive Rainfall
- Reduced Demand
- Revenue Pattern
- Lost Revenues

Scheduled FY11 Rate Increase

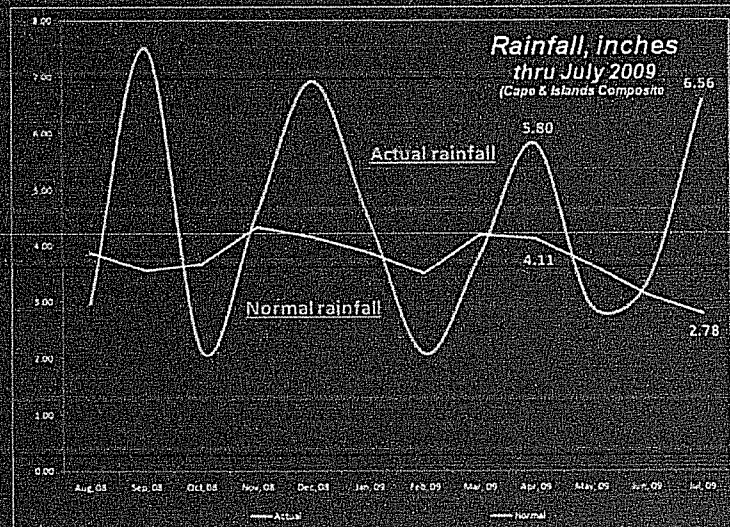
Reserve Fund Balance

- 5% vs. 2.5%



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Revenue Analysis



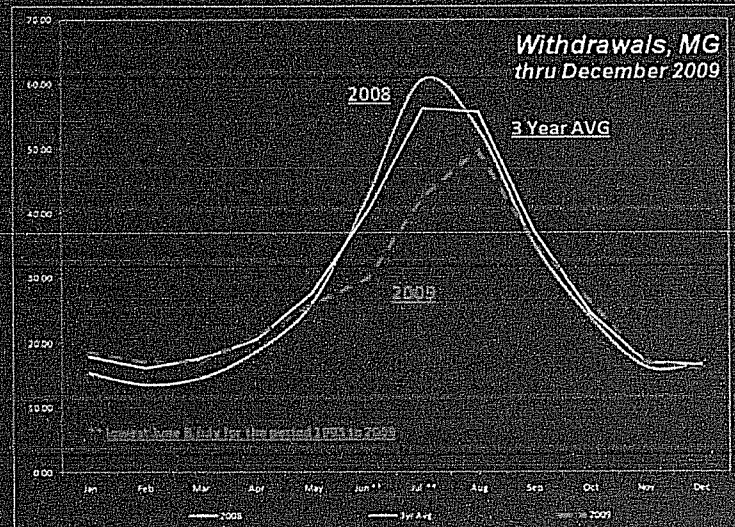
**Town of Orleans
Water Department**

Rainfall for the key time period of April to July 2009;

<u>Actual</u>	<u>Normal</u>	<u>Excess</u>
18.57 in	13.65 in	36%

DEP-Rainfall data has only been updated to July 2009 (understaffed and behind schedule).

Revenue Analysis



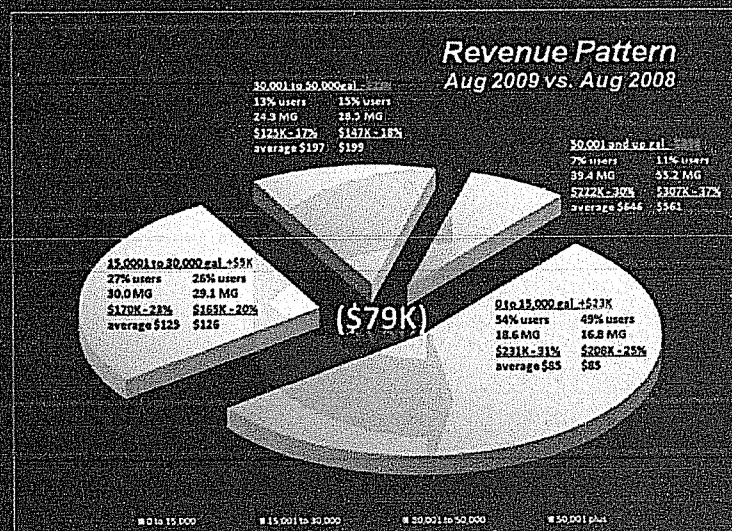
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The excess rainfall caused a significant drop in demand.

For the period June to August 2009 there was a 28% decrease in demand;

<u>2008</u>	<u>2009</u>	<u>Loss</u>
156.46 MG	122.39 MG	-28%, -34 MG

Revenue Analysis



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Water Department

The revenue pattern was basically unchanged for the February and August billing periods;

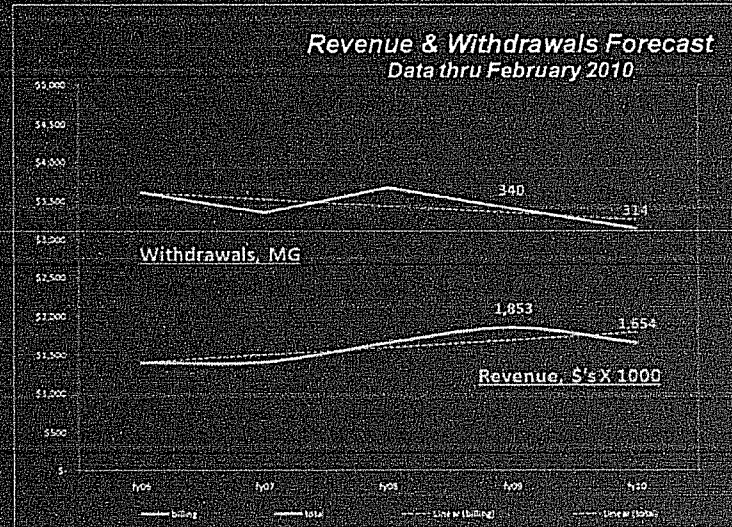
50% of users contributed 25 to 30 % of revenues

10% of users contributed 30 to 40% of revenues

With decreased demand there were more users in the lower 2-usage groups (reverse drive from high to low usage).

Versus FY09 there was a 150 to 200K revenue loss in FY10 (80K August, 80K February).

Revenue Analysis



Town of Orleans
Water Department

Where withdrawals should average 340 MG with revenues of \$1.8 M, withdrawals in FY10 were 310 MG with only \$1.6 M in revenues.

Scheduled Rate Increase

FY11 Scheduled Rate Increase

current rates				effective fy09			
basic service				\$ 74.10			
0 to	15000	1.57	per 1,000 gal				
15001 to	30000	3.88	per 1,000 gal				
30001 to	50000	4.98	per 1,000 gal				
50001 to	up	6.03	per 1,000 gal				
FY11 rates				scheduled 5% for wtp debt service			
basic service				\$ 77.81			
0 to	15000	1.65	per 1,000 gal				
15001 to	30000	4.07	per 1,000 gal				
30001 to	50000	5.23	per 1,000 gal				
50001 to	up	6.33	per 1,000 gal				

# customers:	2,224	1,383	788	640
gallons used:	7,296	22,131	38,560	110,106
	\$ 74	\$ 74	\$ 74	\$ 74
	11	24	24	24
		28	58	58
			43	100
				362
per user	\$ 86	\$ 125	\$ 198	\$ 618
total	\$190,300	\$173,358	\$156,333	\$395,340
				\$915,336
	\$ 78	\$ 78	\$ 78	\$ 78
	12	25	25	25
		29	61	61
			45	105
				381
per user	\$ 90	\$ 132	\$ 208	\$ 649
total	\$199,815	\$182,026	\$164,150	\$415,107
\$ increase	\$ 4	\$ 6	\$ 10	\$ 31
				\$961,098



Town of Orleans
Water Department

Most customers (>50%) will pay an additional \$4 per billing period.

The average increase across all customers will be \$12, or \$2 per month.

This is a nominal rate increase that will help the Dept. to stay solvent.

Scheduled Rate Increase

Financial Forecast

5.0% Rate Increase FY11

FY	rates	other	Total Income	Total Expenses	Fund Balance
04					1,385,734
05	1.5%		1,223,512		1,307,246
06			1,406,539	1,795,331	918,454
07			1,482,201	1,583,478	817,176
08	5.0%		1,822,174	1,646,863	992,487
09			1,897,130	1,815,488	1,074,129
10			1,700,000	1,804,018	970,000
11	5.0%		1,785,000	1,849,026	906,000
12			1,785,000	2,028,391	663,000
13		3.5%	1,847,000	2,056,903	453,000
14		3.5%	1,912,000	2,089,875	275,000
15		3.5%	1,979,000	2,126,867	127,000
16		3.5%	2,048,000	2,241,708	(67,000)
17		3.5%	2,120,000	2,310,996	(258,000)
18		3.5%	2,194,000	2,329,033	(393,000)
19		3.5%	2,271,000	2,334,820	(457,000)
20		3.5%	2,350,000	2,510,727	(618,000)

2.5% Rate Increases FY11 & FY12

rates	other	Total Income	Total Expenses	Fund Balance
1.5%		1,223,512		1,385,734
		1,406,539	1,795,331	1,307,246
		1,482,201	1,583,478	918,454
5.0%		1,822,174	1,646,863	817,176
		1,897,130	1,815,488	992,487
		1,700,000	1,804,018	1,074,129
2.5%		1,743,000	1,849,026	970,000
2.5%		1,787,000	1,849,026	864,000
		1,787,000	2,028,391	623,000
		1,787,000	2,056,903	353,000
3.5%		1,850,000	2,089,875	113,000
3.5%		1,915,000	2,126,867	(99,000)
3.5%		1,982,000	2,241,708	(359,000)
3.5%		2,051,000	2,310,996	(619,000)
3.5%		2,123,000	2,329,033	(825,000)
3.5%		2,197,000	2,334,820	(963,000)
3.5%		2,274,000	2,510,727	(1,209,000)



Town of Orleans
Water Department

Two financial forecasts were done with the current revenue information.

The first forecast includes the scheduled 5% rate increase in FY11.

The second forecast has a 2.5% rate increase in FY11 followed by a 2.5% rate increase in FY12.

The assumptions in both forecasts;

FY10 revenues August \$750K, February \$950K; Total \$1,700K.

It will possibly take 3 years to return to "normal" demand patterns.

The result of the comparison is that the forecast remains in the black for the next 5 years with the 5% rate increase in FY11. The forecast is in the red after 4 years if the rate increase is reduced.

Scheduled Rate Increase

SUMMARY

- Part of our planning for the past 7 years .
- Maintains Dept. solvency for at least 5 years
- Changing the 5% assumes more risk .
- May have 3 years of reduced Revenues.
- Possibility of an unplanned capital investment (i.e. tanks).
- FY10 is a reminder of weather related losses.



Town of Orleans
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