



## WICHITA WATER UTILITIES

**Sewage Treatment Plant**  
2305 E. 57th St. S.  
Wichita, KS 67216

2016

### Soil Biofilter Media

This simplified manual focuses on the operating variables and the troubleshooting guides needed to facilitate the operation of our facility in a cost-efficient and effective manner. It is not meant to cover every aspect of our equipment. It is a quick reference, designed to be used as a working tool for both new and experienced operators. It is also available in electronic format for editing, as the need arises, to keep it always current.

# Operating Variables

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## I. SPRINKLER SYSTEM

The controller for the sprinkler system should be programmed to irrigate the biofilter media according to the following schedule. **Please note that this is a tentative schedule and may need to be adjusted based on the Operator's observations in the field.**

Months of the Year	Duration	Days per Week
May 1 – September 30 (Or no threat of freezing)	20 minutes	Three days/week (i.e. Monday, Wednesday, Friday)
October 1 – April 30 (Winterize)	0	0

# Maintenance of the Biofilter Surface Area

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The surface of the biofilter should be inspected monthly for physical integrity. Holes, or channels, can form in the media thereby allowing odorous air to escape untreated. These channels are usually caused by either burrowing animals or by vegetation growing on the biofilter surface. The biofilter Operator should thoroughly fill any channels or holes.

## I. WEEDS

Any vegetation growing, outside of the approved biofilter seed mix provided as Appendix A, on the surface of the media should be removed. After a plant dies, channels are created where the roots once were. Dead plants should be removed from the biofilter surface either physically or through the use of a topical herbicide such as Round-up™ and the channels should be filled.

## II. BURROWING ANIMALS



A professional exterminator should remove burrowing rodents immediately. Their large burrows should be filled in completely once they are detected. Animals can be a problem because of the warm environment in a biofilter compared to the outside air in the winter. Rodent holes will allow untreated air to escape and will be a problem.

**Appendix A: Approved Biofilter Seed Mix**

Prairie Moon Nursery  
 2115 Prairie Lane  
 Winona, MN 55987  
 866 417-8156  
[www.prairiemoon.com](http://www.prairiemoon.com)

**BOHN BIOFILTER - 6050 SQ FT. - LOW MIX****FORBS**

Description	Qty		Price	# Seeds
<i>Asclepias tuberosa</i> (Butterfly Weed)	1.500	OZ	45.00	6,450
<i>Aster oolentangiensis</i> (Sky Blue Aster)	0.305	OZ	6.11	24,432
<i>Aster sericeus</i> (Silky Aster)	0.486	OZ	19.43	12,631
<i>Baptisia bracteata</i> (Cream Wild Indigo)	0.347	OZ	17.35	486
<i>Callirhoe triangulata</i> (Clustered Poppy Mallow)	0.364	OZ	21.82	1,964
<i>Chamaecrista fasciculata</i> (Partridge Pea)	4.442	OZ	8.35	11,992
<i>Coreopsis lanceolata</i> (Lance-leaf Coreopsis)	0.833	OZ	4.16	16,656
<i>Crotalaria sagittalis</i> (Rattlebox)	0.403	OZ	8.05	1,811
<i>Dalea candida</i> (White Prairie Clover)	0.500	OZ	1.50	9,500
<i>Dalea purpurea</i> (Purple Prairie Clover)	0.416	OZ	1.25	6,246
<i>Gnaphalium obtusifolium</i> (Sweet Everlasting)	0.100	OZ	4.00	50,000
<i>Giatris cylindracea</i> (Dwarf Blazing Star)	0.800	OZ	24.00	11,200
<i>Lupinus perennis</i> (Wild Lupine)	0.972	OZ	19.43	1,069
<i>Monarda punctata</i> (Spotted Bee Balm)	0.278	OZ	5.55	24,984
<i>Oenothera rhombipetala</i> (Sand Evening Primrose)	0.139	OZ	2.08	13,880
<i>Penstemon grandiflorus</i> (Large-flowered Beardtongue)	0.555	OZ	8.33	7,773
<i>Rudbeckia hirta</i> (Black-eyed Susan)	0.555	OZ	1.67	51,078
<i>Sisyrinchium campestre</i> (Prairie Blue-eyed Grass)	0.278	OZ	9.72	12,492
<i>Solidago nemoralis</i> (Old Field Goldenrod)	0.100	OZ	2.00	30,000
<i>Tephrosia virginiana</i> (Goat's Rue)	1.000	OZ	20.00	2,500
<i>Tradescantia bracteata</i> (Prairie Spiderwort)	1.500	OZ	45.00	15,000
Totals for FORBS :	15.871	OZ		
	0.992	LB	\$274.80	#312,144

**TREES, SHRUBS & VINES**

Description	Qty		Price	# Seeds
<i>Amorpha canescens</i> (Lead Plant)	0.278	OZ	4.16	4,442
<i>Ceanothus americanus</i> (New Jersey Tea)	0.139	OZ	2.78	1,055
<i>Rosa arkansana</i> (Prairie Wild Rose)	0.139	OZ	3.47	347
Totals for TREES, SHRUBS & VINES :	0.555	OZ		
	0.035	LB	\$10.41	#5,844

**GRASSES, SEDGES & RUSHES**

Description	Qty		Price	# Seeds
Carex brevior (Plains Oval Sedge)	3.000	OZ	30.00	87,000
Carex muehlenbergii (Sand Bracted Sedge)	2.000	OZ	40.00	24,000
Eragrostis spectabilis (Purple Love Grass)	0.200	OZ	16.00	56,000
Koeleria macrantha (June Grass PLS)	2.000	OZ	22.50	400,000
Totals for GRASSES, SEDGES & RUSHES :	7.200	OZ		
	0.450	LB	\$108.50	#567,000
Totals for this mix :	23.626	OZ		
	1.477	LB	\$393.71	#884,988

Seeding rate: 146 seeds per Sq. ft.