

📍 **MUNICIPAL CASE STUDY**

**Stillwater Township, New Jersey**

*Stillwater Township is a rural and forested community located in the New Jersey Highlands just south of the Delaware Water Gap National Recreation Area. Tourists began coming to Stillwater in the early 1900s for its natural beauty and the pristine waters of Swartwood Lake. Summer homes began to be constructed around the lake beginning in the 1940s, many of which have since become permanent residences. Due to the quality of the lake and its attractiveness to residents and visitors alike, protecting its water quality has been a priority over the past 50 years. Since 1992, these protection efforts have been led by the Swartwood Lakes and Watershed Association (SLWA) with financial support from New Jersey Department of Environmental Protection (NJDEP).*

By: Laura An, DVRPC

**Background**

Stillwater Township is a rural township in Sussex County, New Jersey, abutted by the Delaware Water Gap National Recreation Area along its northern border. About one-third of township land is already protected through a variety of strategies, including farmland preservation, state park land, Green Acres-funded easements and acquisitions, and other programs.

Among its most prominent environmental features are its two lakes, Swartwood and Paulinskill, and the Swartwood State Park. Stillwater has a history of dairy farming but became a summer resort town for tourists towards the first half of the 1900's, due to its location along a railroad connecting the Pennsylvania coal fields to New York City. Beginning in the 1940s, a proliferation of summer homes were built around the Swartwood and Paulinskill lakes, which eventually became year-round residences. The town saw the majority of its growth between 1950 and 1980, although it has recently seen some decrease in population as a result of the 2008 recession. As of 2015, the population stands at 3,922 people.

In 1959, the Swartwood Yacht Club was formed by a group of residents who enjoyed sailing on Swartwood Lake. In addition to teaching sailing classes and hosting boat races in the summer, the club also assisted the state with performing water tests. They were soon joined by the Paradise Fishing Club in 1974, a group of local fishing enthusiasts who were interested in also preserving the quality of the lake.

**Quick Stats**  
*Township of Stillwater*

**Major water bodies:** Swartwood and Paulinskill lakes

**Population:** 3,995 (2015 5-year American Community Survey [ACS])

**Sewer system:** Septic fields

**Land area:** 27.1 square miles

**Water area:** 1.3 square miles

**Median household income:** \$79,392 (2015 5-year ACS)

The two groups, along with other residents concerned about the environmental quality of the lake, all of whom were concerned about the quality of lake water and the eutrophication they were witnessing, came together in 1992 to form what would become the SLWA. The SLWA has raised over \$1.6 million in grants that have been used for various projects regarding water quality management. These grants had primarily been 319 grants from NJDEP, given that Swartswood Lake is owned by the state, but that 319 grant program is no longer funded. The loss of this grant source poses a threat to the watershed association's continued work in maintaining or improving the water quality in Swartswood Lake. A SLWA member stated that state grants are critical because the equivalent amount of funding could amount to as many as 10 years' worth of membership dues.

### The SLWA's Past Work

Eutrophication in the lake is caused by a variety of contaminants. There are three main sources of excess nutrients that contribute to the eutrophication of Swartswood Lake.

The first source of contamination is septic waste systems, since there is no centralized sewer system in Stillwater. While building septic systems requires a permit in Stillwater, there are no requirements for continued maintenance. Generally, it is advisable that residents have septic pumpouts every one to three years in order to keep their septic systems in good working order. The SLWA advocated for an ordinance that would require septic management every three years, but the ordinance did not pass in the interest of avoiding an increase in township fees. The cost of a pumpout is equal to approximately \$1 per week. In comparison, the cost of cleanup, should a septic system fail, could reach up to \$30,000. SLWA President Margaret Emmetts feels that increased public awareness of the benefits of regular pumpouts could be a solution to reducing septic contamination.

Stormwater runoff is another source of contamination, washing a variety of substances from throughout the watershed into the lake.

The SLWA has made efforts to educate residents through newsletters, brochures, and biannual SLWA meetings on the environmental harm caused by phosphorus lawn fertilizers and by cutting grass too close to the water line. The SLWA received grants in 2000 and 2003 (\$223,640 collectively) to conduct stormwater management studies and to upgrade the stormwater systems around the lake to reduce runoff into the lake.

Finally, agricultural runoff also contributes to water impairment. A particular problem is farmers who let their animals in surface waters that drain into the lake. The biggest concern regarding livestock is having animal feces in the water. Stillwater Township is currently looking into implementing programs similar to the one in Warren County, where in addition to education, residents may own up to seven animals, and if they own more, they are required to have a waste treatment plan.

In addition to the aforementioned work, the SLWA has been very proactive in addressing the contents of the lake itself. It has conducted a limnological study of the lake, installed two hypolimnetic aerators to bind up

#### Motivating Factors

**Presence of lake with high-quality water:**

Swartswood Lake's high quality and scenic beauty drew tourists and residents to the area. Maintaining its quality and beauty is important to residents and tourists alike.

**Historic efforts to protect Swartswood Lake:**

Efforts to preserve the quality of the lake date back almost 50 years. The SLWA grew out of these efforts and continues to draw upon them for inspiration.

**Swartswood State Park:** The presence of a state park makes protecting the lake a priority for NJDEP.

phosphorus and increase the amount of dissolved oxygen in lake water, managed the growth of weeds like milfoil through the use of weevils, and purchased a weed harvester.

### Current Work at the SLWA

One of the biggest challenges that the SLWA faces today is the accumulation of biomass. This task is particularly difficult when nonnative invasive species are the primary source of growth. A few of the species that the SLWA is working to control include Eurasian milfoil, American lotus, and most recently, water chestnut. Progress in these efforts has been difficult to gauge, particularly given that the SLWA does not have the funding to conduct necessary benchmark studies. Another study that it would conduct if funding were available is determining how much biomass is acceptable in Swartswood Lake and to what extent it must be controlled. These studies are difficult to conduct because many existing grants cover implementation projects but not the studies that must precede them.

Overall, the SLWA has proven to be a resident-grown organization that has had a significant impact on water protection efforts and demonstrates what can happen when citizens are invested in the health of the places that they inhabit. However, because of limited funding streams, work like theirs is predicated on the availability of grants, contribution of time and money from local citizens, and the cooperation of NJDEP.

### Sources

Emmetts, Margaret. President of the Swartswood Lakes and Watershed Association. Telephone interview. June 30, 2016, with Laura An, DVRPC.

Sprague, Randall. Member of the Swartswood Lanes and Watershed Association, Telephone interview, November 2, 2016, with Laura An, DVRPC

U.S. Census Bureau. *2011–2015 American Community Survey 5-Year Estimates*. Stillwater Township, Sussex County, New Jersey. Table DP03: Selected Economic Characteristics.

———. *2011–2015 American Community Survey 5-Year Estimates*. Stillwater Township, Sussex County, New Jersey. Table DP05: Demographic and Housing Estimates.

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