



TOWN OF DEERFIELD

Board of Selectmen & Board of Health
8 Conway Street
South Deerfield, MA 01373
Voice: 413.665.1400
Facsimile: 413.665.1411
Website: www.deerfieldma.us

August 31, 2011

Ms. Meridith Timony
US EPA- OEP06-1
5 Post Office Square, Suite 100
Boston, MA 02109 -3912

**RE: NPDES General Permit Application
South Deerfield WWTP(MA0101648)**

Dear Ms. Timony:

Please consider this letter as Notice of Intent (NOI) to apply for NPDES discharge permit renewal at the municipal South Deerfield Wastewater Treatment Plant in Deerfield, MA using General Permit MAG580000 and effluent limitations under Part 1.A.. The current permit for the plant is individual permit MA0101648. The last application for renewal was filed in 2005 under transmittal number W057930.

The South Deerfield WWTP is a small extended air activated sludge treatment facility which accomplishes secondary treatment and discharges into the Connecticut River. The design flow of the plant is 0.85 MGD and the 7Q10 flow of the river is 1705(1100MGD) MGD) making a dilution factor of 1294:1. The current mass loading limits for both BOD and TSS are a monthly average of 213 lb/day and weekly average of 319 lb/day. The current Total Residual Chlorine(TRC) limit is 1.0 mg/l. All sludge generated at the facility is hauled off site in liquid form to the Fitchburg East WWTP in Fitchburg, MA for dewatering and incineration.

The Town requests written authorization to continue seasonal disinfection with chlorine gas and a TRC limit of 1.0 mg/l.

The Town requested and received a change from Major to Minor status for the South Deerfield WWTP in 2007 after the plant's only Significant Industrial User (SIU), Oxford Foods, went out of business. As a result of this closing, effluent Total Nitrogen loading to the Connecticut River also declined. The Town believes it now meets General Permit eligibility limits for Total Nitrogen.

The Town believes it meets eligibility criteria for General Permit status in regards to the Endangered Species Act, the National Historic Preservation Act, and in all other ways.

If you need further information, please contact Don Chappell, Chief Operator, at 413-665-2651 or sdwwtp@verizon.net.

Sincerely,

A handwritten signature in black ink, appearing to read 'Mark E. Gilmore', with a long horizontal flourish extending to the right.

Mark E. Gilmore, Chair
Board of Selectmen

Enc.

Cc: MADEP Worcester
MADEP Springfield



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5 Post Office Square, Suite 100
Boston, MA 02109 -3912

RE: NPDES General Permit Application
South Deerfield WWTP(MA0101648)
Old Deerfield WWTP(MAG580001)

Dear Ms. Timony:

The Town of Deerfield Selectboard has authorized Town Administrator Bernie Kubiak to sign official documents and contracts on behalf of the Board of Selectmen. Please make a note of this in your records for subsequent NPDES discharge applications.

Sincerely,

Mark E. Gilmore, Chair
Board of Selectmen

Cc: MADEP Worcester



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 1

1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

April 22, 2005

Mr. Donald E. Chappell
Chief Operator
South Deerfield WWTP
150 Sunderland Road (Rt. 116)
South Deerfield, MA 01373

Re: NPDES Reapplication No. MA0101648 (Town of South Deerfield)

Dear Mr. Chappell:

Your reapplication for a National Pollutant Discharge Elimination System (NPDES) permit has been reviewed and appears to be complete. You may be contacted for additional information as the permit is developed, should it be necessary to clarify, modify or supplement any previously submitted information. By copy of this letter, your State Water Pollution Control Agency is being furnished a copy of your complete application for certification pursuant to Section 401(a)(1) of the Clean Water Act, as amended, 33 U.S.C. §1341(a)(1).

A draft permit and statement of basis or fact sheet will be prepared by this office and forwarded to you for comment prior to the opening of the public comment period. The draft permit will then be publicly noticed and forwarded for state certification. If it is deemed necessary, a public hearing will be held, in which case, the comment period will be extended until the close of the hearing. After the close of the public comment period, your final permit will be issued providing no new substantial questions are raised. If new questions develop during the comment period, it may be necessary to draft a new permit, revise the statement of basis or fact sheet and/or reopen the public comment period.

The conditions of your present permit will continue in force until your new permit is issued and becomes effective since you have filed a timely and complete application. 40 C.F.R. §122.6, 48 Fed. Reg. 14158 (April 1, 1983).

Should you have any questions concerning the permit issuance process, please do not hesitate to contact me at (617) 918-1519.

Sincerely yours,

A handwritten signature in cursive script that reads "Olga Vergara". The signature is written in black ink and is followed by a horizontal line.

Olga Vergara
Environmental Protection Specialist
Municipal Assistance Unit

cc: MA DEP

John P. Paciorek, Board of Selectmen



Enter your transmittal number

2005

W057930
Transmittal Number

Your unique Transmittal Number can be accessed online: <http://www.mass.gov/dep/counter/trasmfrm.shtml> or call DEP's InfoLine at 617-338-2255 or 800-462-0444 (from 508, 781, and 978 area codes).

Massachusetts Department of Environmental Protection Transmittal Form for Permit Application and Payment

1. Please type or print. A separate Transmittal Form must be completed for each permit application.

2. Make your check payable to the Commonwealth of Massachusetts and mail it with a copy of this form to: DEP, P.O. Box 4062, Boston, MA 02211.

3. Three copies of this form will be needed.

Copy 1 - the original must accompany your permit application. Copy 2 must accompany your fee payment. Copy 3 should be retained for your records.

4. Both fee-paying and exempt applicants must mail a copy of this transmittal form to:

DEP
P.O. Box 4062
Boston, MA
02211

* Note:
For BWSC Permits,
enter the LSP.

A. Permit Information

1. Permit Code: BRPWM07
2. Name of Permit Category: PERMIT RENEWAL, NON INDUSTRIAL
3. Type of Project or Activity: MUNICIPAL WASTEWATER TREATMENT

B. Applicant Information - Firm or Individual

1. Name of Firm - Or, if party needing this approval is an individual enter name below: TOWN OF DEERFIELD
2. Last Name of Individual: CONWAY ST 3. First Name of Individual: TOWN OFFICES 4. MI: _____
5. Street Address: SOUTH DEERFIELD MA
6. City/Town: MA 7. State: 01373 8. Zip Code: 413-665-2651 9. Telephone #
11. Contact Person: DONALD E CHAPPELL, CHIEF OPERATOR 12. e-mail address (optional): SDWWTP@VALINET.COM

C. Facility, Site or Individual Requiring Approval

1. Name of Facility, Site Or Individual: SOUTH DEERFIELD WWTP
2. Street Address: 150 SUNDERLAND RD (RT 116)
3. City/Town: SOUTH DEERFIELD MA 4. State: 01373 5. Zip Code: 413-665-2651 6. Telephone #
8. DEP Facility Number (if Known): M-48 9. Federal I.D. Number (if Known): _____ 10. BWSC Tracking # (if Known): _____

D. Application Prepared by (if different from Section B)*

1. Name of Firm Or Individual: _____
2. Address: _____
3. City/Town: _____ 4. State: _____ 5. Zip Code: _____ 6. Telephone #: _____ 7. Ext #: _____
8. Contact Person: _____ 9. LSP Number (BWSC Permits only): _____

E. Permit - Project Coordination

1. Is this project subject to MEPA review? yes no
If yes, enter the project's EOE file number - assigned when an Environmental Notification Form is submitted to the MEPA unit: _____
EOEA File Number

F. Amount Due

Special Provisions:

- 1. Fee Exempt (city, town or municipal housing authority)(state agency if fee is \$100 or less).
There are no fee exemptions for BWSC permits, regardless of applicant status.
- 2. Hardship Request - payment extensions according to 310 CMR 4.04(3)(c).
- 3. Alternative Schedule Project (according to 310 CMR 4.05 and 4.10).
- 4. Homeowner (according to 310 CMR 4.02).

DEP Use Only

Permit No:

Rec'd Date:

Reviewer:

Check Number

Dollar Amount

Date

3/10/05

NITROGEN

Subject: South Deerfield, MA WWTP General Permit Application

From: Don Chappell <sdwwtp@verizon.net>

Date: Tue, 29 Mar 2011 11:51:12 -0400

To: timony.meridith@epamail.epa.gov - 617-918-1533

Dear Ms. Timony:

I have been in touch with Olga Vergara at EPA and Kathleen Keohane at Mass DEP Worcester regarding applying for a General Permit for the South Deerfield WWTP in Deerfield, MA. The current Individual Permit (MA0101648) for the South Deerfield plant is up for renewal and there has been a significant change at the plant since the last permit was issued which I am hopeful might qualify us for a General Permit. I am the Chief Operator for both of Deerfield's two small extended air treatment plants and I applied for, and received, a General Permit for the Old Deerfield WWTP in 2007 (MAG580001).

The South Deerfield WWTP was built in 1971 to accommodate not only the residential wastewater flow from the village of South Deerfield but also the wastewater flow from a food processing plant which had been in existence for many decades. The food processor (Oxford Foods) was listed as the treatment plant's only Significant Industrial User and represented about half of the BOD load to the treatment plant.

The change which has occurred is that this food processor went out of business in 2006. The factory closed and the building was bulldozed. Soon after, I applied for and received a change in status for the South Deerfield WWTP from a Major treatment facility to a Minor treatment facility. It had previously been listed as a Major solely because of the Significant Industrial User. The design flow of the South Deerfield WWTP is 0.85 MGD.

I understand from Ms Vergara and Ms Keohane that it appears that the South Deerfield WWTP may now qualify for a General Permit except for the requirement to stay under the 35 lb/day Total Nitrogen loading limit to the Connecticut River. This is the main purpose for my writing to you, because I believe we may now be under that limit and I am asking that our case be re-examined in that light.

The food processor was required by its Town-issued discharge permit to add nitrogen (urea) to its waste stream in order to prevent nitrogen deficiency issues at the South Deerfield WWTP. As of 2006, that nitrogen load is no longer coming to or being processed by the South Deerfield WWTP.

I am attaching a listing I have compiled from plant records showing effluent nitrogen from the year 2000 to present. You will see that the average Total Nitrogen loading to the Connecticut River from 2000-2006 was 63.1 lbs/day. The average loading from 2007-2011 since Oxford Foods closed is 30.1 lbs/day.

The Fact Sheet associated with the Draft General Permit lists the average Total Nitrogen discharge for the South Deerfield WWTP for the years 2004-2005. The number there is 46 lbs/day and this is in line with the average effluent nitrogen number I came up with on my attached chart of 47.3 lbs/day. These were the years that Oxford Foods was gradually reducing production as they struggled to stay in business, which they ultimately did not succeed at. You will also see that the flow to the South Deerfield WWTP was drastically reduced as a result of Oxford Foods' closing to an average daily flow of 0.434 MGD.

I invite you to take a look at the attached chart and am hopeful that in light of this new information we might now qualify to apply for a General Permit. It appears to me that the South Deerfield WWTP is now under the 35 lb/day Connecticut River nitrogen loading limit. Please feel free to let me know if you need any further information.

Thank you.

Donald E. Chappell, Chief Operator
Deerfield Wastewater Plants
8 Conway Street, Town Offices
South Deerfield, MA 01373
413-665-2651

Nitrogen Summary.xls	Content-Type: application/vnd.ms-excel Content-Encoding: base64
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South Deerfield WWTP Effluent Nitrogen
 South Deerfield, MA
 2000-2010

Sampling Date	Flow MGD	NH3 mg/l	NH3 lbs	Kjeldahl mg/l	Kjeldahl lbs	N03/N02 mg/l	N03/N02 lbs	Total N mg/l	Total N lbs
11/28/2000	0.816	4.4	29.9	7.4	50.4	0.49	3.3	7.9	53.8
1/23/2001	0.572	3.4	16.2	6.9	32.9	5.2	24.8	12.1	57.7
4/10/2001	1.893	0.39	6.2	1.6	25.3	2.2	34.7	3.8	60
7/24/2001	0.809	0.46	3.1	2.1	14.2	0.05	0.3	2.2	14.8
10/9/2001	0.652	0.27	1.5	1.2	6.5	9.2	50	10.4	56.6
1/8/2002	0.643	6.8	36.5	12	64.4	2.8	15	14.8	79.7
4/30/2002	0.875	0.69	5.1	1.67	12.2	7.42	54.1	9.1	66.4
7/2/2002	0.847	1.49	10.5	3.7	26.1	0	0	3.7	26.1
10/22/2002	0.609	0.66	3.4	3.6	18.3	15.7	79.9	19.3	98
1/7/2003	0.635	0.9	4.8	5.3	28.1	8.29	43.9	13.6	72
4/15/2003	0.946	1.61	12.7	2.6	20.5	9.87	77.9	12.5	98.7
7/8/2003	0.778	0.49	3.2	1.9	12.3	14	90.8	15.9	103.2
10/21/2003	0.858	0.3	2.1	0	0	6.23	44.6	6.2	44.4
1/13/2004	0.816	2.74	18.6	3.4	23.1	7.6	51.7	11	74.9
4/6/2004	0.961	3.6	28.9	6.6	52.9	0	0	6.6	52.9
7/6/2004	0.619	2.2	11.4	3.9	20.1	4	20.6	7.9	40.8
11/9/2004	0.536	1.9	8.5	2.7	12.1	6.5	14.8	9.2	41.1
1/18/2005	0.748	0.22	1.4	1.8	11.2	3.3	20.6	5.1	31.8
4/12/2005	0.808	11	74	11	74	0.43	2.9	11.4	76.8
7/12/2005	0.658	0.62	3.4	1.5	8.2	2.3	12.6	3.8	20.1
10/11/2005	1.029	0.63	5.4	0	0	8.1	69.5	8.1	69.5
1/10/2006	0.911	0.84	6.4	1.4	10.6	1.9	14.4	3.3	25.1
4/11/2006	0.737	0.49	3.1	0	0	9.75	59.9	9.8	60.2
7/18/2006	0.433	0.52	1.9	2.47	8.9	14.4	52	16.9	66.4
10/10/2006	0.358	0.63	1.9	0	0	18.4	54.9	18.4	54.9
1/9/2007	0.647	0.8	4.3	2.02	10.9	5.11	27.6	7.1	38.3
4/10/2007	0.622	1.49	7.7	2.05	10.6	6.25	32.4	8.3	43.1
7/10/2007	0.343	3.29	9.4	5	14.3	0.08	0.2	5.1	14.6
10/9/2007	0.275	13.5	30.9	11.4	26.1	0	0	11.4	26.1
1/8/2008	0.335	5.39	15.1	5.88	16.4	0.46	1.3	6.3	17.6
4/8/2008	0.905	0.15	1.1	0	0	3.74	28.2	3.7	27.9

South Deerfield WWTP Effluent Nitrogen (cont.)

Sampling Date	Flow mgd	NH3 mg/l	NH3 lbs	Kjeldahl mg/l	Kjeldahl lbs	NO3/NO2 mg/l	NO3/NO2 lbs	Total N mg/l	Total N lbs
7/8/2008	0.454	18	68.2	17.9	67.8	0.38	1.4	18.3	69.3
10/7/2008	0.343	0.42	1.2	0	0	9.61	27.5	9.6	27.5
1/6/2009	0.491	0.23	0.9	1.24	5.1	0.88	3.6	2.2	9
4/7/2009	0.691	0.14	0.8	0	0	3.56	20.5	3.6	20.7
7/14/2009	0.281	1.02	2.4	1.55	3.6	1.03	2.4	2.7	6.3
10/13/2009	0.289	3.27	7.9	3.68	8.9	0.4	1	4.1	9.9
1/12/2010	0.352	1.17	3.4	1.65	4.8	0.51	1.5	2.2	6.5
4/14/2010	0.626	1.54	8.1	2.05	10.7	0.67	3.5	2.7	14.1
7/7/2010	0.212	0.88	1.6	3	5.3	22.8	40.3	25.8	45.6
10/13/2010	0.245	1.04	2.1	1.48	3.1	17.1	34.9	18.6	38
1/18/2011	0.266	0.85	1.9	1.67	3.7	6.63	14.7	8.3	18.4
Average	0.651	2.4	11.3	3.5	17.6	5.6	28.1	9.1	44.7
2000-2006	0.781	1.9	12.4	3.4	22.1	6.3	41	9.7	63.1
2007-2011	0.434	3.1	11.2	3.6	13.1	4.7	17	8.3	30.1
2004-2005	0.718	2.9	19	3.9	23.4	4	24	7.9	47.3

Notes: Flow Mgd is for sampling day.
 All testing done at Test America Inc, Westfield, MA. Reports on file at South Deerfield WWTP.
 Total N=Kjeldahl + NO3/NO2.