

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND - REGION I
ONE CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

Request for General Permit Authorization to Discharge Wastewater
(Notice of Intent to be covered by the General Permit (NOI))

DEC 18 2009

Potable Water Treatment Facility (PWTF)
NPDES General Permit No. MAG640000 and NHG640000

A. Facility Information

1. Facility Owner:

Name Gorham Water & Sewer e-mail dpatrygorhamws@ne.rr.com
Street/PO Box 8 Main St City Gorham
State NH Zip Code 03581
Contact Person David Patry Telephone Number 603-466-3302

2. Facility Operator (if different from above):

Name Kurt Johnson e-mail (optional) dpatrygorhamws@ne.rr.com
Street/PO Box 8 Main St City Gorham
State NH Zip Code 03581
Contact Person David Patry Telephone Number 603-466-3302

3. Facility Data (attach topographic map or other map showing facility and discharge location(s)):

Name Water Treatment Plant e-mail (optional) dpatrygorhamws@ne.rr.com
Street/PO Box 74 Jimtown Rd City Gorham
State NH Zip Code 03581
Contact Person David Patry Telephone Number 603-466-3302
Facility Latitude N44°24.258 Facility Longitude W071°14.478

4. Standard Industrial Classification (SIC Codes) and Descriptions of Processes:

SIC Code(s) 4941 Water Supply
Description(s) Water Supply

5. Current Permitting Status (please check yes or no):

1. Has a prior NPDES permit been granted for the discharge? Yes (Permit Number: NH640002)
No
2. Is the discharge a "new discharge" as defined by 40 CFR Section 122.22? Yes No
3. Is the facility covered by an individual NPDES permit? Yes (Permit Number) No
4. Is there a pending application on file with EPA for this discharge? Yes (Date of submittal:)
No

B. Discharge Information

1. Name of Receiving Waterbody Moose Brook
2. Type of Receiving Waterbody (e.g. stream, lake, reservoir, estuary etc) Stream
3. State Water Quality Classification: B Freshwater: Marine Water:
4. Describe the discharge activities for which the owner/applicant is seeking coverage, including process discharges not specifically authorized in the PWTF GP which need to be authorized for discharge (and which attain the

effluent limits and other conditions of the general permit). This description should include all treatment methods used on the wastewater prior to discharge including lagoons, baffles, filter presses etc. If lagoons are used at the facility, please include the number and size of lagoons; the size and elevation of the entry pipe; the time of travel from the entry point of the discharge into the lagoon to the entry point to the receiving water; and the length of backwash cycle for any combination of number of filters. (attach extra sheets if necessary):
There is no treatment to the water before being discharged to the lagoon. The debris mat is put into suspension and drained into the lagoon. The water in the lagoon then filters through the overburden at a rate sufficient enough to prevent the need for discharge. There is one lagoon at 158,000 gallons. Entry pipe is 12 inch @ 1122 ft. Time of travel from entry point to lagoon is 10 minutes. Length of cycle is 4 hours.

5. Please provide a diagram depicting the treatment methods, outfalls, and receiving water.

6. Number of outfalls: 1 Latitude and Longitude for each outfall (attach additional pages if necessary)
 OUTFALL # Latitude N 44° 24.213 Longitude W 071° 14.518
 OUTFALL # Latitude _____ Longitude _____

For each outfall:

7. What is the proposed sampling location(s) and proposed consistent times of the month for collecting samples:
Samples will be taken at outfall. Samples will be collected on the 2nd Wednesday of each month. We have not discharged from the plant to date.

C. Effluent Characteristics

1. List here and attach information on any water additives used at the facility (Including chemicals for pH adjustment, dechlorination, control of biological growth, and control of corrosion and scale in water pipes): No chemicals are used in discharge waters. Chemicals are exclusive to plant effluent only.

2. Please report here any known remediation activities or water-quality issues in the vicinity of the discharge.
N/A

3. Are aluminum-containing coagulants used at this facility? Yes ___ No X

4. Does the discharge contain residual chlorine? Yes ___ No X

5. Does the facility provide treatment to remove arsenic from the raw water source? Yes ___ No X

6. Are phosphorus-containing chemicals added to the treated water at this facility? Yes ___ No X

7. All applicants must attach a separate sheet listing all laboratory results (minimum of five) for total recoverable aluminum (in micrograms per liter) taken within the last six months. Do not include dilution when recording your results. See Section 4.4.5 of General Permit for more information.

8. Please include the following effluent data for each outfall:

Characteristic (report if measured)	Average Monthly	Maximum Daily
Discharge Flow (gpd)	<u>N/A</u>	<u>N/A</u>
TSS (mg/l)	<u>_____</u>	<u>_____</u>
pH (s.u.)	(min) <u>_____</u>	(max) <u>_____</u>
Total Recoverable Aluminum (ug/l)	<u>_____</u>	<u>_____</u>
Total Residual Chlorine (ug/l)	<u>_____</u>	<u>_____</u>

Since we have not discharged from the plant to date, there is no data available

(continued on next page)

8. Continued

Characteristic (report if measured)

Whole Effluent Toxicity (%) LC50 N/A and/or C-NOEC N/A

9. If the discharge contains aluminum and/or residual chlorine, please provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water, the dilution factor, and attach any calculations used to support stream flow and dilution calculations (See Appendix VII for dilution calculations and additional information):

7Q10 _____ cfs Dilution Factor _____ cfs

D. Endangered Species Act Eligibility

1. Using the instructions in Appendix I of the PWTF GP, under which criterion listed in Part II are you eligible for coverage under this general permit?

A B _____ C _____ D _____ E _____ F _____

2. If you selected criteria D or F, has consultation with the federal services been completed? Yes _____ No _____

3. If consultation with U.S. Fish and Wildlife Service and/or NOAA Fisheries Service was completed, was a written concurrence finding that the discharge is "not likely to adversely affect" listed species or critical habitat received? Yes No _____

4. Attach documentation of ESA eligibility as described below and required at Part 3.4.1 and Appendix I, Part III, Step 4, of the General Permit.

Criterion A - No federally-listed threatened or endangered species or federally-designated critical habitat are present: A copy of the most current county species list pages for the county(ies) where your site or facility and discharges are located. You must also include a statement on how you determined that no listed species or critical habitat are in proximity to your site or facility or discharge locations.

Criterion B - Section 7 consultation completed with the Service(s) on a prior project: A copy of the USFWS's and/or NMFS's, as appropriate, biological opinion or concurrence on a finding of "unlikely to adversely effect" regarding the ESA Section 7 consultation.

Criterion C - Activities are covered by a Section 10 Permit: A copy of the USFWS's and/or the NMFS's, as appropriate, letter transmitting the ESA Section 10 authorization.

Criterion D - Concurrence from the Service(s) that the discharge is "not likely to adversely affect" federally-listed species or federally-designated critical habitat (not including the four species of concern identified in Section I of Appendix I): A copy of the USFWS's and/or the NMFS's, as appropriate, letter or memorandum concluding that the discharge is consistent with the general permit's "not likely to adversely affect" determination.

Criterion E - Activities are covered by certification of eligibility: A copy of the documents originally used by the other operator of your site or facility (or area including your site) to satisfy the documentation requirement of Criteria A, B, C or D.

Criterion F - Concurrence from the Service(s) that the discharge is "not likely to adversely affect" species of concern, as identified in Section I of Appendix I: A copy of the USFWS and/or the NMFS, as appropriate, concurrence with the applicant's determination that the discharge is "not likely to adversely affect" listed species.

E. National Historic Properties Act Eligibility

1. Using the instructions in Appendix III of the PWTF GP, under which criterion listed in Part III are you eligible for coverage under this general permit?

1 X 2 3

2. Have any State or Tribal historic preservation officers been consulted in this determination? Yes No X
If yes, attach the results of the consultation(s).

F. Certification

I certify that the discharge for which I am seeking coverage under the general permit consists solely of a surface water discharge from a potable water treatment facility. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature *David Patry* Date 12/11/09
Printed Name and Title David Patry, Superintendent

Federal regulations require this application to be signed as follows:

1. For a corporation, by a principal executive officer of at least the level of vice president;
2. For partnership or sole proprietorship, by a general partner or the proprietor, respectively, or,
3. For a municipality, State, Federal or other public facility, by either a principal executive officer or ranking elected official.

Note: Permits No. MAG640000 and NHG640000 may be found at www.epa.gov/region1/npdes/pwtfgp.html



United States Department of the Interior



FISH AND WILDLIFE SERVICE
New England Field Office
70 Commercial Street, Suite 300
Concord, New Hampshire 03301-5087
<http://www.fws.gov/northeast/newenglandfieldoffice>

January 2, 2009

To Whom It May Concern:

This project was reviewed for the presence of federally-listed or proposed, threatened or endangered species or critical habitat per instructions provided on the U.S. Fish and Wildlife Service's New England Field Office website:

(<http://www.fws.gov/northeast/newenglandfieldoffice/EndangeredSpec-Consultation.htm>)

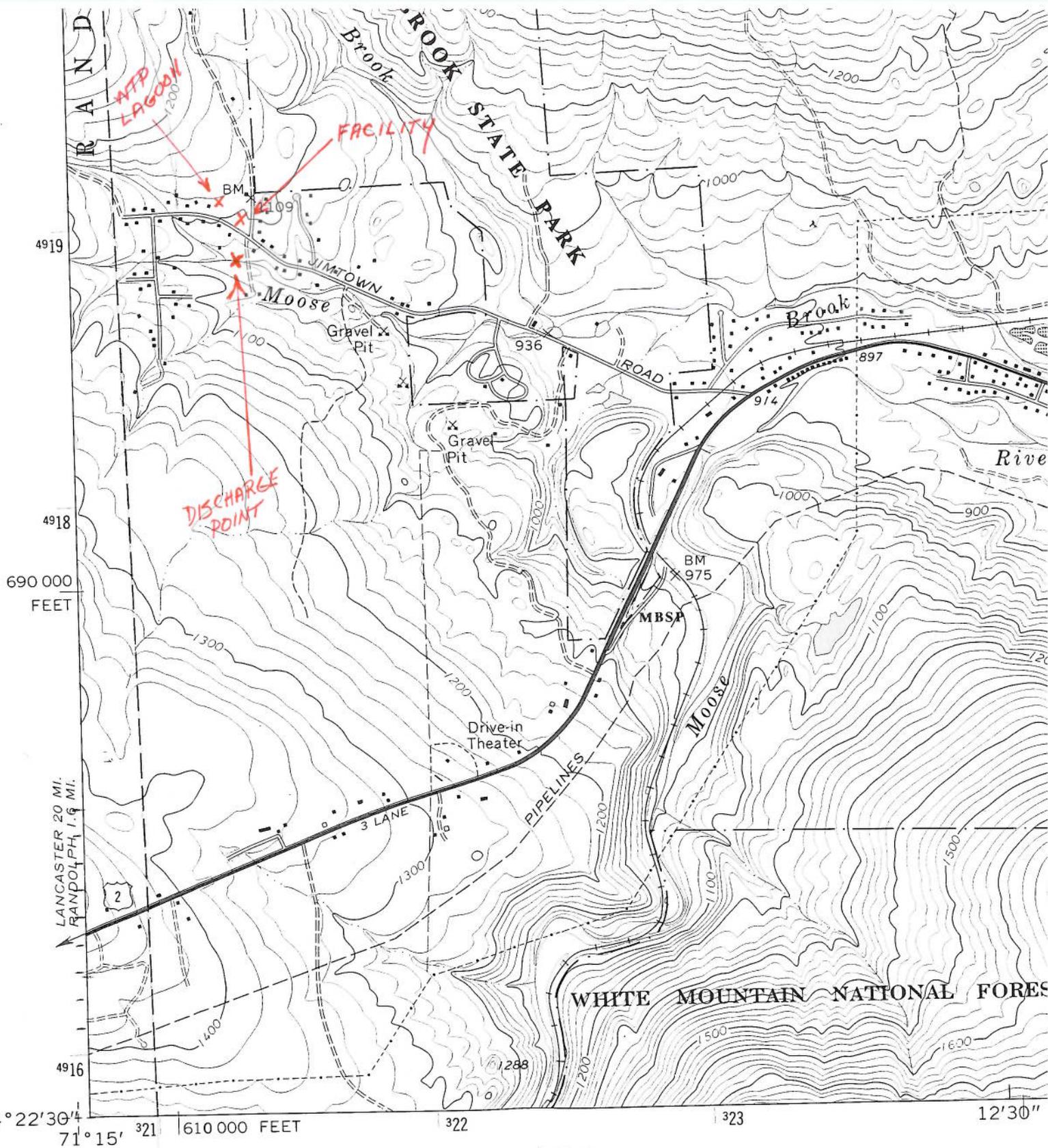
Based on the information currently available, no federally-listed or proposed, threatened or endangered species or critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service (Service) are known to occur in the project area(s). Preparation of a Biological Assessment or further consultation with us under Section 7 of the Endangered Species Act is not required.

This concludes the review of listed species and critical habitat in the project location(s) and environs referenced above. No further Endangered Species Act coordination of this type is necessary for a period of one year from the date of this letter, unless additional information on listed or proposed species becomes available.

Thank you for your cooperation. Please contact Mr. Anthony Tur at 603-223-2541 if we can be of further assistance.

Sincerely yours,

Thomas R. Chapman
Supervisor
New England Field Office



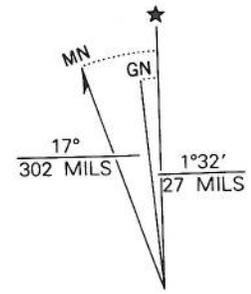
Mapped, edited, and published by the Geological Survey
 Control by USGS and USC&GS

Topography by photogrammetric methods from aerial photographs
 taken 1964 and 1965. Field checked 1970

Polyconic projection. 1927 North American datum
 10,000-foot grid based on New Hampshire coordinate system
 1000-meter Universal Transverse Mercator grid ticks,
 zone 19, shown in blue

To place on the predicted North American Datum 1983
 move the projection lines 3 meters south and

WASHINGTON
 1:25,000



UTM GRID AND 1989 MAGNETIC NORTH
 DECLINATION AT CENTER OF SHEET

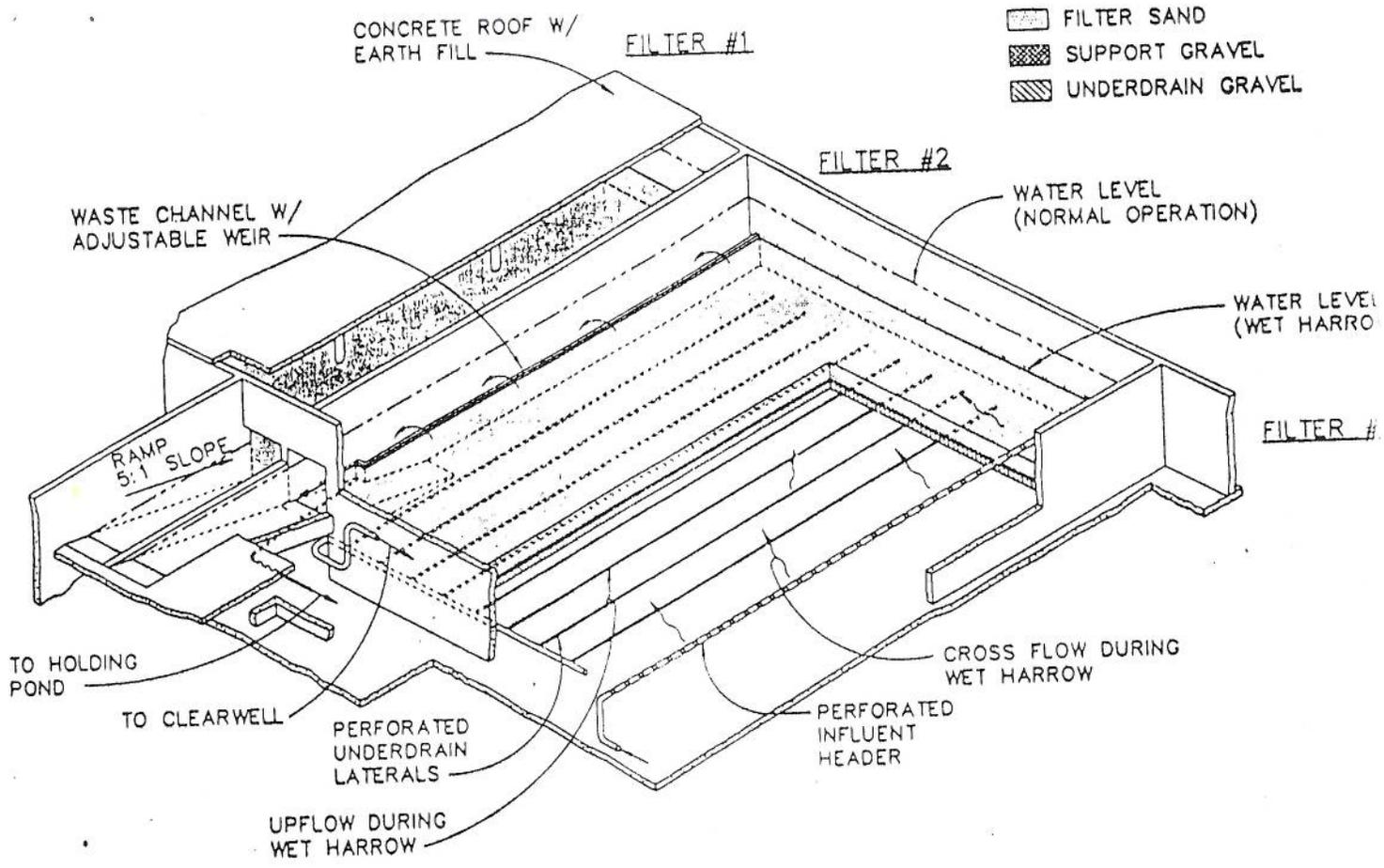
DESCRIPTION OF THE FACILITY

The Gorham Slow Sand Water Filtration Facility is located on Jimtown Road in the northwest portion of the Town of Gorham. The facility intercepts the pre-existing transmission mains from both Perkins Brook and Ice Gulch, the two long-term surface sources for the Town water supply.

The 1.0 MGD facility incorporates three separate parallel filter beds. Each bed has a nominal capacity of .33 MGD at a loading of .05 GPM/square foot, a moderate rate for slow sand filtration facilities. Any one of the three beds can be taken off line for maintenance and the other two can still produce a combined 1.0 MGD, if needed at the time, by temporarily increasing the loading. Incoming raw water is proportionately split between the three beds and filters down through 30 inches of specially selected clean sand of a particular grain size and uniformity coefficient. The filtered water is collected in underdrains and conveyed by a series of pipes to a 90,000 gallon clearwell incorporated into the foundation of the main building. There the water is disinfected with sodium hypochlorite and the pH is raised with sodium hydroxide as a corrosion preventative. Both liquid chemicals are stored in bulk tanks on the main floor, and are injected into the water at a rate proportional to flow. Chlorine residual and pH of the finished water are constantly monitored to assure optimum conditions.

When water is first put through a brand new filter, not much treatment occurs at first other than entrapment of particulate matter. However, after a period of time (which varies according to raw water quality, filtration rate, sand size and temperature), a biological layer of active bacteria and other living organisms builds up on the top centimeter or two of the filter. The time period is ordinarily several weeks. It is in this layer, (which is most commonly referred to by the German term "schmutzdecke") that bacteriological processes take place. As the water passes through the remaining thickness of sand, the by-products from the biological action are trapped and only clear water reaches the bottom.

Over time, the biological layer becomes thick --- which restricts flow --- and requires either physical removal or strong agitation and flushing. At the Gorham plant, this operation is carried out with a tractor-drawn comb harrow driven over the beds several times while raw water is flushed across the surface carrying waste solids over a weir plate through drain piping and into an exterior retention basin. Next, the harrowing is repeated without flushing to evenly distribute the remaining organisms. After harrow is complete, the water level is brought back up to normal and the filtered water is run to waste for the time necessary to reactivate the treatment layer---usually less than one day.



CUT-AWAY OF
CENTER FILTER BED
(FILTER #2)