



COMMONWEALTH OF MASSACHUSETTS  
EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL AFFAIRS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
NORTHEAST REGIONAL OFFICE

205B Lowell Street, Wilmington, MA 01887 • (978) 694-3200

DEVAL L. PATRICK  
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July 27, 2009

Donald Ouellete  
Wayland Water Department  
41 Cochituate Road  
Wayland, MA 01778

Re: City/Town: Wayland  
PWS Name: Wayland Water Department  
PWS ID #: 3315000  
Program: System Modifications  
Action: Classification of Membrane plant treating  
Ground Water

Dear Mr. Ouellette:

Please find attached the Departments review of its classification of the treatment plant currently under construction.

If you have any questions regarding this letter, please contact Hilary Jean at (978) 694-3229.

Sincerely,

Hilary Jean  
Drinking Water Program  
Northeast Regional Office

Sincerely,

Thomas Mahin  
Section Chief  
Drinking Water Program  
Northeast Regional Office

cc: DEP Drinking Water Program/WQA, 1 Winter Street, Boston MA (no attachment)  
Jack O'Connell, P.E., Tata and Howard Inc., 125 Turnpike Rd., Westborough MA 01581  
Donald Millette, Wayland Water Department

File name: Y:\DWP Archive\NERO\Wayland-3315000-System Modifications-2009-07-27  
Page 1 of 2

The Department, in its September 25, 2007 construction approval letter, classified the membrane plant currently under construction as a III-T Water Treatment Facility and required Wayland to submit a staffing plan for the new facility to the Department for its approval at least 60 days prior to the anticipated startup of the new facility.

Your consultant, Jack O'Connell, P.E., Tata and Howard Incorporated, in a letter dated July 2, 2009, requested that the Department reclassify the facility as a II-T Treatment Plant. The Department has considered this request and agrees to **reclassify the facility as a II-T Treatment Plant.**

In its review of the points assigned toward arriving at this classification Department has assigned points slightly differently from what Mr. O'Connell suggests. The points are assigned as follows:

Population	1
Design Flow	2
Water Supply Source- GW	3
Water Supply Source- Quality	2
pH Adjustment	4
Color Control	4
Iron and Manganese Removal	10
Coagulant Addition	4
Fluoridation	5
Disinfection	5
Special Processes- Membranes and O <sup>3</sup> Generation	10
Residuals Disposal	5
Total=	<b>55</b>

A facility that has from 31 to 55 points assigned is classified as a II-T Treatment Plant.

The waters that are being treated are currently considered as Ground Water. However, the Microscopic Particulate Analyses of two wells, Baldwin Pond Well # 3 and Meadowview Well, have show that the water quality of these wells are under a moderate risk of influence from surface waters such that protozoa associated with surface waters may have a significant impact of the biological quality of the water. The Department's policy is to require additional testing of these wells. If this testing shows that the wells are required to be classified as surface water, then the Department will assign a value of 15 point for "Special Processes". This increased point value will change the classification of the facility to a III-T Treatment Plant.

July 15-09

WATER TREATMENT FACILITY RATING WORKSHEET

PUBLIC WATER SYSTEM Wayland PWSID# \_\_\_\_\_

FACILITY NAME \_\_\_\_\_

SOURCE(S) \_\_\_\_\_ SOURCE(S) ID# \_\_\_\_\_

Item No.	Description	Available Points	Maximum Points	Final Points
1.	Population (max)	1 pt/10000 1-10*	10	1
2.	a. Design Flow or b. Peak month average day (whichever is larger)	1 pt/mgd or part 1-10*	10	2
3.	Water Supply Source			
	a. Groundwater	3	NA	3
	b. Surface water	5	NA	
	c. Average raw water quality	0-10**	NA	2
	d. Raw water quality requires treatment 10% of time	2	NA	
	e. Water w/turbidity requiring frequent treatment changes	5	NA	
	f. Raw water subject to industrial pollution	10	NA	
4.	Aeration	2	NA	
5.	Packed Tower Aeration	6	NA	
6.	pH adjustment	4	NA	4
7.	Stability or Corrosion	4	NA	
8.	Taste and Odor Control	8	NA	
9.	Color Control	4	NA	4
10.	Iron/Manganese Removal	10***	NA	10
11.	Ion Exchange/Softening	10	NA	
12.	Chemical Precipitation Softening	20	NA	
13.	Coagulant Addition	4	NA	4
14.	Flocculation	6	NA	
15.	Sedimentation	5	NA	
16.	Upflow Clarification	14	NA	
17.	Filtration	10***	NA	
18.	Fluoridation	5	NA	5
SUBTOTAL				35

35

WATER TREATMENT FACILITY EVALUATION SHEET

NO.	DESCRIPTION	AVAILABLE POINTS	MAXIMUM POINTS	FINAL POINTS
SUBTOTAL POINTS FROM PREVIOUS PAGE ----->				<del>28</del> 35
19.	Disinfection	0-10****	10	
	a. No disinfection	0		
	b. Chlorination	5		5
	c. On-site generation	5		
20.	Special Processes (reverse osmosis) (electrodialysis) (other)	0-15	15	10
21.	Residuals Disposal	0-5	5	
	a. No disposal to raw water	0		5
	b. Disposal to lagoons and then raw water source	2		
	c. Dispose to plant raw water	5		
TOTAL POINTS				<del>78</del> 55

FOOTNOTES

- \* Maximum of 10 points.
- \*\* Assign 1 - 10 for variation or change in the quality of raw water source. Little or No Variation = 0 pts.; River source = 10 pts.
- \*\*\* Each unit process should have points assigned only once. For example, a facility using oxidation, precipitation and filtration for iron removal, add ten points for the iron removal only and zero for filtration.
- \*\*\*\* For disinfectants (ozone, chloride dioxide, chloramines) assign 5 points or chlorination or 5 points for on site generation.
- NA Not Applicable

PLEASE COMPLETE A SEPARATE SHEET FOR EACH TREATMENT FACILITY; A FACILITY USING ONLY DISINFECTION BY CHLORINATION IS NOT A TREATMENT FACILITY.

POINTS

- VSS-T: 30 Points and less, and a maximum population of 500
- Class I-T: 30 Points and less
- Class II-T: 31 to 55 Points
- Class III-T: 56 to 75 Points
- Class IV-T: 76 Points and greater

GRADE OF FACILITY \_\_\_\_\_

Completed by \_\_\_\_\_ Title \_\_\_\_\_

Signature \_\_\_\_\_ Date \_\_\_\_\_

FOR DEP USE ONLY - NOTES

TATA & HOWARD  
INCORPORATED

July 2, 2009

Mr. Thomas Mahin  
DEP - Northeast Regional Office  
205 B Lowell Street  
Wilmington, MA 01887

Subject: Town of Wayland  
Rating of New Baldwin Pond Water Treatment Facility

RECEIVED  
JUL 06 2009  
DEP  
NORTHEAST REGIONAL OFFICE

Dear Mr. Mahin:

In an effort to assist you in determining a rating for the new Baldwin Pond Water Treatment Facility in Wayland, we have reviewed the point rating scale under 310 CMR 22.11B(4)(a) and we suggest the following rating based on our knowledge of the design.

<u>Item</u>	<u>Description</u>	<u>Suggested Points</u>
a.i.	Size of Treatment Facility – Population Served	1
a.ii.	Size of Treatment Facility – Design Flow	2
b.i.	Water Supply Source - Groundwater	3
b.iii.	Water Supply Source – Average Raw Water Quality	2
e.	pH Adjustment	4
i.	Iron & Manganese Removal	10
l.	Coagulant addition	4
q.	Fluoridation	5
r.ii.	Chlorination	5
t.ii.	Residuals Disposal - Lagoons (Drying Beds)	2
t.iii.	Backwash Water Disposal – Supernatant to Raw Water	5
Total Points		43

We hope this information will assist you in determining a rating for the new water treatment facility in Wayland. If you have any questions, please call.

Sincerely,  
TATA & HOWARD, INC.



Jack O'Connell, P.E.  
Senior Vice President

cc: Mr. Don Ouellette  
Wayland DPW

CONSULTING ENGINEERS