

## WWPTF Meeting Minutes 11/20/2012

### Attendees:

Christopher Whelan, Town Manager  
Richard K. Reine, PWLF, Public Works Director  
Alan H. Cathcart, Water/Sewer Superintendent  
Marcia Rasmussen, Director – Planning & Land Management  
Susan Rask, Public Health Director  
Hardik Raval, Public Works Engineer – Water Systems  
Jeff Wieand, Board of Selectman (BOS)  
Toby Kramer, Citizen Representative  
Arthur Fulman, Chair – Public Works Commission (PWC)  
Jeff Adams, Natural Resources Commission

### Absent:

Fred Watriss,

### Consultant:

Kent Nichols, Weston and Sampson  
Laurie Toscano, Weston and Sampson

### Public in attendance:

Carmin Reiss, Chair, Board of Selectman

Director Reine opened the meeting and presented the minutes of the last Wastewater Planning Taskforce (WWPTF) meeting on 6/26/2012 which were also provide to the WWPTF members, in advance, via email. No comments were received on the minutes and they were approved by the WWPTF. Director Reine also provided three handouts along with the minutes.

The first handout was a letter dated 6/20/2012 following a meeting with the regulators – EPA and DEP – in which the Town requested deferral in issuance of the new NPDES permit to give the Town time to address increased wastewater capacity needs following an integrated water resources approach. The Town received mixed signals during that meeting where some permit writers had expressed reservations about the integrated planning approach while others such as Brian Pitt, EPA NPDES Program Supervisor, appeared more receptive to such an approach. The Town and its consultants were generally encouraged with the responses in the meeting. Ironically, within a few days following this meeting, EPA headquarters issued a memorandum to its regional offices encouraging them to partner with communities interested in exploring a holistic water management approach (with a focus on wastewater and stormwater permits) and provided a policy framework , to permit under this approach.

Handout two included language taken from a Fact sheet which was provided with a recently issued Draft NPDES permit. Director Reine informed the task force that despite the encouraging response from the June 26<sup>th</sup> meeting, EPA proceeded to issue the Town a draft NPDES permit. He noted the excerpt provided which acknowledged the Town's interest in pursuing an integrated water resources plan. While EPA recognized the potential value of such plan, they stated that according to permit guidance, the development of such a plan would not and should not influence the schedule associated with the issuance of a NPDES permit.

The third handout was the Town's response to the draft NPDES permit. This was prepared with the assistance from Woodard & Curran (Firm responsible for contract operations at the wastewater treatment plant) and Anderson & Krieger, the Town's legal counsel. Director Reine highlighted points of interest from the draft permit such as no increase in flow, the new Aluminum limit and additional monitoring and record keeping requirements. He encouraged the WWPTF members to familiarize themselves with all the comments in anticipation of the issuance of the final permit. Director Reine mentioned that watershed groups such as OAR, SuAsCo, and River's Alliance provided comments on this draft permit. Their comments, as expected, asked EPA and DEP to impose more stringent limits in the draft permit. Director Reine advised that Town staff will likely recommend appealing the final permit if the permit includes an Aluminum limit based on the substantial additional cost which would be incurred with questionable environmental benefit based on inaccurate science. A full explanation of this is contained within the handout.

Jeff Wieand asked whether the Town will have to comply with the new Aluminum limit while the permit is being appealed. Director Reine noted that while the new permit is being appealed the Town would not be required to comply with the new Aluminum limit and would continue to operate under the existing permit. Superintendent Alan Cathcart noted that while there is little precedent for requesting and receiving approval for increased surface water discharge limits within Massachusetts, as part of the alternatives analysis - this remains the most cost effective option. Staff believes that one way of potentially achieving approval to increase surface water discharge flow would be if it were done in the context of an integrated water resources plan.

With this as background, Director Reine went on to state that a key objective of this meeting which will allow the task force to continue to advance its goals was to determine if the task force supports of the following items:

1. To come to a consensus as a task force and agree on the timeframe to permit, design and construct the groundwater discharge (GWD) facility as described, at the existing WWTP. This results from the findings that GWD has been identified as a viable alternative to address short and mid-term wastewater capacity needs and represents a viable option and is not dependent on EPA's receptiveness or approval of an integrated water resources plan.

2. Vote to agree to support the leveraging of the 155, 000 gallons per day (gpd) of capacity allowance created by the GWD option to address current needs, prior to full permitting, design and construction of the GWD - but only after the DEP's concurrence with the hydrogeological study indicating the site will accept this discharge volume.
3. Vote on charging staff and Weston & Sampson to compile all studies and documents generated to date, involving town wastewater needs, alternative analysis, and associated planning documents which had been prepared over the last decade, into a comprehensive "integrated" report which can be used in discussions with the regulators as well as Concord citizens and businesses which had been slated for future sewer expansion phases. This report and associated capacity prioritization and phasing would be refined based upon public interest. This report could also be used to seek grant opportunities if and when an integrated water resources planning approach could be more favorably received by the regulatory community. It was also noted that the current wastewater allocation and phasing report was almost 10 years old and the new comprehensive report will help communicate new phasing to the public and be submitted to the relevant regulatory authorities to communicate any change in phasing.

Director Reine invited Kent Nichols, project manager from Weston & Sampson to update the task force on the groundwater discharge alternative efforts completed at the WWTP. Mr. Nichols reminded the task for that based on Weston & Sampson's work, they were reasonably confident that 155, 000 gpd of wastewater could be discharged into the ground near the WWTP, without significant capital investment. He explained that this option would require review of the Massachusetts Environmental Policy Act (MEPA). This is the same process which be triggered should the town proceed with a requested increased to surface water discharge. The MEPA is designed to notify potentially interested stakeholders such as abutters, regulators and environmental groups of a project and allows them to comment on such proposals.

Mr. Nichols stated that Weston & Sampson will submit the hydrogeological report which was completed over the past summer to DEP as soon as the Town authorized them to do so. By reviewing and accepting this report DEP would acknowledge that the WWTP site is technically capable of receiving 155, 000 gpd of wastewater discharge via this GWD site. Once this step has been completed, if interested in permitting this alternative, a MEPA filing would be initiated. He explained that once the Town made a commitment to embark on a full GWD permit application, it would involve some level of the design of the actual facility and would likely commit the Town to moving ahead with construction prior to the expiration of the permit.

Jeff Wieand asked whether the permit will be filed before or after the MEPA process. Kent Nichols stated that the hydrogeological report will be filed first with the DEP. The DEP would likely take up to 60 days to comment on the report. Once the DEP's concerns on this report, if any, are addressed the next step would be to proceed with

the MEPA filing. He added that the GWD permit can be applied in parallel to the MEPA process. However, he would recommend that the Town complete the MEPA process before filing for the permit since comments received during the MEPA process could significantly alter the nature of the work and hence the permit application.

Mr. Nichols explained that the MEPA process itself is only a 30 day process. However, depending on the comments received and issues raised by outside stakeholders, additional MEPA work could be required - such as preparation of an Environmental Impact Report. Mr. Wieand inquired about the comment period for the MEPA process. Mr. Nichols stated that the MEPA process generally allows for a 30 day comment period, however it can be voluntarily extended as done by Concord in the past. Hence it is beneficial to provide detailed information upfront to avoid extending the comment period. This further supports compiling all the planning efforts (Item #3 above) to produce a comprehensive planning report.

Director Reine stated that the staff does not believe the GWD alternative, while doable, would be more advantageous or cost effective, than increasing wastewater flow capacity through the existing plant. He re-iterated that such a long-term solution would require regulatory buy in of an integrated water resources plan. Based on very preliminary costs, the GWD requires an investment of about \$2- 3 million dollars, including the design and construction of the discharge fields as well as a de-nitrification treatment system. Investing a somewhat smaller amount in improvements to stormwater, water and wastewater would be a better approach. Director Reine advised that based on the points raised by Mr. Nichols previously, staff would not, at this time, recommend moving forward with the full permitting for GWD. Instead, they would recommend that the Town submit the hydrogeological report to the DEP and get their "technical" acceptance that 155,000 gpd discharge at in proposed GWD site.

Once accepted, the Town would then proceed with created a summary document integrating all recent wastewater and planning reports completed within the past several years.

If and when the regulatory climate becomes more conducive to holistic water management the Town would then be prepared to proceed with an integrated water resources plan in support of increased NPDES capacity. If the regulators are unwilling or unable to accept this approach, the Town could always proceed with the permitting track required to design and construct the 155,000 gpd GWD site.

Superintendent Cathcart updated the task force on existing effluent flow conditions recorded at the WWTP. He noted that while the permitted flow average did actually exceed the NPDES permit limit of 1.2 million gallons per day (mgd) for a couple of months, the exceedance was reported to the regulators without any response or required action. He went on to explain that the rolling average flow and associated exceedance was directly attributed to the March 2010 flooding event, not increases

in wastewater service. Presently, flow has been receding, in-part to the relatively dry summer period with the rolling average presently calculated at 1.01 mgd. In conclusion, it was stated that there was no imminent regulatory trigger which would require the town proceed with the GWD permitting effort.

Superintendent Cathcart went on to explain that it is unknown as to how quickly the rolling average – and associated regulatory trigger requiring the Town to take any action - will move up again and exceed the permit limit since it is primarily indicative of regional climactic conditions (precipitation and associated groundwater levels). Laurie Toscano of Weston & Sampson provided a chart of the effluent rolling average, going back to May 2004, to the WWPTF. Mr. Nichols noted that as seen on the chart the facility exceeded the permit limit of 1.2 mgd no enforcement action was taken by the regulators. Director Reine stated that enforcement action could be taken by regulators if flows exceeded the permit limit for a prolonged time.

Director Reine went on to provide the task force with an update as to local wastewater capacity allowance model applied by the Public Works Commission when evaluating requests from property owners interested in expanding their existing sewer services. This model requires applicants to provide a wastewater capacity “relief valve” for all increases in wastewater flow which exceed an aggregate of 1,000 gpd per parcel. Subject to recommendation provided by the task force, staff would be prepared to provide the PWC with a recommendation that the “relief valve” could now be placed upon the Town – for an allowance up to the 155, 000 gpd capacity associated with the aforementioned GWD site.

Director Reine went on to explain that if, for whatever reason, the effluent rolling flow average for the WWTP exceeded the existing NPDES permit limit, the Town would likely enter into a consent order with EPA and DEP with a goal of identifying the best long-range options available to address such an exceedance. This would likely include a re-assessment of GWD permitting alternative versus a direct discharge option, pending support of compelling and environmentally responsible integrated water resource management plan.

Toby Kramer asked about the time frame required to permit and construct a GWD facility. Mr. Nichols advised that the all permitting process activities involve a relatively long time period. As previously discussed, the MEPA process takes 30 days, however, depending on the comments received and required response, we could expect it may be significantly longer. He noted it would be advisable to allow at least six months for the MEPA process. Assuming MEPA approval is received, the GWD permit would be filed directly with the DEP. Mr. Nichols advised that in his experience the GWD permit can take from 90 days to up to two years; again, depending on the comments received from various stakeholders. The statutory time frame is about 240 days which includes receiving and addressing the stakeholder comments. Hence, it is advisable to allow for about nine months for the GWD permit. Construction of the GWD would require additional time which includes construction of the discharge site as well as the

denitrification system which would also likely be required. Jeff Wieand summarized and Kent Nichols confirmed that the overall time allowance required to permit and construct a GWD site appeared to be 2 to 2 ½ years.

Toby Kramer asked if the Town intended to commence the MEPA process and apply for a GWD permit. Director Reine noted that the timing and trigger as to when to enter the MEPA process depended on the level of risk the Town was willing to take. Mr. Nichols stated that most communities, with similar wastewater capacity challenges, tend to wait until an enforcement action is taken by a regulatory agency, before they opt to change or restrict new sewer connections. Typically, only after a permitted flow exceedance has been reported, for an extended period of time, would EPA consider moving ahead with the issuance of a consent order.

Mr. Nichols went on to explain that Concord had already undertaken the types of planning and studies that a community might consider. Because of this, he noted that Concord is well ahead of the pack with respect to strategic planning. As a result of this effort, there really was no immediate benefit to be realized by moving forward with the permitting of the GWD site.

Director Reine advised that the Town should obtain DEP's "buy-in" for the hydrogeological report and, once received, consider using the 155,000 gpd capacity as a cap which could be used to relieve the capacity constraint for short-term sewer connections. He added that approximately 90,000 gpd of capacity could remain committed to future sewer extension phases, if interest remained within these designated areas, and the remaining 65,000 potential capacity could be allocated for infill including smart growth. Director Reine explained he believed there was not significant demand for a sewer extensions and went on to state that at one recent public meeting, organized for the Cambridge Turnpike Improvement Project which happens to be included in a future sewer extension phase, when the public was informed as to potential betterment costs for a sewer extension, there was little interest expressed as to seeing such a betterment imposed.

Director Reine reiterated that staff did not recommend that the Town proceed with MEPA filing and full permitting for the GWD but put a hold on the process after submission of the hydrogeological report. He went on to state that once DEP approved the hydrogeological report, the Town should re-evaluate the new sewer improvement fee (SIF) to ensure all new connections paid an appropriate fee commensurate with future capacity expansion costs and allow for additional flow and connections based on this available capacity.

Mr. Wieand inquired about the risk of proceeding with this option. Director Reine advised that the risk would involve regulatory action in the form of a consent order. While this is generally an approach and trigger which is acceptable in most communities, it was acknowledged that this could be perceived negatively in Concord. Toby Kramer further inquired whether the Town would be penalized for accepting additional connections and flows and not proceeding with the permitting and construction of the

GWD. Mr. Nichols advised that generally there is no fine for a flow exceedance. The original intent of the Clean Water Act was not to limit the amount of water entering into the environment but to limit the amount of pollutants.

Superintendent Cathcart re-iterated that it was important to remember that the Town was already working with DEP on the development of a GWD evaluation plan approach of submission of the hydrogeological report and proposal of the integrated planning effort has been made clear to the regulators. Toby Kramer asked whether the Town will be waiting for the flow to exceed the permit before presenting the integrated water resources plan to the regulators. Superintendent Cathcart explained that there are three triggers to commencing this plan; 1. The holistic water management approach becomes accepted at the EPA's regional level and Concord can be a test case. 2. The Town continues to track the flows and as it gets close to exceeding the permit limit the process will begin. In this case the Town would file for the notice for project change and compile all the planning efforts to date. This report would be submitted prior to receiving a consent order. Or - 3. Concord observes that the other Towns are also having similar problems. At which point the Town would wait approximately one year, and when approached by the regulators would start the discussion about the water resources plan. Director Reine added that the Town could proceed with the next steps if grant money is available for this purpose.

Arthur Fulman asked Kent Nichols what other communities are doing in such situations. Kent Nichols advised that Concord has been on the forefront of planning. For example in its planning effort some 12 years ago, Concord has considered sub basin water balance which has now become an important process. At that time Concord supported decentralized wastewater treatment when other similar communities were continuing with centralized wastewater management. Concord at that time decided to keep many properties on a more sustainable septic system. Finally other Towns would wait for a consent order prior to commencing any planning. Concord on the other hand has undertaken significant planning to address the wastewater capacity constraints.

Jeff Wieand inquired if there was a risk that Concord could be penalized for going "an extra mile" with respect to wastewater planning on the premise that the Town had all this additional information but chose not to go proceed with the permitting of a GWD site. Kent Nichols advised that there is always a risk of fines but usually the fines are for water quality (pollutant load) violations - not on the quantity. Carmin Reiss asked if such a risk could be quantified. Mr. Nichols explained that the Town has also been progressive when it comes to pollutant load reductions. Concord has been meeting and exceeding a phosphorus limit for more than five years which some Towns have just started to meet. Such efforts provide a strong argument in support of the Town should a fine for any exceedance be issued. Mr. Nichols did note that downside of being so progressive could be there would be little sympathy for a community like Concord.

Arthur Fulman and other members echoed this sentiment and added that an enforcement action against Concord tends to be more severe than the enforcement taken against other Towns. Mr. Nichols advised that when the flows exceeded the permit limit [for an

extended period of time] EPA would likely issue a consent order which would start a discussion about wastewater plans. It is rare that the EPA would issue without such preliminary discussion.

Mr. Nichols also offered that Town continues to take other important steps which is generally included in such plans such as water conservation. Kent Nichols noted that the Town has an exceptional water conservation program and that not many Towns have employed a water conservation coordinator to develop such a program. He also noted that the Town also continues to invest in inflow and infiltration removal from within sewer system. Superintendent Cathcart added that these efforts are further supplemented with a well-developed storm water initiative which includes regulations, also considered to be unusually progressive.

Carmin Reiss noted that even with the existing stormwater regulations the Town did receive a fine for stormwater violations. Superintendent Cathcart indicated that EPA had certainly appeared to want to highlight their expectations and commitment towards storm water policies and chose to fine communities such as Concord to set an example across the state. Town Manager Chris Whelan added that there was no prior notice from EPA prior to receiving the fine for stormwater. Town Manager Whelan also noted the potential for regulatory enforcement action and noted that if the permit limit was exceeded there was a risk that a moratorium could be imposed on accepting new connections and flow. He inquired whether there is a risk of increased cost of construction should the Town decide not to proceed with the GWD permitting. Director Reine stated that current construction prices were favorable and are likely to go up in the future. However, the real risk is constructing the “wrong” facility. He explained that investing significant funding in stormwater in lieu of \$2-3 Million in GWD and treating non-point sources is a more environmentally beneficial and sustainable option.

Jeff Wieand inquired whether the “science” of the GWD and the hydrogeological report will be outdated in 5 years. Mr. Nichols advised that the hydrogeological report is a “soft approval” which does not have an expiration date. He further explained that the physical science of the water movement (percolation) in the ground does not change. He did explain that regulations governing the approval and water quality parameters may change. Carmin Reiss asked how long the MEPA approval is valid. Mr. Nichols stated that the MEPA approval would be valid for 3 years. He advised that once MEPA approval is obtained it is generally not advisable to stop the permitting process.

Toby Kramer asked if the surface water discharge permit increase will also require a MEPA approval like that for GWD. Mr. Nichols re-iterated that both the options require MEPA approval, however, surface water discharge increase has no guarantees. Mr. Nichols went on to explain how Marlboro, MA WWTP received an increase in surface water discharge permit only to have it retracted later by the EPA.

Toby Kramer inquired about the comprehensive report which would integrate all the planning efforts and additional costs. Director Reine noted that the Town would

negotiate the scope of additional work with Weston & Sampson and seek Town Manager authorization for required amendments to the existing contract.

Director Reine further explained that as part of this integration effort the task force may want to consider hosting public meetings for neighborhoods which were slated for sewer system expansion, to update them as to where we are and gauge their interest for near term service. If there is no sufficient interest from neighborhoods for sewer system expansion, the Town would be provide the state with a notice through the appropriate mechanism and the sewer system expansion phases would be deferred until additional capacity was realized and the economics where more favorable. At that point we would know the available capacity from the 155,000 that can be utilized for smart growth.

Jeff Wieand inquired about the validity of the hydrogeological report associated with the GWD site. Director Reine stated that staff feel's confident that the report will be accepted by the DEP. Kent Nichols re-iterated that DEP typically responds to a hydrological report within 30 to 60 days. He added that Weston and Sampson uses conservative estimates and had already engaged with DEP staff prior to finalizing the report. Superintendent Cathcart noted that Chris Stevens of the DEP Northeast Regional Office was onsite to observe the load testing in the sand beds and appeared satisfied with investigatory effort.

Jeff Wieand asked about the time frame and cost to complete the comprehensive planning report. Director Reine stated that this task requires a significant level of effort. The cost of this effort is yet to be determined. He suggested that this report could potentially be completed within 6 to 12 months. Mr. Nichols explained that Weston & Sampson have already utilized some available funds from the existing contract to work on the GWD efforts. The plan would be to use remaining funds slated for other tasks to perform some of the integrated planning report work. Director Reine advised that the original contract with Weston & Sampson may require the replenishment in the order of \$50, 000 - \$75,000, which would allow the above discussed additional tasks to be completed.

Jeff Wieand inquired about the possible need to revise the sewer improvement fee (SIF). Director Reine explained that a new SIF will likely be developed based on the most current projected cost to meet the Towns long-range wastewater needs. Superintendent Cathcart noted that any revision made to the SIF would require the approval from the PWC. Toby Kramer inquired about the potential betterment cost of \$30, 000 per home which had been referenced by Director Reine when discussing the recent Cambridge Turnpike neighborhood meeting. Superintendent Cathcart advised that this number was strictly an estimate which would require more evaluation prior to citing in public. He noted that due to existing economic climate, it was hard to imagine that future sewer phase areas would receive betterment relief from the general fund – as was the case that was approved at Town meeting for the Phase I sewer extension.

Toby Kramer asked about the timeframe for public meetings in relation to compiling the comprehensive planning report, given the report will take up to one year to develop. She noted an immediate need for additional wastewater flow in West Concord. Director

Reine advised that the task of compiling the last 10 years of planning effort into a comprehensive planning report would be independent from the task of proceeding with the GWD and adjusting the SIF. He re-iterated that, should the task force determine it is appropriate, the submission of the hydrogeological report and acceptance by the DEP could mean an allowance of up to 155,000 gpd for added capacity. He again noted that it was ultimately up to the PWC to approve any significant service increases – with the caveat that they would also revise the SIF to be commensurate with the value of this service.

Director Reine went on to explain that this administrative process could be completed by the spring of 2013. He noted that this time frame could work for the some important redevelopment projects such as the one proposed on Beharrell Street - which is currently planning to construct an onsite disposal system to handle their wastewater needs. After the approval of the Town adopted GWD “relief valve”, they would be required to pay the SIF equivalent to what might be the cost of construction of an onsite disposal system and use the Town’s sewer system.

Jeff Wieand asked about calculating the new SIF on the GWD option and inquired about the scenario if the GWD is not constructed. Director Reine explained that the SIF bylaw requires substantiating the cost per gallon hence the new SIF will be based on the ability of the town to expand capacity to meet its design needs. Superintendent Cathcart added that the \$3 million investment is for the GWD only which yields 155, 000 gpd as detailed in the hydrogeological report. However, the towns design needs, as documented in recent wastewater planning effort is 320,000 to 600,000gpd. The SIF should consider all costs which could be realized to reach this need. He went on to state that, as discussed previously, staff believes investments in stormwater improvements, if supportable in an integrated water resources approach, could be considered to keep costs reasonable.

Arthur Fulman inquired about the degree of comments received from the environmental interest groups during the public comment period. Kent Nichols advised that the comments received from such groups have become more stringent. He added that the Town is already considering points which are likely to be commented on by such groups and is also involving such groups in their planning effort. However, he noted that doing so will not eliminate the nature of comments from the interest groups. Director Reine added that the comments received from such groups during the public comment period for the Town’s draft NPDES permit were very stringent asking the EPA to further lower the Town’s compliance limits. Director Reine advised that the interest of such groups is for the Town to realize its 600,000 gpd of additional wastewater needs entirely by water conservation - which is not plausible. Jeff Adams commented that bearing in mind the risks and Town staff’s comfort level, he supports compiling a comprehensive planning report and implementation of the integrated water resources plan.

Toby Kramer MOVED and the Committee UNANIMOUSLY APPROVED the points detailed below:

a.) submit the Hydrogeological report to the DEP and upon concurrence ,accept the 155,000 gpd GWD site flow as a relief valve which could then be utilized to address short and mid-term needs and revise the “capacity allowance model” previously approved, b.) to recommend new sewer connections be considered for approval based on the existing criteria outlined in the sewer regulations and currently utilized by the PWC with the understanding that planning efforts made of the last decade be integrated into a comprehensive report which would be used to assist in future wastewater negotiations with regulators and provide an update to impacted residents and businesses to determine receptiveness and timing of construction of future sewer phases and betterment assessments .