Squibnocket Pond District Advisory Committee Report to The Town Committee on Squibnocket and Meeting Minutes, July 31, 2014

August 2, 2014

Date: July 31, 2014
In attendance: Wendy Weldon and Leanne Cowley, co-chairs; John Flender, Liz Gude, Rick Karney, Rich Osnoss , Bret Stearns, Jo-Ann Taylor

The Squibnocket Pond District Advisory Committee met on July 31, 2014 to discuss (issues) about the Pond that relate to the work of the newly formed Town Committee on Squibnocket. This Town Committee is examining ideas and proposals for the Selectmen and Town regarding: access to Squibnocket Farms, Squibnocket beach access, and beach parking lot. Members of SPDAC were charged with discussing any aspects of these issues that may have impact on the Squibnocket Pond and its watershed, particularly those that may affect the health and well being of the Pond. We also considered the potential effects of removal of the current parking lot revetment, the future spillover of ocean water into the pond and how all of these items relate to each other and to the health of Squibnocket Pond, its flora and fauna.

Several major categories of concern were discussed:

Breaching, Runoff, and Pollutants

Runoff is a major concern, as it affects the pond water and its inhabitants, as well as groundwater supply. The question was raised whether a breach from ocean to pond is likely, if and when the revetment is removed, and whether that would have an overall positive or negative impact on the pond. Bret, Rick and Jo-Ann agreed that permanent breaching at the east end of the pond is an improbability, even if the revetment is removed. This is a result of having an opening at the west end of the pond, i.e.Herring Creek. A normal process of beach migration would mean that erosion will take place on the shore side, the beach will build up in some places and wear down in others, and as a result of sand buildup, the pond may "move" inward. A shifting barrier beach will always be there.

Washover, similar to what takes place now, is more of a concern. Past washovers have resulted in a deep buildup of sediment in the east end of the pond. Therefore, impervious surfaces of a road or parking lot that sits between the pond and shore pose possible harm; oil, grit, heavy metals, and sediment would wash over into the pond at such times and not only introduce pollution, but contribute to more filling in of the east end. However, since an access road to Squibnocket Farms is necessary, a raised roadway might have less impact than one at ground level, in terms of runoff. In either case, proper mitigation precautions must be implemented, such as swales, catch basins, vegetative buffers.

New data on nitrogen loading and other nutrients or pollutants are still waiting on the forthcoming Massachusetts Estuary Project (MEP) study. The MEP management has promised to have the study on Squibnocket Pond including Menemsha, Quitsa and Stonewall Ponds finished by December 2014. Although in light of the timeline of the other MEP reports, it is not known when that is projected to be available.

Salinity

The pond's brackish nature allows shellfish to exist at the low end of their salinity tolerance. The shellfish act as very useful natural water filters. Because of high bacterial levels, the MA DMF has classified the pond as "prohibited" for the harvest of shellfish. The high bacterial levels are likely due to waterfowl and poor water exchange. The low salinity also helps keep the harmful oyster drill (a predatory sea snail) in check, since they thrive only at salinity above 20 ppt. It's a good situation for getting oysters started, so they can then be moved to a saline location for maturing to a harvestable state. The herring that reach the pond through the Herring Run seek out fresh water for spawning, near the streams leading into the pond or in the least saline areas of the pond. Generally, spawning takes place under 12 ppt salinity, and embryos have best survival under 5 ppt. Bret Stearns is working on a way to make more precise counts of how many herring enter and leave the pond.

Since a permanent breach is not thought to be likely, we did not explore the consequences of the pond shifting from brackish to saline. The assumption is that an overall goal is to let nature take its course as much as possible. There may be a future dredging of Herring Creek at the Aquinnah end of Squibnocket Pond. This would have little effect on the overall salinity in the whole pond.

Flora and Fauna

We have previous reports from 1989-2001 that indicate the Pond district is home to some species of rare, threatened or endangered plants and animals. A fish survey submitted to Allan Keith by Greg Skomal in 2001 lists 14 species of samples fish, as well as 10 other reported species. Otters are being reported as returning to the pond in numbers not seen for a long time. Currently a few families of swans make their home there. Ducks, geese and cormorants frequent the pond. As is often noted, the pond is a valuable and unusual habitat and ecosystem that we must do our best to protect.

There was consensus by Bret, Rick and Jo-Ann, on the following points that are pertinent to the Town Committee's efforts:

1. Vegetative buffer zones as described in the Town Zoning By-Law Article 12, Zone B, should be adhered to as much as possible.
2. A parking lot more removed from the pond and shore would have less deleterious impact on the pond.
3. In general, a parking lot has more impact close to the Pond than a roadway.
4. A gravel parking lot is better than an impervious surface, in terms of environmental impact. In either case, it should be pitched in such a way as to direct runoff away from the pond. And, runoff controls must be implemented around the road and parking lot, in the form of vegetative buffers, swales, and catch basins if appropriate.
5. An elevated roadway may have more long-term potential to let future erosion and beach buildup processes take place without endangering the roadway, particularly if the revetment is removed,. A raised roadway would allow dunes to form in front of and behind the roadway. It eliminates the probable destructive nature of rebuilding a roadway after each main storm event.