



WEAVER GENERAL CONSTRUCTION COMPANY
 3679 S. Huron St., Suite 404
 Englewood, CO 80110
 Phone: (303) 789-4111 FAX: (303) 789-4310

SUBMITTAL TRANSMITTAL

February 21, 2011

WGC Submittal No: 02900-001

PROJECT: **Harold Thompson Regional WRF**
 Birdsall Rd.
 Fountain, CO 80817
 Job No. 2908

ENGINEER: **GMS, Inc.**
 611 No. Weber St., #300
 Colorado Springs, CO 80903
 719-475-2935 Roger Sams

OWNER: **Lower Fountain Metropolitan
 Sewage Disposal District**
 901 S. Santa Fe Ave.
 Fountain, CO 80817
 719-382-5303 James Heckman

CONTRACTOR: **Hydro-Turf Inc.**
 Bill Thompson

SUBJECT: Landscaping Blanket, Hydro-Mulch, Tackifier and Seed.

SPEC SECTION: 02900 - Landscaping

PREVIOUS SUBMISSION DATES: None

DEVIATIONS FROM SPEC: ___ YES X NO

CONTRACTOR'S STAMP: This submittal has been reviewed by Weaver General Construction and approved with respect to the means, methods, techniques, & safety precautions & programs incidental thereto. Weaver General Construction also warrants that this submittal complies with contracted documents and comprises on deviations thereto:

<p>Contractor's Stamp:</p> <p>Date: 2/21/11 Reviewed by: H.C. Myers (X) Reviewed Without Comments () Reviewed With Comments</p> <p>ENGINEER'S COMMENTS: _____</p>	<p>Engineer's Stamp:</p>
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Material Specifications

WinterStraw™ HV

HVG - Double Net -Green
HVW - Double Net -White
HV Bio - Double Net - Jute



WinterStraw™ HV (High Velocity) Double Net Products are short term, single top & single bottom net erosion control blankets that are machine-assembled using 100% agricultural straw fibers. The straw fibers are evenly distributed across the entire area of the blanket to a rough thickness of 3/8" and stitched between your choice of netting using high strength degradable thread. Biodegradable thread is used on our Bio (Jute) Products

Each blanket is covered on the top and bottom with a photodegradable polypropylene or jute net. Net openings are approximately 1/2" wide x 1/2" long and are stitched on 1 1/2" centers for increased performance capabilities.

Netting options:

Functional Longevity

Green Net – Standard photodegradable polypropylene netting.	12 Months
White Net – Rapidly degrading, polypropylene netting with a UV degrader additive.	45-90 Days
Jute Net – Biodegradable fiber netting	12-18 Months

All WinterStraw™ blankets are individually labeled and shrink-wrapped to protect against the weather and damage.

Materials:

- 100% Certified Weed Free Straw
- Photodegradable polypropylene Netting or Jute Netting
- Degradable polypropylene Thread or Biodegradable Thread

Roll Sizes:

Area:	100 yd²	200 yd²	500 yd²
Width:	8 feet	16 feet	8 feet
Length:	112.5 feet	112.5 feet	562.5 feet
Weight:	50 lbs	100 lbs	250 lbs

Physical Characteristics:

Fiber:	100% Certified Weed Free Agricultural Straw
Unit Weight:	0.50 lb/yd ² ± 10%
Thread Material:	High Tensile Polypropylene or High Tensile Biodegradable Thread
Thread Pattern:	1.5" wide x 4" long
Netting:	Polypropylene (green or white) or Jute Netting
Net Openings:	1/2" wide x 1/2" long
Net Configuration:	1- Top & 1- Bottom

Performance Characteristics:

Winterstraw™ blankets are designed to provide temporary ground cover to reduce erosion, protect seeding, enhance germination, and speed re-vegetation. Functional longevity is between 3 and 12 months depending on soil conditions, climate, geography, and choice of netting. Testing shows HVG , HVW, and HV Bio blankets are suitable for the following applications:

Slopes: up to 2:1 **Channel flows:** up to 4.5 ft per second **Shear Stress:** up to 1.63 lbs/ft².

All figures are based on product at the time it is manufactured.

WinterStraw™ ~ Double Net Performance Data Sheet

WinterStraw™ blankets are constructed of 100% Natural Straw fibers stitched between two photodegradable polypropylene nets using degradable thread. WinterStraw™ HVBio blankets offer biodegradable Jute netting and high tensile biodegradable thread. Our blankets are designed to protect against erosion by providing temporary ground cover while enhancing seed germination and assisting with vegetation establishment. Functional longevity is as short as 45 days and up to 12 months depending on product used and site conditions. Soil erosion is controlled by the root system, stem and leaf structure of the mature vegetation after the blankets degrade.

WinterStraw Double Net blankets are rated for channel flows up to 4.5 feet per second and 1.63-lbs/ft² shear stress. Additionally, our blankets have a design C-Factor of .042 and are typically appropriate for up to 2:1 slopes.

Additional Physical Properties as tested and observed:

Property	Test Method	MARV*
Mass per Unit Area	ASTM D 6475	8 oz/yd ²
Thickness	ASTM D 6525	0.33 inches
Light Penetration	ASTM D 6567	11 %
Water Absorption	ASTM D 1117/ECTC-TASC 00197	403 %

ECTC Bench Scale Testing **

Description of Test Method	Test Method	Results
ECTC Method 2 -Determination of un-vegetated RECP ability to protect soil from Rain Splash and associated runoff.	<u>2 in. (50mm)/hr for 30 minutes</u>	Soil Loss Ratio = 4.60
	<u>4 in. (100mm)/hr for 30 minutes</u>	Soil Loss Ratio = 6.10
	<u>6 in. (150mm)/hr for 30 minutes</u>	Soil Loss Ratio = 8.00
ECTC Method 3 - Determination of un-vegetated RECP ability to protect soil from Hydraulically Induced Shear stress.	Shear Loss Curve Intercept	1.63 psf@ 1/2" soil loss
ECTC Method 4 - Determination of Temporary Degradable RECP performance in encouraging seed germination and plant growth.	% Improvement/Increased Biomass	443 %

* Minimum Average Roll Values (MARV) are calculated as an average of values of rolls taken during quality assurance testing.

** Soil Loss Ratios, as reported by NTPEP = Soil Loss Bare Soil/Soil Loss with RECP (Note: soil loss is based on regression analysis)



HYDRO MULCH[®] 1000 with SlikShot[™]

- MEETS OR EXCEEDS ALL REQUIREMENTS FOR WOOD FIBER MULCH
- ABSORBS WATER RAPIDLY, FORMING A HOMOGENEOUS SLURRY THAT ENSURES AN EVENLY DISTRIBUTED STAND OF GRASS
- HYDRO MULCH 1000 HOLDS 12 TIMES ITS WEIGHT IN MOISTURE, THUS ENHANCING SEED SURVIVAL RATES
- INDEPENDENT UNIVERSITY TESTING PROVES HYDRO-MULCH 1000 CONROLS EROSION AND GROWS A HEALTHIER STAND OF GRASS THAN 100% PAPER FIBER

DIRECTIONS FOR USE

PLEASE REFER TO EQUIPMENT
MANUFACTURER'S LOADING INSTRUCTIONS.



PHYSICAL PROPERTIES

MOISTURE CONTENT	12% +3
ORGANIC CONTENT	99.2% +-4
ASH CONTENT	.8+-4
pH RANGE	4.8+-2
WATER HOLDING CAPACITY	1200% MIN

TYPICAL APPLICATION RATE

MODEST TO 4 TO 1 SLOPE	1500 LBS / AC
3 TO 1 SLOPE	2000 LBS / AC
3:1 TO 2:1 SLOPE	2500 LBS / AC

PACKAGING

NET WEIGHT 50 LB BALE, 40 BALES PER SKID
WITH A UV TREATED PALLET COVER

DISTRIBUTED BY





Nilex Environmental Inc.
15171 East Fremont Drive
Centennial, Colorado 80112
(303) 766-2000 phone
(303) 766-1110 fax
www.nilex.com

Nilex Plantago Tackifier

Description:

Plantago Tackifier is a premium organic 100% Psyllium fiber derived from the outer coating of the seed. It is valuable as a binding agent when used with hydroseeding mulch in seeding or erosion control applications. It is a highly effective and economical for holding surface applications of hay or straw mulch in place. It improves slurry suspension and slurry flow. Plantago Tackifier is durable and forms a firm, resilient, re-wettable membrane which secures the surface.

Characteristics:

Active ingredient: 100% Psyllium
Protein Content: 16.7%
Settleable Solids: 80.8%
1% Solution pH 5.5%
Total Nitrogen: 2.68%

Uses:

Plantago Tackifier may be applied as wet slurry or to dry surfaces in applications such as:

- Erosion Control
- Dust Control
- Binding Agent
- Seeding Applications

Application Rates:

40 to 160 pounds per acre depending on degree of slope as well as raveling of surface soils. Prepare the slurry by mixing seed, mulch, fertilizer, Plantago Tackifier and water in the tank by the amounts specified. Slowly add all the material and mix thoroughly.

Packaging:

50 lb. heavy duty paper bags. Palletized at 40 bags/pallet (2,000 lb). It is convenient to handle and transport because it comes in powder form.

Sharp Bros. Seed Co.

101 East 4th Street Road

Greeley, CO 80631

970.356.4710

Office

800.421.4234

Toll Free

970.356.1267

Fax

www.sharpseed.com

inforequest@sharpseed.com

Preliminary Letter of Certification

Mix		HAROLD D THOMPSON WASTEWATER FACILITY							
Approx. Acres	1.00								
SPECIES - VARIETY	LOT #	PLS LBS. PER ACRE	TOTAL LBS NEEDED		SEED SPECIFICATIONS				
			PLS		PURITY %	GERM %	PLS LBS		ORIGIN
BLUE GRAMA, ALMA	2008.0740	1.500	1.50		90.26%	90.00%	1.50		CO
SAND BLUESTEM, GARDEN COUNTY	G0-1517	8.000	8.00		83.16%	95.00%	8.00		NE
LITTLE BLUESTEM, CIMMARON (SUB FOR PASTURA)	CLB-09-NB	3.500	3.50		60.45%	97.00%	3.50		KS
WESTERN WHEATGRASS, ARRIBA	BG3284-10	8.000	8.00		98.12%	96.00%	8.00		WY
SIDEOAS GRAMA, NINER	2008.0570B	4.500	4.50		72.92%	88.00%	4.50		CO
PRAIRIE JUNEGRASS, VNS	019-53-971A	0.500	0.50		97.99%	93.00%	0.50		WA
GALLETA, VIVA	27057A	5.500	5.50		65.75%	96.00%	5.50		TX
TOTALS			31.5	31.5			31.5		

*** Seed Lots and Availability of Seed Lots are subject to change without prior notification.***

***** These Preliminary Certifications are only relative to Seed Lots available on JANUARY 24, 2011 * ****

This Preliminary Letter of Certification was prepared for:

HYDROTURF, INC

Please feel free to contact us directly if you have any questions or comments.
We appreciate your business !!