

APPENDIX E
SEWER SYSTEM

Sewer System

The sewer system that services Moultonborough is part of a larger system that services 10 towns including the towns of Belmont, Center Harbor, Franklin, Gilford, Laconia, Meredith, Northfield, Sanbornton, Tilton and Moultonborough that are all part of the Winnepesaukee River Basin Program (WRBP) and run by the State Department of Environmental Services. The program was established by legislative action in 1972, as a comprehensive plan to control water pollution in the Lakes Region. The intent of the legislation was to eliminate and remove wastewater discharges to lakes and tributaries in the Winnepesaukee River Watershed Basin and to provide major interceptors along routes where existing development exceeded the ability of subsurface systems to safely dispose of sewage. The cost of operating and administering the system would be borne by the participating communities based on their actual and/or anticipated wastewater flows.

The treatment plant, located in Franklin, NH and collection lines were constructed in the 1970's using funds available under the Federal Clean Water Act (CWA). Under this program communities were eligible for 90%-95% matching funds for projects to help clean up lakes and rivers by eliminating poorly treated sewage discharges.

The Franklin plant has a designed capacity of 11.5 million gallons per day and is currently operating at 57% capacity or 6.5 million gallons per day. All of the existing capacity has been allocated to the 10 member communities based on the estimated usage the communities paid for when the system was constructed. Moultonborough is part of a two town "sewer district" made up of Moultonborough and Center Harbor. The Bay District Sewer Commission is an elected commission made up of 3 commissioners who manage the Bay District collection system in the two towns. Originally established in 1968 when the two districts was serviced by a local treatment plant, owned and operated by the district.

The District has clearly defined boundaries agreed on by the two towns and expansion outside of the district takes the affirmative vote of the Board of Selectman of both towns, regardless of which town the expansion is located.

The district is allocated 240,000 gallons per day of discharge and is currently running at about 50-60% capacity, depending on the season. However the system needs are based on the highest level of use in order to limit system overflow because of high seasonal use. The WRPB estimates that the district currently serves approximately 200 residents in Moultonborough (5% of the total population), making it the smallest user in the system, followed closely by Center Harbor with 264 residents served (26% of their population). Laconia is the largest community served with 15,300 residents served (94% of their total population).

The main trunk line for the Moultonborough portion of the system follows the south side of Lake Shore Drive in the western end of the road to the junction of Alpine Park road and the northern side of the road to the eastern portion. An expansion in 1990 included the northern portion of route 25 between Glidden Road and Bean Road. The system follows Bean road for approximately one half mile. There have been no significant expansions of the system since the

1990's with the exception of a small development of 12 lots on Colonial Drive and 9 lots on Route 25. To date very few homes have been built on these new lots.

Two pump stations support the system by forcing septage from the lower elevations along the shore area up to the trunk lines along Lake Shore Drive and Route 25. The Bay District covers nearly 4 miles of road and provides sewer service to 96 homes and businesses. Most of these hookups are residential dwellings (48). The entire system, including those hookups in Center Harbor consists of 205 connections. Given the fact that the system is running at 50%-60% capacity, it is estimated that another 200 – 250 hookups would complete the allocation for the Bay District.

The average daily flow during the winter months is 58,000 GPD which is nearly doubles during the summer months to 104,000 when many of the seasonal homes are occupied.

Sewage is collected through more than 4 miles of collection lines and transferred to three lagoons located north of Route 25 in Moultonborough that were part of the original system that was abandoned when the town(s) connected in to the WRPB system in the 1990's. The lagoons serve as a holding facility during the winter months as well as a solids removal system. The lagoons are drained down every fall and excess accumulated sludge is removed. The trunk line and pumps used to transport wastewater to the Franklin facility are sized to handle wastewater that has had a majority of solids removed through the lagoon system. It is possible that any significant expansion to the system, beyond the current district, would require some increase in the number and capacity of the lagoon system or some other solids removal method.

The previous Master Plan stated that infiltration of groundwater into the system was a problem through trunk lines along Lake Shore Drive and through surface manholes in need of adjustment. The District reports the these needs have been addresses and an ongoing maintenance plan has led to this issue no longer being a serious problem.

Staffing

The Bay District employs one part-time engineer to oversee the general operation of the system. This person oversees the installation of new hookups, operates the pumps which empty the lagoons as well as the pumping stations that transport Wastewater from lower elevations to the lagoons.

The Bay District Commission maintains office space within the Center Harbor Fire station located off Main Street. This facility meets the needs of the District Commission as a work area for maintaining records and for routine meetings.

Future needs

At this point in time there does not appear to be any future needs within the system and any that are necessary are managed by the district itself and the costs absorbed by the users of the system.

Expansion Capabilities

The Bay District is certainly able to expand to meet most of the needs of properties within the confines of the district, however expansion beyond the boundaries of the district, is problematic.

- Further expansion would exceed the capacities of the lagoons resulting in construction of additional lagoons and/or the need for some other method of solids removal
- It would result in exceeding the allocated capacity of the district with the WRPB. It is possible that additional capacity could be purchased from other communities that are not using their allocation, however the viability and actual cost of this is not known.
- Expansion of the District into Moultonborough would require the approval of the Center Harbor Board of Selectmen
- The construction of trunk lines, pumping stations, forced mains and collection lines into Moultonborough would be excessive. For example, a 26 mile extension to Wolfeborough is estimated at \$161 million in 2007. The expansion to Moultonborough Center would be 4.8 miles along route 25.
- The construction of collection lines would likely bring additional development to the area that may or may not meet the needs and wants of the community.
- Availability to the sewer collection system would likely bring increased density of development in both residential use and commercial use along Route 25.
- While connection to the sewer system severely limits the possibility of untreated sewage reaching lakes and streams it also may encourage larger dwelling units closer to the lake and watershed area and while they may not be contributing to the downgrade of water quality with effluent making its way into the lake, they produce more runoff due to increased lot coverage and as such contribute other pollutants to the lake.

Recommendations

- Consider appropriate new technologies for dealing with wastewater in future development areas.
- Designate areas of town that are targets for specific types of development i.e. commercial/industrial, dense neighborhood, or conservation areas and develop incentives for those developers that choose to use appropriate new technologies to handle wastewater in a more efficient way and regenerate groundwater more efficiently and environmentally compliant than traditional septic systems.