



Erosion and Sediment Control in Residential Construction

Erosion and Sediment Control (E & S Control) is crucial in managing soil and water quality during residential construction projects. In Pennsylvania, state regulations mandate specific measures to prevent sediment runoff and protect our waterways. This bulletin outlines why E & S Control is necessary, where it applies, and the roles of various control measures, including silt socks, fences, and filters.

1. Why E & S Control is Required

- **Environmental Protection:** Construction activities can disturb soil, leading to erosion. Eroded soil can enter stormwater systems and local waterways, causing pollution and degradation of aquatic habitats.
- **Regulatory Compliance:** Pennsylvania law requires that all construction sites have an E&S Control plan in place. Failure to comply can result in fines and project delays.
- **Soil Conservation:** Effective E&S Control helps maintain soil health, reducing the long-term impact of construction on the land.
- **Water Quality Protection:** Controlling sediment runoff helps preserve water quality in rivers, streams, and lakes, protecting both wildlife and human resources.

2. Where E & S Control is Required

- **Construction Sites:** Any residential construction that disturbs one acre or more of land.
- **Slopes and Hillsides:** Areas prone to erosion due to steep grades.
- **Near Waterways:** Sites adjacent to streams, rivers, or lakes where sediment can easily wash away.
- **Roadways and Parking Lots:** Any areas where earth is disturbed, especially near drainage systems.

3. E & S Control Measures – Silt Socks

- **Description:** Silt socks are tubular fabric bags filled with filter material, typically used to intercept sediment-laden water. They are placed along the perimeter of construction sites or in drainage areas.
- **Purpose:**
 - **Sediment Filtration:** Silt socks trap sediment while allowing water to flow through.
 - **Erosion Prevention:** By slowing down water flow, they reduce the likelihood of erosion.
 - **Flexibility:** They can be easily moved and adjusted as site conditions change.



Erosion and Sediment Control Continued

4. E & S Control Measures – Silt Fences

- **Description:** A silt fence consists of a permeable fabric stretched across posts, designed to catch sediment from runoff.
- **Purpose:**
 - **Barrier to Sediment:** Silt fences prevent soil particles from being washed away from the construction site.
 - **Temporary Solution:** They are effective during the construction phase and can be removed once the site is stabilized.
 - **Versatile Use:** Suitable for use around the entire perimeter of a site or in specific problem areas.

5. Silt Filters for Street Grates

- **Description:** Silt filters are designed to fit into street grates, capturing sediment before it enters the stormwater system.
- **Purpose:**
 - **Stormwater Management:** Filters help maintain the integrity of stormwater systems by preventing clogging and reducing pollutant levels.
 - **Water Quality Enhancement:** They improve the quality of water being discharged into local waterways.
 - **Maintenance:** Regular cleaning and replacement are necessary to ensure effectiveness.

Erosion and Sediment Control is essential during residential construction to protect the environment, comply with state regulations, and maintain water quality. Understanding and implementing measures like silt socks, silt fences, and silt filters can greatly reduce the impact of construction activities. Homeowners should work with their contractors to develop and maintain an effective E & S Control plan throughout the construction process. For more information, consult your local conservation district or visit the Pennsylvania Department of Environmental Protection website.

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