Denitrifying Bioreactor (605)

1. Water Control Structure leading to a pit filled with a carbon source is attached to the end of a drainage system.

D.1 (+) Organic Compounds

D.2 (-) Nutrient levels in discharge

D.3 (+) Cost of installation and maintenance

D.4 (+) Disturbed areas (construction), soil erosion

Critical Area Planting (342)

I.1 (+) Discharge methyl mercury

I.2 (+) Release of ammonia gas

I.3 (-) Nutrients delivered to receiving waters

I.4 (-) Cost of future regulatory compliance

I.5 (+) Growth of desirable vegetation

I.6 (+) Greenhouse gases

I.7 (+) Water quality

I.8 (-) Cost media replacement and disposal

I.9 (+/-) Net return

I.10 (+) Soil Stabilized

C.1 (-) Air Quality

C.2 (+) Aquatic habitat

C.3 (+/-) Income and income stability (individuals and communities)

C.4 (+/-) Public/private health and safety, public/private property protection

Initial setting: The discharge of an underground or surface drainage system goes directly into receiving waters. The bioreactor is connected to the outlet pipe or ditch to remove some of the nitrogen from the influent.

Denitrifying Bioreactor (605) Redesign and retrofit to assure chamber discharge is fast enough to avoid anaerobic conditions.

Note: Effects are qualified with a plus (+) or minus (-). These symbols indicate only an increase (+) or a decrease (-) in the effect upon the resource, not whether the effect is beneficial or adverse.