

February 12, 2007
Joint Meeting
Sewer Commission, Water Commission, Thorndike Development, CDM at DEP

Summary of Discussion

- Frank Mezzacappa, of DEP, began the meeting at 9:05 a.m. by stating the meeting had been requested by the Kingston Sewer Commission and Kingston Water Commission. He introduced Elaine Fiore as the Chair of the Sewer Commission.
- Elaine Fiore reviewed that Lloyd Geisinger represents the Thorndike Development project being proposed for the former O'Donnell sand and gravel pit location adjacent to the MBTA station in Kingston. As part of the development they are proposing a discharge site to handle effluent from the expanded Kingston wastewater treatment facility. The proposed location of the effluent field is adjacent to Smelt Brook. Ms. Fiore introduced Mr. Geisinger to present this concept.
- Lloyd Geisinger explained that the proposed development site will cover 106 acres of the O'Donnell property which is under agreement and pending approval of the town as a 40R site. Thorndike Development spent last summer working with the Town on a new Smart Growth Zoning By-Law, which will be presented as an article at Town Meeting on April 9, 2007. Mass. Highway has recently sent a letter of approval for a new southbound entry ramp for Route 3, which will wrap around the back of the wastewater treatment plant.
- Approximately 200,000 gallons of flow will be generated from 1021 Kingston's Place. He has been working with the Sewer Commission to meet the needs of the development and the Town. He has also been working with the Water Commission on the 186 well in order to meet the needs of the 730 homes and businesses that will be built. The issues are what is the impact of this development on the new well, Smelt Pond and Smelt Brook? The development would like to locate 100,000 gallons of effluent disposal adjacent to Smelt Brook. The balance of the effluent from the development and the plant expansion would go to another site that is currently wooded. The Sewer Commission is concerned with the environmental issues involved with discharging effluent so close to Smelt Brook. The Water Commissioners are interested in this site because they feel it will recharge the Smelt Brook area.
- Don Freeman, of CDM, stated that CDM had done a survey of the area in the early 1990's. The current proposed disposal site would be the Davis property. Hydro geological and modeling work still needs to be done but this site looks favorable since the conditions are very similar to the current discharge site at the

Indian Pond Country Club. Borings have been done and those results should still be available. The Smelt Brook site has not been surveyed.

- Bob Schreiber, of CDM, said that there is a 3D model available that was based on the Plymouth-Carver Aquifer study. The Davis site is above the water table and provides more flexibility. The flow from the area goes toward the Jones River. It is not clear how much clearance there would be between the discharge area at Smelt Brook and the water table. A good amount would probably go to Smelt Brook. Would this be favorable regarding the quality and quantity of water being discharged there?
- Mark Devine, of Coler and Colantonio, stated that the 186 well is closer to the mall and partially in Zone 2, and has previously been approved by DEP. The Water Commission was looking for a well site outside of the Jones River basin due to the Trackle Pond well being limited to the use of only 80% of its capacity capability for recharge reasons. The 186 well is situated close to the Plymouth-Carver aquifer divide. With this project, there is an opportunity to bring highly treated water back into the aquifer and to help recharge Smelt Brook. The Sewer Commission has expressed concern with the additional testing and treatment requirements that might be needed in order to discharge at Smelt Brook. They are concerned whether DEP would approve such a site.
- Frank Mezzacappa asked if the Zone 2 lines go up to the Davis property. The answer was no and that Smelt Pond is in Zone 2. The Grassy Hole and 186 wells are also in Zone 2.
- Don Freeman asked about the Second Brook well. He was told that the Second Brook well has not been approved yet but that it would be in the same zone as the Davis property.
- Jeff Gould, of CDM, asked if the expansion would increase the treatment needs in order to maintain the effluent quality. Ms. Fiore replied that if the Davis site is used for disposal of the effluent there would be no additional treatment requirements anticipated.
- Don Freeman added that the Sewer Commission would need to know what additional treatment requirements DEP would impose to meet the needs of disposal at Smelt Brook. The Town does not need to meet disinfection requirements year round. It would be a significant cost increase to maintain this level of treatment year round. Would the discharge permit change?
- Jeff Gould indicated that the discharge permit would probably need changes.
- Frank Mezzacappa said DEP would need to know the travel time for discharge and the additional cost for disinfection in order to make a determination about the site.
- Bob Schreiber asked for DEP guidelines for discharge of pathogens.
- Mike Fabbiano, of Cubelis, said that the discharge site would be located to the rear of the house lots along Smelt Brook and in property that is not owned by the home owners. The area is about 180 to 200 feet away from Smelt Brook. A USGS survey was used and indicates that the high groundwater in the area is at about 100 feet. The discharge area would be a trench format about 1500 feet in length. The development elevations range between 140 and 180 feet. So far estimates indicate about 100,000 to 125,000 gallons of discharge could be handled per day.

Testing still needs to be done. The layout has been planned to be the most accessible as slopes in this area are 2 to 1. Individual lot lines have not been set yet and could be altered if the discharge site needed to be altered somewhat.

- Tom Morgan, of CDM, asked if the discharge site sloped downward. He was told that it did but that it would be a long trench layout and it still needs to be determined if they can discharge by gravity.
- Bob Schreiber asked for the distance between the discharge area and the groundwater. He was told that it is about 40 and no less than 25 feet from groundwater. Mr. Schreiber continued asking what the likelihood of the effluent flowing to Smelt Brook would be with this amount of material between the discharge area and Smelt Brook. The reply was that it was very likely to flow to Smelt Brook.
- Jeff Gould asked if there would be irrigation wells and if so where would they be located. Mr. Geisinger replied that there would be irrigation wells and that the location of the wells had not been determined yet.
- Mike Fabbiano stated that water reuse was no likely to be used near the residences.
- DEP asked if there was a need to find more means of recharging the well sites. Mr. Devine replied that there was no need but it is environmentally beneficial. There will be a small impact on Smelt Pond from the 186 well.
- Jeff Gould stated that DEP would need to see the research. There are too many issues involved at this point to determine if this is a feasible proposal. What is the water quality in the brook now?
- Bob Schreiber said they could go back to earlier reports for this information but that those records are almost 10 years old. The effluent was studied for the golf course discharge site, but that are runs toward the Jones River.
- Pine DuBois said that the water quality at Smelt Brook has invasive species. The fish habitat restoration is an interest to the Jones River Watershed but they are not sure how much can be done about it since there is a hazardous waste site at Cobb and Drew. There is a spawning area at the lower end of Smelt Brook. Cranberry bogs also draw water from Smelt Pond.
- Frank Mezzacappa said DEP needed a conceptual plan in order to determine if stricter treatment requirements will be needed.
- Pine DuBois said the Watershed does not want nitrates and phosphorous in Smelt Brook but they are trying to maintain the flow in the brook. They would like to see water quality testing done at the plant to ensure that quality is maintained. They would like to see a dual system used.
- Don Freeman commented that there is a limit of 10 milligrams per liter to nitrogen limit now. There are no phosphorous limits now. It would be difficult to separate two different discharge limits for the golf course and for Smelt Brook. There would be a significant cost associated with such a process. Effluent would need to be treated chemically once it left the SBR. Alum would have to be added.
- Bob Schreiber commented that the Davis property has a very similar geology and depth to the groundwater. Current discharge requirements could be maintained.
- Ken Vandal, Wastewater Superintendent, stated that adding alum would alter the PH, which would be very difficult to change by adding soda ash.

- DEP determined that further site study work needed to be done and that the results should be provided to them for review and determination of the feasibility of the Smelt Brook discharge site.
- Meeting concluded at about 10:10 a.m.

Suzanne Richards
Administrative Assistant