

CASE STUDY



NEW YORK STATE BEST MANAGEMENT PRACTICES FOR GOLF COURSES

Wash Load at Bedford Golf and Tennis Club



Project Details

- **Golf Course Profile:**

Location: Bedford, New York
Annual rounds of golf: 13,000
Staff: 18
Acreage: 139 acres
Public or Private: Private

- **BMP Implementation:** Followed chemical storage guidelines from planning through construction and operation.

- **Budget Total:** \$492,000

Permits:	\$ 4,600
Architecture & Engineering:	\$ 52,000
Site Work:	\$ 46,100
Building:	\$304,300
Equipment:	\$ 76,000
New well:	\$ 9,000

Project Summary

The Bedford Golf and Tennis Club followed Best Management Practices (BMP) chemical storage guidelines in the construction of a new state of the art wash/load facility. This facility incorporates a number of features to contain any unintended releases of chemicals and incorporates a new filtration system (Carbtrol System) for wash water recycling and a new chemical mixing and loading system (Plant Star).

Building a new facility had been considered for ten years prior to construction. Previously, pesticides were stored inside two 6 x 12 x 10 foot pesticide storage buildings. A bermed paved area was installed 15 years ago so that small spills could be easily cleaned up completely. Although all spills and their cleanup were recorded, they did not have to be reported to the NYSDEC.

Machines were previously washed on a blacktop area with irrigation water. Clippings were collected to the extent possible, dried and combined with other clippings then spread with a fairway topdresser over primary rough areas.

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Though the wash area was far enough from any wetland areas to be a surface water contaminant, the potential for ground water contamination was a concern alleviated by the new facility and wash area features.

Building Features

The building is a poured concrete slab with a wall height of 4 feet and 23 gauge steel above that. The roof is insulated to prevent condensation as is the heated chemical storage area. The facility incorporates a number of features to prevent unintended releases of potential contaminants as well as safety features, including the following:

- The floor has a pitch to drains that can all be collected in the mixing and loading area
- Concrete painted with a 2 part epoxy paint and hardener to create a completely impervious surface
- Personal protective equipment (PPE) first aid kits, a portable eyewash and spill containment material is kept in the filtration room away from chemicals and fertilizers
- Fire extinguishers are located in strategic locations inside the building
- All doors are keyed alike to facilitate easy access by authorized personnel.
- The pesticide storage room is equipped with metal pallet racks with wire shelves
- Chemicals are segregated by function with liquids on the lower shelves and solids above them as recommended by NYSDEC.
- The fan in the chemical storage room is connected to the light so that it comes on whenever someone enters the room. Fans are also located in the mix load area and wash area.

Wash Area Features

The wash area consists of 4 stations with one central sump. Clippings are blown off the machines in designated areas throughout the course to prevent a large accumulation at the sump. The machines are then washed with continuously recycled water. Two carbon filters filter the water.

Though many systems utilize a drain to daylight in case excess rain water accumulates in the system, the Town of Bedford would not allow this. Therefore, if the system shuts down due to excessive water in the system, it must be pumped through the filters and into an extensive stormwater treatment area adjacent to the building.



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Planning and Construction

Site work included paving, landscaping, storm water treatment and fencing. The equipment was for the Carb-trol recycling system and the Plant Star mix load equipment. A new well had to be installed because the old well was located 65' from the new building. NYS Health Department regulations prohibit a potable well from being located within 100 feet of a chemical mix/load facility. The original budget was exceeded by approximately \$50,000 primarily due to redesigns to meet town requirements, expanded paving, special paints required for floors and containment areas and town required engineering oversight and testing.

Meetings were held with the fire department to stress the importance of containing any fires but not extinguishing with water. Although the building is non-combustible, the Club does not wish to extinguish a fire with large amounts of water which could lead to an environmental contamination situation. The Fire and Spill Response Plan was amended with the fire department's input and is part of both Club personnel training as well as fire department training.

Conclusion

Although the building was costly, the Board of Governors is satisfied that everything possible was done to prevent an environmental mishap from occurring on the property. It is a building they are proud of even though it is hidden away in the woods. The possibility of a chemical spill has been minimized. The chance for groundwater contamination from either nutrients or chemicals has been greatly reduced. The NYS BMPs for Golf Courses certainly had a positive impact in helping to convince the membership of Bedford Golf and Tennis that this was the proper way to go.