

Appendix C

Approved Construction Water Quality Practices / Construction BMPs (CN)

*(Check the Lake County Surveyor's Office website for the most up-to-date
approved practices)*

www.lakecountysurveyor.org

APPLICATION

A **silt fence** is a temporary barrier of entrenched geotextile fabric stretched across and attached to supporting posts and installed on the contour to intercept and treat sediment-laden storm water runoff from **small**, unvegetated drainage areas. Its purpose is to trap sediment from small, disturbed areas by reducing the velocity of sheet flow. Generally, silt fences capture sediment by ponding water to allow deposition, not by filtration. However, specific characteristics of the fabric may allow for higher permeability of water and additionally create some filtering capability.

APPROVED PRODUCTS

SS-700 SiltSaver

DESCRIPTION

The Silt-Saver® Belted Silt Retention Fence, when installed correctly, produces a retention fence with superior filtering capabilities and proven strength.

The fabric used is a **spunbond polyester** material with a fiberglass scrim or net sandwiched in between the layers. With this process, the fabric and the screen become one product. Meshing the support system with the fabric eliminates the problems of traditionally supported fence where the fabric separates from the supporting wire.

TECHNICAL INFORMATION REPORT (TIR) REQUIREMENTS

1. No calculations are required in the TIR.

STORMWATER POLLUTION PREVENTION PLAN REQUIREMENTS

The following items should appear on the construction SWPPP plan sheets and detail sheets.

1. The location of all proposed silt fencing must be delineated with an appropriate symbol shown in the legend.
2. The specifications should be included on the detail sheets of the SWPPP.
3. Installation instructions must be included on the detail sheets of the SWPPP plan(s).

INSTALLATION

The silt fence shall be attached to hardwood stakes with hardwood laths and secured with five 1-1/2" staples. Hardwood stakes shall be 6' on center. The bottom 12" of fabric shall be left unsecured to allow for entrenchment.

A 6" deep trench along proposed fence line shall be created. Drive the stakes into the trench 8-12" or until secure. Be sure to stretch fabric taut when driving stakes. Stakes must be installed

on the downhill or downstream side of fence. Drape loose end of geotextile into trench, then backfill and compact soil on both sides.

MAINTENANCE

- Inspect within 24 hours of a rain event and at least once every seven calendar days.
- If fence fabric tears, starts to decompose, or in any way becomes ineffective, replace the affected portion immediately. *Note: All repairs should meet specifications as outlined by the manufacturer.*
- Remove deposited sediment when it is causing the filter fabric to bulge or when it reaches one-half the height of the fence at its lowest point. When contributing drainage area has been stabilized, remove the fence and sediment deposits, grade the site to blend with the surrounding area, and stabilize.
- <http://www.siltsaver.com/products/bsrf.html> for additional inspection requirements.

SPECIFICATIONS

See <http://www.siltsaver.com/products/bsrf.html> for specific product specifications.

LIMITATIONS

- Limited to one-quarter acre per 100 linear feet of fence
- Further restricted by slope steepness (see Table 1 below)

Table 1

Percent Slope		Maximum Distance
< 2%	< 50:1	100 feet
2% - 5%	50:1 to 20:1	75 feet
5% - 10%	20:1 to 10:1	Provide surface stabilization
10% - 20%	10:1 to 5:1	Provide surface stabilization
> 20%	> 5:1	Provide surface stabilization

- Fence should be installed parallel to the slope contour
- Minimum of 10 feet beyond the toe of the slope to provide a broad, shallow sediment pool. This includes fencing around soil stockpiles.
- May NOT be used for concentrated or channel flow.

REFERENCES

1. *The Indiana Storm Water Quality Design Manual, Planning and Specification Guide for Effective Erosion and Sediment Control and Post-Construction Water Quality*. Published by the Indiana Department of Environmental Management.
2. <http://www.siltsaver.com/products/bsrf.html>

APPLICATION

An **erosion control blanket** is a biodegradable, organic or synthetic mulch incorporated with a biodegradable, photodegradable, or permanent polypropylene, natural fiber, or similar netting material. It is an alternative to mulch and normally used on slopes and in concentrated flow channels. It is used to prevent erosion by protecting the soil from rainfall impact, overland water flow, concentrated runoff, or wind, to provide temporary surface stabilization, to anchor mulch in critical areas, including slopes and concentrated flow conveying systems, to reduce soil crusting and to conserve soil moisture and increase seed germination and seedling growth.

APPROVED PRODUCTS

North American Green S75, DS75, S150, DS150, C125, SC150, C125BN, SC1250BN, S75BN, S150BN

DESCRIPTION

Blanket material generally consists of organic (straw, excelsior, woven paper, coconut fiber, etc.) or synthetic mulch incorporated with a polypropylene, natural fiber or similar netting material. (The netting may be biodegradable or photodegradable.)

Note: Some erosion control blanket nettings may pose a threat to certain species of wildlife if they become entangled in the netting matrix. Staples, pins or stakes used to prevent movement or displacement of blanket. (Follow manufacturer's recommendations for specific applications.)

TECHNICAL INFORMATION REPORT (TIR) REQUIREMENTS

1. The TIR should include documentation / calculations demonstrating the shear stress for the design storm is at or below the maximum shear stress allowed by the manufacturer for the specific blanket proposed for use in concentrated flow locations. Manufacturer's software may be used to calculate shear stress with runoff estimates provided by the design engineer.

STORMWATER POLLUTION PREVENTION PLAN REQUIREMENTS

The following items should appear on the construction SWPPP plan sheets and detail sheets.

1. The specific manufacturer's model or blanket type(s).
2. The proposed locations to be blanketed, preferably by cross-hatching.
3. Detailed installation procedures including staple pattern for each model and application area (e.g. slopes, channels, etc.).
4. An inspection checklist including date and inspector name.

INSTALLATION

The typical installation procedure is as follows:

1. Select the type and weight of erosion control blanket to fit the site conditions (e.g., slope, channel, flow velocity) per the manufacturer's specifications.
2. Prepare the seedbed, add soil amendments, and permanently seed the area immediately following seedbed preparation.
3. Lay erosion control blankets on the seeded area so that they are in continuous contact with the soil with each up-slope or up-stream blanket overlapping the down-slope or down-stream blanket by at least eight inches, or follow manufacturer's recommendations.
4. Tuck the uppermost edge of the upper blankets into a check slot (slit trench), backfill with soil and tamp down. In certain applications, the manufacturer may require additional check slots at specific locations down slope from the uppermost edge of the upper blankets.
5. Anchor the blankets in place by driving staples, pins, or stakes through the blanket and into the underlying soil. Follow an anchoring pattern appropriate for the site conditions and as recommended by the manufacturer.
6. For specific installation instructions for each model see <http://www.nagreen.com>

MAINTENANCE

The general maintenance requirements to be addressed in the SWPPP should include:

- Inspect within 24 hours of each rain event and at least once every seven calendar days.
- Check for erosion or displacement of the blanket. If any area shows erosion, pull back that portion of the blanket covering the eroded area, add soil and tamp, reseed the area, replace and staple the blanket.
- See <http://www.nagreen.com> for specific maintenance instructions.

SPECIFICATIONS

See <http://www.nagreen.com> for specific model specifications.

LIMITATIONS

- Each application must not exceed the maximum shear stress created by water flow specified by the manufacturer when used in concentrated flow areas.

REFERENCES

1. *The Indiana Storm Water Quality Design Manual, Planning and Specification Guide for Effective Erosion and Sediment Control and Post-Construction Water Quality*. Published by the Indiana Department of Environmental Management.
2. <http://www.nagreen.com>

APPLICATION

A **turf reinforcement mat** is a three-dimensional matrix typically used in channel applications or on slopes to reinforce plant rooting systems and the underlying soil material. It may be buried under the surface in contrast to erosion control blankets. It is used to provide reinforcement to vegetation in areas of *concentrated flow* or *steep slopes* where other types of stabilization, such as riprap, are not feasible or desired, to provide surface stabilization and to provide reinforcement for plant roots as vegetation is being established. The material of construction is generally stabilized as compared to an erosion control blanket and is frequently utilized as a "permanent" application.

APPROVED PRODUCTS

North American Green P300, SC250, C350, P550

DESCRIPTION

Turf reinforcement mat (typically consists of a three-dimensional matrix of polypropylene, nylon, or other material) and is commonly anchored using six to 12-inch staples, pins, or stakes.

TECHNICAL INFORMATION REPORT (TIR) REQUIREMENTS

1. The TIR should include documentation / calculations demonstrating the shear stress for the design storm is at or below the maximum shear stress allowed by the manufacturer for the specific blanket proposed for use in concentrated flow locations. Manufacturer's software may be used with runoff estimates provided by the design engineer.

STORMWATER POLLUTION PREVENTION PLAN REQUIREMENTS

The following items should appear on the construction SWPPP plan sheets and detail sheets:

1. The specific manufacturer's model or mat type(s).
2. The proposed locations to be reinforced, preferably shown by cross-hatching.
3. Detailed installation procedures including staple pattern.

INSTALLATION

1. Select a turf reinforcement mat appropriate for the site conditions (e.g., slope, channel, flow velocity) per the manufacturer's specifications.
2. Grade and prepare the soil foundation for mat installation.
3. Install the mat according to the manufacturer's instructions, including burying the edges in check slots or slit trenches.

4. Anchor the mat in place by driving staples, pins, or stakes through the mat and into the underlying soil. Follow an anchoring pattern appropriate for the site conditions and as recommended by the manufacturer.
5. Backfill the mat with topsoil, filling to the top of the mat.
6. Seed the area after the mat has been installed and backfilled with soil.
7. Install erosion control blankets over the seeded turf reinforcement mat to stabilize the surface.
8. See <http://www.nagreen.com/> for specific installation instructions for the proposed model on the plans to be used.

Note: Some products may not require backfill of topsoil or the application of erosion control blankets. Consult manufacturer's literature for proper installation guidance.

MAINTENANCE

- Inspect within 24 hours of each rain event and at least once every seven calendar days.
- Check for erosion or displacement/exposure of the mat.
- If a specific area shows erosion, add soil and restabilize.
- See <http://www.nagreen.com/> for additional maintenance requirements for the specific model proposed on the plans.

SPECIFICATIONS

See <http://www.nagreen.com/> for specifications of the specific model proposed on the plans.

LIMITATIONS

- Each application must not exceed the maximum shear stress created by water flow specified by the manufacturer when used in concentrated flow areas.
- The material of construction should have an appropriate life expectancy for the application. Frequently, a turf reinforcement mat will be considered permanent and provide reinforcement of plant rooting.

REFERENCES

1. *The Indiana Storm Water Quality Design Manual, Planning and Specification Guide for Effective Erosion and Sediment Control and Post-Construction Water Quality*. Published by the Indiana Department of Environmental Management.
2. <http://www.nagreen.com/>

APPLICATION

Check dams are a series of runoff control structures, consisting of geotextile fabric and an obstruction such as a berm, placed across drainage channels to slow storm water runoff and dissipate energy. This measure may also provide limited effectiveness as a sediment control measure.

Check dams are commonly used (a) in channels that are eroding, but where permanent stabilization is impractical due to their short period of usefulness, and (b) in eroding channels where construction delays or weather conditions prevent timely installation of erosion-resistant linings.

APPROVED PRODUCTS

GeoRidge®

DESCRIPTION

GeoRidge® is a permeable ditch berm designed for erosion and sediment control. GeoRidge® is constructed of a durable UV stabilized HDPE and manufactured using a fully automated process to ensure the highest quality and consistency. GeoRidge® has proven effective for erosion and sediment control. By acting as a dissipater, GeoRidge® reduces flow velocities, and provides a smoother, less damaging release of water minimizing the problem of downstream sediment. Compared to straw bales and other devices, GeoRidge® consistently outperforms, delivering superior results.

GeoRidge® should be used in conjunction with a geotextile or erosion control blanket to prevent under- or side-cutting. The erosion control blanket shall be a machine-produced mat of 100% coconut fiber matrix stitch bonded with UV stabilized thread between two UV stabilized polypropylene nettings. The erosion control blanket shall be C125 as manufactured by North American Green, or equivalent.

TECHNICAL INFORMATION REPORT (TIR) REQUIREMENTS

1. The frequency or spacing of the GeoRidge® shall be documented in the TIR. The frequency or spacing is based on the velocity and slope of the swale or channel. See manufacturer's information of specific requirements.

STORMWATER POLLUTION PREVENTION PLAN REQUIREMENTS

The following items shall appear on the construction SWPPP plan sheets and detail sheets.

1. Location of all proposed GeoRidge®s clearly labeled.
2. Detailed installation procedures. These details should include overlap distance, anchoring, etc.

INSTALLATION

See <http://www.nilex.com/Products.aspx?ProductID=98> for manufacturer's installation requirements.

MAINTENANCE

- Inspect within 24 hours of each rain event and at least once every seven calendar days.
- If significant erosion occurs between dams, install an erosion-resistant liner in that portion of the channel.
- Remove accumulated sediment when it reaches one-half the height of the dam to maintain channel capacity, allow drainage through the dam, and prevent large flow from displacing sediment.
- When dams are no longer needed, remove and stabilize the channel, using an erosion-resistant lining if necessary.
- Similar to silt fence and bales, silt deposited behind Geo-Ridge® must be removed periodically to maintain the permeability and, therefore, the performance of Geo-Ridge(tm). Allowing excessive sediment to build behind the berm will create a non-porous check structure. As water flows over the plugged berm, the impact of the water on the downstream side of the terrace will promote the dislodgment and transportation of sediment, leading to failure of the system.
- See <http://www.nilex.com/Products.aspx?ProductID=98> for additional manufacturer's maintenance requirements.

SPECIFICATIONS

See <http://www.nilex.com/Products.aspx?ProductID=98> for manufacturer's specifications.

LIMITATIONS

- The channel geometry must be linear to create continuous contact between the soil surface and the bottom of the Geo-Ridge® berm, i.e. there must be no gaps between the soil surface and the berm.
- Erosion control blankets must be used in conjunction with the berm.
- Maximum channel slope = 38%
- Maximum Geo-Ridge® spacing (ft) = height of Geo-Ridge® (ft) / channel slope (ft/ft).
- Berms must be secured with pins or staples per manufacturer's requirements.

REFERENCES

1. *The Indiana Storm Water Quality Design Manual, Planning and Specification Guide for Effective Erosion and Sediment Control and Post-Construction Water Quality*. Published by the Indiana Department of Environmental Management.

2. <http://www.nilex.com/Products.aspx?ProductID=98>

APPLICATION

Sediment laden sheet flow from graded areas prior to establishment of vegetation such as behind curb areas must be addressed as part of a comprehensive SWPPP. Unprotected topsoil, particularly on sloping areas, is vulnerable to significant erosion and sediment control problems. Erosion and runoff can significantly impact disturbed sites that may not be ready for permanent erosion control measures or permanent measures have not yet been established.

APPROVED PRODUCTS

SedimentSTOP®

DESCRIPTION

SedimentSTOP®, which consists of a mixture of coconut fiber and weed-free straw reinforced with a 100% biodegradable netting, provides more effective sediment control than straw bales and straw wattles. Rolled from edge to edge, the multiple layers of netting formed from rolling the sediment create a temporary, water-permeable structure that offers superior soil interception, filtration, sediment control, and containment properties. SedimentSTOP rolls are constructed from 100% biodegradable components and designed to remain intact for 2-3 years. A fiber matrix consisting of 50% agricultural straw and 50% coconut fiber is applied at a rate of 1.75 lbs/yd² (measured in an unrolled state). This dense fiber matrix is sewn to a single leno woven biodegradable net along with a two foot Splash Apron(tm) section which uses a leno woven top net extending along one side for the length of the roll. Leno woven nets have more integrity than cross lay nets due to the twisted double strands holding the cross directional strands in place. The fiber matrix and layers of net in a finished roll form the filter medium for sediment laden runoff.

Sediment laden runoff is slowed as it flows through the SedimentSTOP® and sediment is deposited within the roll as well as upslope of the roll. The short Splash Apron is stapled down in the same way as an erosion control blanket and acts to prevent erosion from water that may over-top the SedimentSTOP roll and cascade down the other side

TECHNICAL INFORMATION REPORT (TIR) REQUIREMENTS

1. A discussion of the maximum spacing per the manufacturer between rolls on slopes should be included in the TIR.

STORMWATER POLLUTION PREVENTION PLAN REQUIREMENTS

The following items shall appear on the construction SWPPP plan sheets and detail sheets.

1. The location of all SedimentSTOP®s clearly defined and labeled.
2. Installation details including the required anchoring trench and anchor spacing.

3. Spacing of the SedimentSTOP® on slopes should be provided per manufacturer's specifications.
4. Inspection schedule and checklist should be included on the SWPPP plan sheets.

INSTALLATION

See <http://www.nagreen.com/> manufacturer's installation instructions.

MAINTENANCE

- Inspect within 24 hours of a rain event and at least once every seven calendar days.
- Check anchoring a trench depth.
- Remove accumulated sediment when it reaches one-quarter the height of the SedimentSTOP®.
- Repair eroded and damaged areas.
- If ponding becomes excessive, ridges should be removed and reconstructed.
- Inspect to ensure that the ridge is holding its shape and producing adequate flow.

SPECIFICATIONS

See <http://www.nagreen.com/> for specifications.

LIMITATIONS

- Spacing on slopes must not exceed manufacturer's recommendations.
- Total upstream area should not produce over-topping condition for 2-year storm.

REFERENCES

1. *The Indiana Storm Water Quality Design Manual, Planning and Specification Guide for Effective Erosion and Sediment Control and Post-Construction Water Quality*. Published by the Indiana Department of Environmental Management.
2. <http://www.nagreen.com/>

APPLICATION

Catchbasin inserts are structures designed to inside a standard catchbasin and prevent sediment or other undesirable materials from entering the storm sewer. Inlet protection measures should not be the only level of sediment control. It is not the intent of these measures to accommodate or be effective where sediment loading is high. It is important that appropriate sediment control measures are installed in the drainage area above the storm sewer system to reduce excessive sediment loading. The drop inlet protection measures are designed to reduce the amount of sediment entering a storm sewer system. It is extremely important to note that these measures require intensive maintenance and require frequent monitoring, cleanout, repair and/or replacement.

APPROVED PRODUCTS

Catch-All Inlet Protector

DESCRIPTION

The Catch-All structure inlet filter assembly consists of a steel frame with a replaceable geotextile fabric bag attached with a steel band and locking cap that is suspended from the frame. The structure inlet filter assembly is installed under the grate on the lip of the drainage structure frame with the fabric bag hanging down into the drainage structure.

TECHNICAL INFORMATION REPORT (TIR) REQUIREMENTS

1. No calculations are required in the TIR.

STORMWATER POLLUTION PREVENTION PLAN REQUIREMENTS

The following items shall appear on the construction SWPPP plan sheets and detail sheets.

1. The location of each insert clearly labeled.
2. A detail drawing of each insert type must be provided. One drawing for each insert with differing dimensions.
3. An inspection checklist should be included on the plans.

INSTALLATION

See <http://www.marathonmaterials.com/Specs/STD%20Catch-All%20Brochure.pdf> for manufacturer's installation procedures.

MAINTENANCE

- Inspect after each rainfall event and remove sediment / debris as needed.
- Replace bag every six (6) months

- Replace bag after any oil, gasoline or solvent spill.
- Replace bag if there is a hole in the fabric.

SPECIFICATIONS

See <http://www.marathonmaterials.com/Specs/STD%20Catch-All%20Brochure.pdf> for current specifications.

LIMITATIONS

- Catch-All or any catchbasin insert must be used in conjunction with stabilization practices upstream. This includes surface stabilization practices.

REFERENCES

1. *The Indiana Storm Water Quality Design Manual, Planning and Specification Guide for Effective Erosion and Sediment Control and Post-Construction Water Quality*. Published by the Indiana Department of Environmental Management.
2. <http://www.marathonmaterials.com/>

APPLICATION

When concentrated runoff is carried through a storm water conveyance system and discharged, it is necessary to provide a stable outlet. Outlet protection measures are designed to prevent scouring at the point of discharge and provide energy dissipation to reduce erosion downstream of the discharge point. Scour is erosion at the outlet area caused by the shear forces in the water - a combination of velocity and the weight of flowing water. Shear is compounded by the increasing velocity of the water as it rapidly expands from the confined pipe out into a channel.

APPROVED PRODUCTS

ScourSTOP(tm)

DESCRIPTION

ScourStop™ is a semi-rigid, highdensity polyethylene plastic mat (4 ft X 4 ft X .5 in) combining vegetation with modern polymer material technology to mechanically protect the soil from scour and erosion until the shear forces have dissipated. Transition mats must be used over another erosion management practice cover, typically a turf reinforcement mat (TRM), sod, or combination of the two, for immediate and long term soil loss protection. ScourStop(tm) is formulated with 10 year, UV protection; coloring it a dark green. However, once vegetated, the mat is mostly shielded from the sun and undetectable - making it a permanent erosion control practice.

TECHNICAL INFORMATION REPORT (TIR) REQUIREMENTS

1. Peak runoff from the 10-year frequency design event of the water conveyance structure.
2. Copy of the manufacturer's designer checklist, completed.

STORMWATER POLLUTION PREVENTION PLAN REQUIREMENTS

The following items shall appear on the construction SWPPP plan sheets and detail sheets.

1. Location of the proposed ScourSTOP(s).
2. Detail of the ScourSTOP mat.
3. Detailed Installation instructions.
4. Inspection checklist with specific inspection points.

INSTALLATION

See <http://www.scourstop.com/ease-of-installation.php> for manufacturer's installation instructions.

MAINTENANCE

- Inspect after each rainfall event during establishment of vegetation. Inspect yearly after vegetation established.
- Repair / revegetate as needed.

SPECIFICATIONS

See <http://www.scourstop.com/resources.php> for the manufacturer's design specifications.

LIMITATIONS

- Must be used in conjunction with other erosion practices such as sod or a turf reinforcing mat.

REFERENCES

1. *The Indiana Storm Water Quality Design Manual, Planning and Specification Guide for Effective Erosion and Sediment Control and Post-Construction Water Quality*. Published by the Indiana Department of Environmental Management.
2. <http://www.scourstop.com/>

APPLICATION

A temporary construction ingress/egress pad is a sediment control measure, consisting of a stabilized pad used at any point where construction traffic will be traversing between a small construction site and the adjoining public right-of-way or street. The pad may consist of aggregate with geotextile underlayment or a portable manufactured system. The ingress / egress pad prevents movement of soil from the site by equipment tires. A portable manufactured system is recommended for single lots.

APPROVED PRODUCTS

AGS Mud Mat

DESCRIPTION

AGS Mud Mats consist of pocketed, double-wall, high-strength fabric with high tensile reinforcing ribs confined within each sleeve which allows for easy deployment and amazing structural stability. Mats connect together to form custom sizes. Ground pressure from vehicle tires is reduced up to 40x causing minimal ground disturbance.

TECHNICAL INFORMATION REPORT (TIR) REQUIREMENTS

1. No calculations are required in the TIR.

STORMWATER POLLUTION PREVENTION PLAN REQUIREMENTS

The following items shall appear on the construction SWPPP plan sheets and detail sheets.

1. A detail of the Mud Mat including anchoring / joining connections.
2. The location(s) of the proposed Mud Mats.

INSTALLATION

See <http://www.enviroages.com/new.asp> for manufacturer's installation procedures.

MAINTENANCE

- Inspect daily and remove built-up debris as necessary.
- Inspect for breaks or tears in the material. Repair or replace as required.

SPECIFICATIONS

See <http://www.enviroages.com/> for manufacturer's specifications.

LIMITATIONS

- Minimum length of construction entrance should be 50 feet, minimum width should be 12 feet.

REFERENCES

1. *The Indiana Storm Water Quality Design Manual, Planning and Specification Guide for Effective Erosion and Sediment Control and Post-Construction Water Quality*. Published by the Indiana Department of Environmental Management.
2. <http://www.enviroages.com/>

APPLICATION

Dust control is a construction site management measure used to control the blowing and movement of dust on construction sites and associated land-disturbing activities. Dust control measures may consist of either chemical, structural, or mechanical measures.

APPROVED PRODUCTS

APS 605 Silt Stop® 605

DESCRIPTION

APS 605 Silt Stop® material is designed to agglomerate very fine particulate and retain the agglomerate for up to 1-4 days in traffic areas (1-3 months on non-traffic areas). This mechanism has been shown to reduce airborne dust from haul roads, waste dumps, tailings piles, and open areas on construction sites.

TECHNICAL INFORMATION REPORT (TIR) REQUIREMENTS

1. No calculations are required in the TIR.

STORMWATER POLLUTION PREVENTION PLAN REQUIREMENTS

The following items shall appear on the construction SWPPP plan sheets and detail sheets.

1. The areas to be treated with the SiltSTOP should be clearly delineated on the plans, preferably with cross-hatching.
2. The mixing proportions should be clearly stated on the SWPPP.

INSTALLATION / APPLICATION

See <http://www.siltstop.com/dust.html> for manufacturer's application directions.

MAINTENANCE

- Re-apply as needed to control suspended dust, 1 to 4 days for traffic areas.

SPECIFICATIONS

See <http://www.siltstop.com/dust.html> for manufacturer's specifications.

LIMITATIONS

- May be used for temporary stabilization only. Permanent measures must be implemented for continued use of roadways etc.

REFERENCES

1. *The Indiana Storm Water Quality Design Manual, Planning and Specification Guide for Effective Erosion and Sediment Control and Post-Construction Water Quality*. Published by the Indiana Department of Environmental Management.
2. <http://www.siltstop.com/dust.html>

APPLICATION

Concrete washout areas are designated locations within a construction site that are either a prefabricated unit or a designed measure that is constructed to contain concrete washout. Concrete washout systems are typically used to contain washout water when chutes and hoppers are rinsed following delivery.

APPROVED PRODUCTS

FryeFlow Filtration Systems concrete washout devices.

DESCRIPTION

The FryeFlow Filtration Systems concrete washout devices are comprised of a metal frame specially designed to hold a geotextile basket. The basket is made of a high-flow geotextile allowing water to flow directly through the basket, leaving all sediment and debris behind. The high-flow geotextile is made up of polypropylene filaments, woven to form a stable and durable network such that the filaments retain their relative position. The geotextile is nonbiodegradable and resistant to most soil chemicals, acids, and alkali with a pH range of 3 - 12.

TECHNICAL INFORMATION REPORT (TIR) REQUIREMENTS

1. No calculations are required in the TIR.

STORMWATER POLLUTION PREVENTION PLAN REQUIREMENTS

The following items shall appear on the construction SWPPP plan sheets and detail sheets.

1. The location of each washout basin clearly delineated and labeled.
2. A detail of the concrete washout basin.
3. Installation instructions.
4. Maintenance procedures including a checklist.

INSTALLATION

See <http://fryeflowsystems.com/installation.html> for manufacturer's installation procedures.

MAINTENANCE

- Inspect after each use and replace basket when full. Dispose of properly.

SPECIFICATIONS

See <http://fryeflowsystems.com/installation.html> for manufacturer's specifications.

LIMITATIONS

- Basket must be inspected and replaced as use warrants.

REFERENCES

1. *The Indiana Storm Water Quality Design Manual, Planning and Specification Guide for Effective Erosion and Sediment Control and Post-Construction Water Quality*. Published by the Indiana Department of Environmental Management.
2. <http://fryeflowsystems.com/>

APPLICATION

Construction projects occasionally require some form of dewatering operation to allow for construction of building foundations, installation of utility lines, or isolation of work areas in and around waterbodies or stream channels. This usually involves the use of a pumping system which siphons water from a pit or trench. When the dewatering operation draws water from the bottom of the pit or trench, it often agitates the soil material on the bottom and results in a slurry which is pumped outside of the pit or trench. This generally results in the discharge of sediment-laden water.

The impact of this sediment-laden water can be reduced by the use of dewatering bags on the pump discharge to filter the sediment out.

APPROVED PRODUCTS

Dandy Dewatering Bag(tm)

DESCRIPTION

The Dandy Dewatering Bag is designed to control sediment discharge in dewatering applications where water is being pumped. When pumped water reaches the Dandy Dewatering Bag, the suspended solids are allowed to settle out of the slowed flow and are captured by the bag. The Dandy Dewatering Bag(tm) shall be a bag sewn of nonwoven fabric in the U.S.A. using a double needle machine and a high strength thread. The bag shall have a spout opening large enough to accommodate at least a four (4) inch pump discharge hose with an attached strap to tie unit closed. The fabric shall have a flow rate of 95 gal/min/ft².

TECHNICAL INFORMATION REPORT (TIR) REQUIREMENTS

1. The size of the dewatering bag and pump discharge should be documented in the TIR.

STORMWATER POLLUTION PREVENTION PLAN REQUIREMENTS

The following items shall appear on the construction SWPPP plan sheets and detail sheets.

1. Location of proposed dewatering pump discharge.
2. Specification of dewater bag.
3. Inspection / replacement guidelines and / or checklist.

INSTALLATION

See <http://www.dandyproducts.com/Products/DandyDewateringBag/tabid/44/Default.aspx> for the manufacturer's installation instructions.

MAINTENANCE

- Bag should be replaced when ½ full.
- See <http://www.dandyproducts.com/Products/DandyDewateringBag/tabid/44/Default.aspx> for additional maintenance requirements by the manufacturer.

SPECIFICATIONS

See <http://www.dandyproducts.com/Products/DandyDewateringBag/tabid/44/Default.aspx> for manufacturer's specifications.

LIMITATIONS

- The size of the bag may limit the discharge rate of the pump.
- Proper disposal of the bagged material may be a concern.

REFERENCES

1. *The Indiana Storm Water Quality Design Manual, Planning and Specification Guide for Effective Erosion and Sediment Control and Post-Construction Water Quality*. Published by the Indiana Department of Environmental Management.
2. <http://www.dandyproducts.com/Products/DandyDewateringBag/>

APPLICATION

Fine particles and colloidal clays can remain suspended in water or runoff for long periods of time. Sometimes the time in suspension is longer than the time provided by settling basins or other water quality practices. Settling of these finer particles can be accelerated by use of a polymer. The polymer is introduced at a point upstream to help provide adequate mixing without shear.

APPROVED PRODUCTS

APS 700 Series Floc Log®

DESCRIPTION

APS 700 Series Floc Log is a group of soil specific tailored log-blocks that contains blends of water treatment components and polyacrylamide co-polymer for water clarification and erosion control. They reduce and prevent fine particles and colloidal clays from suspension in stormwater. There are more than 60 types of Floc Logs designed for varying soil and water conditions. Contact Applied Polymer Systems, Inc. or your local distributor for testing and site-specific application information.

TECHNICAL INFORMATION REPORT (TIR) REQUIREMENTS

1. Results of testing and site-specific application recommendations by the manufacturer should be provided in the TIR or in writing to the LCSO MS4 Section.

STORMWATER POLLUTION PREVENTION PLAN REQUIREMENTS

The following items shall appear on the construction SWPPP plan sheets and detail sheets.

1. The Specific Floc Log® to be used.
2. The specific procedure for introducing and mixing the Floc Log®. This should include all construction parameters such as length and width of a mixing channel
3. Maintenance guidelines.

INSTALLATION

See http://www.siltstop.com/flog_log_aps_700.html for manufacturer's installation requirements.

MAINTENANCE

- The Floc Log®s should be inspected and replaced when the polymer has been exhausted.
- See http://www.siltstop.com/flog_log_aps_700.html for additional maintenance requirements of the manufacturer.

SPECIFICATIONS

See http://www.siltstop.com/flog_log_aps_700.html for the manufacturer's specifications.

LIMITATIONS

- Testing must be performed for each site conditions. The results of the testing must be provided to the LCSO MS4 Department.

REFERENCES

1. *The Indiana Storm Water Quality Design Manual, Planning and Specification Guide for Effective Erosion and Sediment Control and Post-Construction Water Quality*. Published by the Indiana Department of Environmental Management.
2. http://www.siltstop.com/flog_log_aps_700.html

APPLICATION

Sediment laden sheet flow from graded areas prior to establishment of vegetation such as behind curb areas must be addressed as part of a comprehensive SWPPP. Unprotected topsoil, particularly on sloping areas, is vulnerable to significant erosion and sediment control problems. Erosion and runoff can significantly impact disturbed sites that may not be ready for permanent erosion control measures or permanent measures have not yet been established.

Coir logs are approved for use behind curbs and across construction drives. The logs may be re-used as long as the structural integrity of the coir and netting are maintained.

APPROVED PRODUCTS

D2 Land and Water Coir Logs

DESCRIPTION

Coir Logs are constructed of interwoven coconut fibers that are bound together with biodegradable or permanent netting. Commercially produced coir logs come in various lengths and diameters. The product needs to be selected specifically for the site.

TECHNICAL INFORMATION REPORT (TIR) REQUIREMENTS

1. No requirements.

STORMWATER POLLUTION PREVENTION PLAN REQUIREMENTS

The following items shall appear on the construction SWPPP plan sheets and detail sheets.

1. The location of all proposed coir logs should be delineated on the plans sheets.
2. The specifications should be included on the plans sheets.
3. The installation details should be included on the plan sheets
4. The maintenance guidelines should be included on the plan sheets.

INSTALLATION

1. Install logs behind curbs. Turn the ends of the log barrier up slope such that the point of contact between the ground and the bottom of the log barrier end terminates at a higher elevation than the top of the log barrier at its lowest point.
2. Excavate a trench with a depth and width equal to at least one-fourth the diameter of the log or follow the manufacturer's recommendations. Where applicable, the trench may also be excavated upslope of a curb or sidewalk. Placing the product against the curb or sidewalk will provide additional stability and resistance to surface flow.

3. Construct the log or utilize a pre-manufactured product. For compost use a pneumatic blower or similar device to provide adequate and consistent fill in the log. (Seed or sod may be applied at the time of installation for permanent applications.)
4. Coir Fiber Logs shall be joined end-to-end to create a continuous length. The Polypropylene net exterior shall be laced continuously to the exterior net of the adjacent coir fiber log with 0.125" diameter inter-braided nylon rope in such a manner that there are no gaps between adjacent logs.
5. Hardwood Stakes measuring 2" x 2" x 36" shall be used for securing Coir Fiber Logs. Stakes shall be notched to accept 0.25" inter-braided nylon rope. Notching shall take place after the stakes have been driven into site soils. Rope for securing Coir Logs with stakes shall be 0.25" diameter inter-braided nylon rope. Posts should be spaced no more than five feet apart and driven through the middle of the log. Reference approved construction documents for actual dimensioned location and quantity of Hardwood Stakes. The posts should be driven a minimum of 18 inches deep into the soil. The stake should be flush with the top of the log.
6. Backfill the trench with excavated soil placed against the log barrier to ground level on the down-slope side and to two inches above ground level on the up-slope side of the log barrier. Compact the fill material to keep it in place.

See http://www.d2lwr.com/D2_sedi.html for manufacturer's installation requirements.

MAINTENANCE

- The logs should be inspected weekly and after each rainfall event. Inspection should include if the materials diameter is less than specification and if the outer netting is been degraded or broken.
- Remove accumulated sediment when it reaches one-quarter the height of the log.
- Inspect to ensure that the sock is maintaining its integrity and producing adequate flow.
- Repair eroded and damaged areas.
- If ponding becomes excessive, logs should be removed and either reconstructed or new product installed.
- Reseed, if applicable.
- Remove and dispose of log if necessary.
- See http://www.d2lwr.com/D2_sedi.html for additional maintenance requirements of the manufacturer.

SPECIFICATIONS

See http://www.d2lwr.com/D2_sedi.html for the manufacturer's specifications.

LIMITATIONS

- Limited to one-quarter acre per 100 linear feet of barrier.
- Also limited per the table below.

Table CN-119-1 - Coir Log Application Parameters

Slope		Maximum Distance Above Log (linear ft) for Minimum Log Diameter
		(8 inch Log)
0%-2%	<50:1	125
2%-10%	50:1 to 10:1	100
10%-20%	10:1 to 5:1	75
20%-33%	5:1 to 3:1	25
>33%	>3:1	10

REFERENCES

1. *The Indiana Storm Water Quality Design Manual, Planning and Specification Guide for Effective Erosion and Sediment Control and Post-Construction Water Quality*. Published by the Indiana Department of Environmental Management.
2. http://www.d2lwr.com/D2_sedi.html