

RESPONSE TO PUBLIC COMMENT

From June 19, 2000 to July 18, 2000 and August 26, 2000 to September 8, 2000 the United States Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MA DEP) solicited Public Comments on a draft NPDES permit, developed pursuant to an application from the Caritas Southwood Hospital. After a review of the comments received, EPA has made a final decision to issue the permit authorizing the discharge. The following response to comment describes the changes and briefly describes and responds to the comments on the draft permit. A copy of the final permit may be obtained by writing or calling Betsy Davis, United States Environmental Protection Agency, 1 Congress Street, Suite 1100 (CMA), Boston, Massachusetts 02114-2023; Telephone (617) 918-1576.

A) Comments submitted by Choate, Hall and Stewart on behalf of the Southwood Hospital on July 18, 2000.

Comment #1: The requirements for 24-hour composite sampling of influent and effluent and analyses three times per week are not necessary for monitoring a wastewater treatment plant of this size, especially considering future discontinuance of the discharge to the existing system. According to our engineers, the effluent concentration levels and frequency of sampling and monitoring provided in the Southwood draft NPDES permit are more appropriate for substantially greater discharges from larger treatment plants (e.g., Charles River Pollution Control District WWTP and the Milford WWTP), as opposed to a facility such as Southwood, which will maintain a maximum discharge of 55,000 gallons per day. Further, sampling and testing at the levels proposed in the draft NPDES permit would force Southwood to install sampling equipment to the current system at a cost of approximately \$20,000, even though the system will be abandoned in the near term. An additional \$24,000 would also have to be expended by Southwood annually for influent and effluent testing under the terms of the draft permit.

As indicated above and addressed with representatives of EPA and DEP, Southwood plans to abandon its wastewater treatment plant in favor of an alternative system. Under these circumstances, it is unreasonable to require Southwood to comply with the effluent concentration limits and monitoring requirements proposed in the draft NPDES permit at this time. We would appreciate the opportunity to discuss alternative effluent concentration limits and monitoring schedules with EPA and DEP.

Response: The sampling frequencies for TSS and BOD₅ have been reduced from three times per week to twice a week based on recent DMR data showing that the facility is in compliance with the existing permit limits. The sampling frequency for ammonia-nitrogen has been reduced from five times per week to twice per week, since the flow is decreasing.

The Charles River and the Stop River are now effluent dominated streams and permit exceedances in effluent dominated streams have a greater potential for environmental harm. Limitations and monitoring requirements in the permit reflect the fact that Charles River and Stop River are on the Massachusetts 303(d) lists of impaired water and the discharge has a large impact on the quality of the receiving water.

See the response to comment #15.

Comment #2: The Effluent Limitations and Monitoring Requirements table on page 2 of the draft NPDES permit does not require copper testing, although the Schedule of Compliance on page 6 discusses the reporting of copper limits. We assume that because an effluent limit for copper was not provided, that testing for copper concentrations is not required by the draft permit. However, this issue should be clarified before the final NPDES permit becomes effective.

Response: Copper was mistakenly omitted from the draft permit, but has been added on page three of the final permit. Attachment D of the fact sheet, part of the draft permit package, included the copper calculation and the fact sheet explained the need for it in the permit. A one year compliance schedule has been added to the final permit, so that for the first year of the permit, the permittee will only be required to report the average monthly and daily maximum copper levels.

Comment #3: The wastewater system alternatives currently under review by Southwood include replacement of all vitrified clay (“VC”) sewer pipes on the site. Replacement of all the VC sewer pipes will essentially eliminate infiltration to the wastewater treatment plant.

Response: The EPA and MA DEP concur that replacing the vitrified clay pipes will greatly reduce infiltration/inflow.

Comment #4: The existing wastewater treatment plant is a gravity operation, therefore no emergency power is required.

Response: Back-up power is a standard condition of all POTW permits. In accordance with, 40 CFR §122.41, an alternate power source is required when an operation is required to achieve compliance with the permit. An alternative power source is needed as a backup for the chlorination system.

Comment #5: Southwood and its engineers would find it extremely difficult to prepare the Chlorination System Report and Best Management Practices Plan within the three-month period currently specified in the draft permit. We therefore request at least six months from the effective date of the permit to prepare and submit these documents. Also, given the relatively small size of the discharge from the Southwood wastewater treatment plant, we recommend that disinfection with chlorination be replaced by ultraviolet light (“UV”) disinfection. Use of UV disinfection would leave no residual chlorine in the effluent.

Response: EPA and MA DEP support switching from a chlorination system to a UV system and if and when the change takes place we will modify the permit to show the change.

The date for submitting the Chlorination System Report has been changed to July 31, 2001 in recognition that the chlorination season will have ended when the permit becomes effective. The Chlorination System Report requires sampling with the system in operation. The date for development of a Best Management Practices plan has been extended from 90 days to 270 days. The Best Management Practices plan need only be submitted to EPA and MA DEP upon request. The plan will be minimal if staffing is

reduced as proposed by the permittee however, if the permittee should restaff at any time you will have to augment the BMP plan to account for an increase in activities.

Comment #6: The section of the draft NPDES permit requiring compliance with federal and state laws regarding use and disposal of sewage sludge is inappropriate, as existing sludge as septage is pumped semi-annually from Southwood's septic tank by a licensed hauler. The septage is disposed of at a regional wastewater treatment plant licensed to receive and treat septage.

Response: The agency includes standard sludge conditions in all NPDES permits. Since Southwood contracts disposal of sludge, the language does not apply to your facility at this time. If circumstances at the facility change such that Southwood does not contract disposal of its sludge, the sludge requirements would apply.

B). Comments submitted by the Charles River Watershed Association on July 18, 2000.

Comment #7: Disinfection has been reduced from year-round to seasonal (March 1 to October 31) in all permits. CRWA recognizes that this disinfection schedule reflects an increased period of disinfection, compared to the treatment plants' current NPDES limits. However, CRWA prefers the use of year-round disinfection coupled with adequate dechlorination (as needed), originally proposed in the draft NPDES permits. While recreational use of the river decreases there still are users who boat and fish during the winter. Additionally miles, of the upper reaches of the Charles violate the Massachusetts Surface Water Quality Standards for fecal coliform during the winter when disinfection is discontinued.

Response: The fecal coliform limits are based on State Water Quality Standards, for Class B water, and MA DEP believes that seasonal disinfection is the best option for these permits. The monitoring period has been extended from March 1 through November 30 in all six permits because of increased activity along the river. The MA DEP recommends year round disinfection when a facility's discharge could impact a public drinking water supply or shellfish beds. Ingestion of contaminated water or shellfish is a public health concern however, neither of these conditions exists for facilities that discharge to the Charles River.

Comment #8: It is not clear why the numerical limit for ammonia at the Southwood Hospital has been dropped for April and May and why the summer limit has been increased from 1 mg/l to 7.6 mg/L. We feel this is a very high limit for the summer. Also, it is not clear why the permit limit for copper has been eliminated altogether from the Southwood Hospital.

Response: The numerical limit in the draft permit of 7.6 mg/l for ammonia is a mistake in that it only considered ammonia toxicity concerns and did not consider dissolved oxygen concerns. The number will be changed in the draft permit and the public comment period was extended so that there was an opportunity for comment. The Massachusetts 303 (d) list identifies segments in the upper Charles River with low dissolved oxygen levels. To meet water quality standards, the ammonia limits in the permit reflect a maximum amount of that can be discharged into the receiving stream in the absence of a TMDL. Once a TMDL is completed for the upper Charles it is possible that the limits will be more stringent. The concentration based limits are 1 mg/l for average monthly and average weekly and 2 mg/l

for maximum daily, and the mass based limits are 0.5 lbs/day for the average monthly and the average weekly and 0.8 lbs/day for maximum daily.

See response to comment #2.

Comment #9: CRWA recommends that all permits have winter, reporting requirements for BOD, TSS, phosphorus, ammonia, fecal coliform, temperature, and dissolved oxygen. This information will be critical as the EPA, Massachusetts Department of Environmental Protection, and CRWA begin preparation of Total Maximum Daily Loads on the Charles River.

Response: All six permits have year round reporting requirements for BOD₅, TSS and dissolved oxygen. Year round ammonia limits are in the draft permits for MCI WWTP, Milford WWTF and Wrentham Developmental Center. The other three facilities did not warrant winter ammonia limits at this time (See Attachment to the fact sheet for ammonia calculation) but are required to report ammonia each month during the cold weather season.

Effluent temperature is not typically required monitoring in municipal wastewater permits, but river temperature and effluent temperature would be routinely monitored as part of the water quality surveys designed to support TMDL development.

Winter phosphorus monitoring has been added to all six permits because there is the potential for accumulation in impoundments which contributes to eutrophication in the receiving water.

The reporting period for fecal coliform is explained in the response to comment #7.

Comment #10: NPDES permits for MCI, Southwood Hospital and Wrentham all have BMP sections in their footnotes. CRWA recommends that the other plants be required to implement BMP plans, if they have not done so.

Response: Incorporating a BMP plan is a means of putting good housekeeping procedures into practice and addressing toxics being discharged into the sewer system at all three facilities. A BMP plan is a vehicle in which the plant operator can address the need for pollution prevention within the facility. The decision for including a BMP in the MCI, Southwood Hospital and Wrentham Developmental Center permits and not the other three are based on the various types of work performed at these facilities, since the treatment plants are not the primary functions at any of them, as well as observations made by EPA and the MA DEP staff during recent site visits. There are activities at the facilities which could contribute to pass through as interference of treatment processes.

C) Comments submitted by Choate, Hall and Stewart on behalf of the Southwood Hospital on August 29, 2000.

Comment #11: Preliminary Schedule of Elimination of Discharge to Surface Waters

In conjunction with the reduction of operations at its Norfolk facility, Southwood has decided to apply to the Town of Walpole ("Town") for permission to discharge wastewater from the facility into the Walpole sewer system. Connection to the Walpole sewer would obviate the requirement for a NPDES permit, as it would eliminate discharge to surface waters.

The regulations governing administration of the NPDES permitting system anticipate the incorporation of a schedule for compliance and/or termination of discharge to surface water into an NPDES permit. See 40 C.F.R. § 122.47 (2000). Pursuant to Section 122.47, Southwood requests that EPA incorporate a schedule into the draft NPDES permit that would accommodate Southwood's transition from discharge to the current WWTP system to connection to the Walpole sewer. Please remember that during the transition period, Southwood will be closing most of its operations at the Norfolk facility and Southwood's engineers project a significant reduction in flow through the existing WWTP. We would be happy to provide more information with respect to the scheduled closing of operations at our September 5th meeting.

In accordance with the regulations, Southwood has prepared the following proposed schedule with interim dates for the achievement of milestones, with the final objective of the elimination of discharge to surface water. Of course, Southwood's proposed schedule and achievement of milestones is contingent upon local and regulatory approvals. Southwood's proposed schedule is for discussion purposes and is submitted in an effort to reach agreement on a reasonable compliance schedule. Its terms may be subject to change based on the actions of state and local regulatory authorities and other contingencies beyond Southwood's present knowledge or control. We would welcome any assistance that EPA could provide in expediting the state and local approval processes.

Southwood's representatives have already initiated discussions with the Town to determine the steps necessary to reach agreement with the Town for a connection to its sewer system.

Southwood believes it can realistically reach a comprehensive agreement with the Town with respect to sewer connection, and with a neighboring property owner for an easement, within six months. As part of the comprehensive agreement with the Town, the Town must approve Southwood's submittal of an application to the Department of Environmental Protection ("DEP") for a Sewer Extension Permit (which will be required for the Walpole connection).

Once the Town authorizes Southwood's application, Southwood expects that the DEP Sewer Extension Permit could be issued within four months.

Southwood's connection to the Walpole system will also require approval from the Massachusetts Water Resources Authority ("MWRA") because it will involve a connection to the MWRA sewer system by a non-MWRA sewer community (i.e., Norfolk). The MWRA and DEP approval processes can be conducted on parallel tracks; Southwood anticipates that the MWRA approval could also be obtained within four months of Southwood's reaching a comprehensive agreement with the Town.

The final phase of Southwood's connection to the Walpole sewer system, construction of the sewer extension and connection, could begin once the permitting is in place. Once construction begins, Southwood's engineers estimate that construction could be completed within six to nine months.

We believe the circumstances surrounding the Southwood facility at this time, particularly its phased elimination of all discharges of wastewater to any surface waters, render the incorporation of a schedule with interim dates especially appropriate in this case. Based on the schedule above, Southwood expects that discharges to surface water could be eliminated by January 2002. In the meantime, as Southwood discontinues its operations at the Norfolk facility, Southwood expects continued reduction in the amount of wastewater flowing through the existing WWTP.

Response: See the response to comment #1 submitted in the letter dated September 8, 2000 from Choate, Hall and Stewart regarding the compliance schedule and effluent limitations in the final permit.

Comment #12: Ammonia

On July 25, 2000, EPA informed Southwood that the ammonia limit included in the draft NPDES permit was incorrect. EPA reduced the ammonia limit in the draft permit, 7.6 mg/l, to 1 mg/l for the average monthly and average weekly limits, and to 2 mg/l for the maximum daily limit, with a testing frequency of five times per week. Southwood's engineers have advised us that the existing WWTP cannot attain these limits. Given Southwood's plan to eliminate its discharges to surface waters, it would be unreasonable to require Southwood to either construct a new WWTP or to allocate the significant resources required to upgrade the WWTP in order to comply with this standard.

Southwood also objects to the revised draft monitoring requirements. Southwood's engineers estimate that sampling and analysis of ammonia alone, five times per week, would cost up to \$31,200 per year. Southwood's engineers have determined that testing for ammonia levels one time per week would provide sufficient information to protect the quality of the receiving waters. In fact, DEP groundwater discharge permits for small WWTPs of the approximate size of the Southwood WWTP typically require ammonia testing only once per month.

Response: See the response to comment #1 and comment #15 submitted in the letter dated July 18, 2000 and September 8, 2000, from Choate, Hall and Stewart regarding the frequency of monitoring for ammonia in the final permit and the effluent limitations in the final permit.

Comment #13: Copper

On July 25, 2000, EPA informed Southwood that although the draft permit provided no effluent limit for copper, such a limit was mistakenly omitted from the permit. The revised draft NPDES permit proposes to include a maximum daily limit for copper of 5

ug/l and an average monthly limit of 4 ug/l. Southwood's engineers have advised us that the existing WWTP cannot attain these limits. Given Southwood's plan to eliminate its discharges to surface waters, it would be unreasonable to require Southwood to either construct a new WWTP or to allocate the significant resources required to upgrade the WWTP in order to comply with this standard.

Response: See the response to comment # 2.

Comment #14: Total Residual Chlorine

Lastly, the limit for Total Residual Chlorine included the draft NPDES permit is 11 ug/l, which is four and a half times less than the detectable test limit, as measured by the 20th Edition of the Standard Methods. According to Southwood's engineers, the facility would be unable to comply with this proposed limit without a complete replacement of its existing chlorination system. The cost of retrofitting the system with an ultraviolet light (UV) disinfection system would be approximately \$30,000 for equipment and structures. Again, Southwood believes that this expenditure of resources is not prudent, given its plans to discontinue all wastewater discharges from the facility.

Response: As stated in footnote 6 of the permit, the minimum level for chlorine, which is the level at which compliance is determined is 50 ug/l. Appropriate interim limits, and a compliance schedule for achieving the chlorine limits would be included in the Administrative Order issued by MA DEP or EPA. See response to comment #15.

C) Comments submitted by Choate, Hall and Stewart on behalf of the Southwood Hospital on September 8, 2000.

Comment #15: As discussed in our previous comment letters and at our September 5, 2000 meeting, Southwood has decided to apply to the Town of Walpole ("Town") for permission to discharge wastewater from the facility into the Walpole sewer system. Connection to the Walpole sewer would obviate the requirement for a NPDES permit, as it would eliminate discharge to surface waters.

Over the past two years, Southwood has taken the following steps toward obtaining permission to discharge wastewater from the Norfolk facility into the Walpole sewer system: (1) the Massachusetts state legislature has passed an act allowing Southwood to connect to the sewer system in Walpole;' (2) Southwood has met with the Walpole town manager, the sewer superintendent, and the Town sewer commission with respect to infiltration removal work to be performed by Southwood on the Walpole sewer system, with such work resulting in a net reduction in flow through the Walpole system; (3) Southwood has met with an adjacent landowner with respect to obtaining an easement to allow the facility to connect to the Walpole sewer system; (4) Southwood's engineers have prepared final design plans for the proposed connection to the Walpole sewer system; and (5) Southwood has secured Orders of Conditions for construction of the sewer connection from the conservation commissions in accordance with the 40 C.F.R. § 122.47, Southwood has prepared the following proposed schedule with interim dates for the achievement of milestones, with the final objective of the elimination of discharge to

surface water. In order to address the potential delay or complications associated with obtaining necessary state and local regulatory approvals, we have incorporated an alternative schedule with interim dates for constructing a new WWTP with groundwater discharge, and for obtaining a groundwater discharge permit from the Department of Environmental Protection ("DEP"). However, some delays may be unavoidable and Southwood would like to work with EPA to address this concern. Southwood's proposed schedule is for discussion purposes and is submitted in an effort to reach agreement on a reasonable compliance schedule.

1. Southwood believes it can realistically reach a comprehensive agreement with the Town with respect to sewer connection, and with a neighboring property owner for an easement, by March 31, 2001. As part of the comprehensive agreement with the Town, the Town must approve Southwood's submittal of an application to the DEP for a Sewer Extension Permit (which will be required for the Walpole connection).
 - a. If Southwood is not able to reach a comprehensive agreement with the Town by March 31, 2001, Southwood's engineers will design and construct a new WWTP that will discharge to groundwater pursuant to a DEP groundwater discharge permit and eliminate surface water discharges from the facility.
 - i. Southwood's engineers estimate that the design for a new WWTP could be completed and that DEP could issue a groundwater discharge permit for the new WWTP within ten months (including the thirty-day public comment period required under DEP regulations). Southwood's engineers could submit the groundwater discharge permit application approximately six weeks after beginning the design phase. Accordingly, we estimate that the permit could be issued by January 31, 2002.
 - iii. Once DEP issues a groundwater discharge permit, Southwood's engineers estimate that construction of the new WWTP could take approximately eight months and that the new WWTP could begin operation by September 30, 2002. Once the WWTP begins operations, it could take approximately two months to achieve groundwater discharge permit compliance.
2. Southwood's connection to the Walpole system will require a Sewer Extension Permit from DEP. Southwood anticipates that DEP approval of the permit could be obtained within four months of Southwood's reaching a comprehensive agreement with the Town, *i.e.*, by July 31, 2001.
 - a. If Southwood is not able to obtain approval from the DEP by July 31, 2001, Southwood's engineer will design and construct a new WWTP that will discharge to groundwater pursuant to a DEP groundwater discharge permit and eliminate surface water discharges from the facility. Based on

the schedule set forth in Section 1.a(i)-(iii), above, Southwood's engineers estimate that design, permitting and construction of the new WWTP could take approximately eighteen months and that the new WWTP could be in operation by January 31, 2003.

3. Southwood's connection to the Walpole system will also require approval from the MWRA because it will involve a connection to the MWRA sewer system by a non-MWRA sewer community. The MWRA and DEP approval processes can be conducted on parallel tracks; accordingly, Southwood anticipates that the MWRA approval could also be obtained within four months of Southwood's reaching a comprehensive agreement with the Town, *i.e.*, by July 31, 2001.
 - a. If Southwood is not able to obtain approval from the MWRA by July 31, 2001, Southwood's engineer will design and construct a new WWTP that will discharge to groundwater pursuant to a DEP groundwater discharge permit and eliminate surface water discharges from the facility. Based on the schedule set forth in Section 1.a(i)-(iii), above, Southwood's engineers estimate that design, permitting and construction of the new WWTP could take approximately eighteen months and that the new WWTP could be in operation by January 31, 2003.
4. The final phase of Southwood's connection to the Walpole sewer system, construction of the sewer extension and connection, could begin once the DEP and MWRA permitting is in place. Once construction begins, Southwood's engineers estimate that construction could be completed within six to nine months. Accordingly, Southwood's engineers estimate that construction could be completed and that the facility could be connected to the Walpole sewer system by April 31, 2002.

We believe the circumstances surrounding the Southwood facility at this time, particularly its phased elimination of all discharges of wastewater to any surface waters, render the incorporation of a schedule with interim dates especially appropriate in this case. Based on the schedule above, Southwood expects that discharges to surface water could be eliminated and connection to the Walpole sewer achieved by April 31, 2002. If the actions of state or local regulatory authorities prevent Southwood from connecting to the Walpole sewer system, Southwood expects that discharges to surface water could be eliminated and the design, construction and permitting of a new WWTP pursuant to a groundwater discharge permit could be completed between September 30, 2002 and January 31, 2003. If a new WWTP with discharge to groundwater is not constructed, Southwood will eliminate discharge to surface water, including infiltration, by January 31, 2003. Although Southwood believes that the proposed schedule is realistic, Southwood requests that the draft permit provide for a 90 day grace period for each of the proposed milestones. In the meantime, as Southwood discontinues its operations at the Norfolk facility, Southwood expects continued reduction in the amount of wastewater flowing through the existing WWTP.

Supplemental Information With Respect To Closure Of Operations at Southwood

As discussed in our previous comment letters and at our September 5, 2000 meeting, Southwood will be closing most of its operations at the Norfolk facility and Southwood's engineers project a significant reduction in flow through the existing WWTP. Over the past 18 months, Southwood has reduced its staff occupancy to 123 employees and its total patient/visitor occupancy to 65 people. Southwood has terminated its inpatient operations and the facility is open from 7:00 a.m. to 8:00 p.m., Monday through Friday only. The urgent care facility will close at the end of September. By January 1, 2001, Southwood expects to reduce its staff occupancy from 123 to 79 employees and its total patient/visitor occupancy to 39 people. By June 1, 2001, Southwood anticipates a staff occupancy of 50 and a total patient/visitor occupancy of 10 people. With the exception of one security guard and a power plant employee, Southwood plans to terminate all operations by December 1, 2001.

As a result of the closure of operations, Southwood has already reduced its wastewater flow from approximately 42,000 gallons per day to approximately 29,000 gallons per day. Of these 29,000 gallons per day, approximately 16,000 gallons per day are due to the infiltration of groundwater. Southwood's engineers estimate that wastewater flow will drop (a) from approximately 29,000 gallons per day to 21,000 gallons per day by January 1, 2001; and (b) from 21,000 gallons per day to 18,000 by June 1, 2001; and (c) from 18,000 gallons per day to 16,000 gallons per day by December 1, 2001. By December 1, 2001, Southwood's engineers estimate that almost 100% of the wastewater flow through the existing system will be the result of the infiltration of groundwater.

Lastly, we believe that given the above-detailed schedule for elimination of the discharge of wastewater from Southwood to surface waters, it is reasonable to request that the effluent and monitoring requirements for all pollutants remain at the levels provided in Southwood's existing NPDES permit while Southwood pursues the sewer connection to Walpole, or in the alternative, the construction of a WWTP with discharge to groundwater.

Response: EPA and MA DEP appreciate that Southwood plans to terminate its discharge by December 1, 2001, but the permittee has stated that they do not want the permit terminated on that date, because a subsequent owner may need to discharge to the river if the MWRA tie in is not completed. The proposed tie in to MWRA seems to be the shortest schedule of compliance, but it is not assured since it is contingent upon local, MWRA, and state approval. The other alternative discussed, design and construction of a WWTP that will discharge to groundwater, will take longer to implement, and the permittee would not know whether to initiate the design of a facility until it became clear that the tie in to the MWRA was not going to be approved. This would call for two compliance schedules in the permit, and while such a scenario is allowed by the regulations, it would complicate the permit and increase the likelihood of the need for permit modification or a violation of the schedule by the permittee in the future. Therefore we have decided not to put the compliance schedule in the permit. We anticipate that MA DEP or EPA will work with Southwood to develop a compliance schedule, based on your proposed schedule and issue it in a non-penalty administrative order.