METRO

Parks and Greenspaces Department

600 N.E. Grand Avenue
Portland, OR 97232

Memorandum

DATE: March 24, 1994

TO: Managers and Technical Advisors of St. Johns Landfill Vegetation Cover

FROM: Jim Morgan

SUB: Summary of Landfill Cover Vegetation Meeting 3/3/94

A meeting to discuss strategies for implementing the St. Johns Landfill Cover Vegetation Plan was held at the landfill March 3, 1994. Present were:

Mark Wilson	Janell Davis	Sam Chandler
Dennis O'Neil	Pete Hillman	Jim Morgan
Wes Jarrell	Lee Eddleman	

Mark started the meeting by re-iterating the assumed goal of establishing a native vegetation communities on the St. Johns Landfill over time. Everyone acknowledged this goal. All present acknowledged that Sub-Area 1 has become established primarily with invasive pest plants (i.e. rye, vetch). Native plants survive only in one mesic test plot.

Dennis posed the question, "If we left the invasive pest and native plants in place as they are now, that is, let nature takes its course, would the native plants finally take over?". The response was maybe, over an X amount of time (Scientists have not had the luxury of monitoring analogous systems over the time it takes for such systems to stabilize.). Given the dominance of many hearty exotic plants and the high availability of nutrients (sewage sludge and yard debris compost) at the landfill, the cover vegetation communities could take considerable time to approach equilibrium (20-200 years?).

Pete posed a question regarding soil preparation for Sub-Area 3. After severe erosion problems occurred in Sub-Area 2 in winter 93-94, precaution need to be taken in Sub-Area 3 to avoid a similar occurrence. It was agreed that the best erosion prevention measure was the early establishment of grasses in the fall. Increasing the seeding rate was discussed. In those areas where the existing landfill topsoil was applied to the surface, the existing seed bank is sufficient to provide erosion-control cover, if enough moisture is available in the fall. This is evident on the steep northeastern slopes of the landfill. It was recommended that yard debris compost be mixed with imported soils in Sub-Area 3 because:

(1) yard debris compost prevent surface erosion, as demonstrated by the W&H Pacific study financed by Metro's Solid Waste;
(2) yard debris compost add soil bulk (moisture storage) and serves as a carbon source; and,
(3) yard debris release nutrients slowly, giving invasive pest plants less an advantage.

Given the competitive edge invasive pest plants have over natives in early establishment over natives, it was agreed that removal of invasive pest plants should be a immediate focus. Experimental plots should be established to meet this goal to determine effective methods for reducing the invasive pest plants

SUB-AREA 1

DEMONSTRATION PLOTS

Invasive Pest Plant Removal

The suggestion made for invasive pest plant removal experimental plots on Sub-Area 1 (roughly 1-acre plots) include:

1. Herbicide - No Till
   - apply herbicide (Round-Up) in late March, early April
   - monitor; apply again if needed
   - re-seed with native grasses prior to ryegrass flowering (see below)

2. Solarization
   - use till and no-till strips
   - apply plastic or other solar screening material before May 1; leave through mid-September
   - re-seed (see below)

3. pH Manipulation
   - vary soil pH on both till and no-till plots
   - high and low soil pH will favor certain native plants
   - high pH adding lime; low pH adding sulfur
   - re-seed (see below)

Native Planting

After viable invasive pest plants have been eliminated in the demonstration plots, native grasses can be established. These grasses can provide a seed source for future plantings.

1. Seed With 2 Grass Species
   - using a brillion or range drill seeder, Elymus glaucus and Bromus carinatus can be planted initially; Festuca spp. can be added in future years

Maintenance on Remaining Sub-Area 1

Lee recommended not mowing this year, except for immediately adjacent to test plots and around gas and monitoring wells to provide access. Others recommended swathing, such as with a side-bar cutter (sickle mower), before mid-May and heaving the cut grass laying on the ground. Purchase of a cutter bar attachment to the Kabota is recommended.

Mark will generate cost estimates for establishing and maintaining demonstration plots, as well as materials needed and a schedule.

SUB-AREA 2

Swath or mow regularly to prevent exotic, invasive plants from setting seed. Cutting the grasses at the base and allowing them to lay flat, as with a scythe, will deter additional growth.

SUB-AREA 3

1. Soil nutrient specifications need to be re-written.

2. As an alternative to using Regreen for early stabilization of soils, consider using a cheaper native seed that is fast growing, Bromus carinatus. Initially, plant 10 acres of relatively level ground in Bromus and the remainder in Regreen.

Agenda Items Not Covered In Meeting

I. 1994 Vegetation Maintenance and Establishment Scope and Work Schedule:

Review of Prairie, Shrub/Tree & Erosion Control Test Plots-Subarea 1

Discussion of Proposed Maintenance work-Subarea 1
Grasslands: mychorrizae enrichment?
Shrub/Woodlands: fertilizer-mychorrizae enrichment & deer fence

II. 1994 Equipment/Staff Needs
Equipment Lease/Contract Labor
Staff responsibilities

III. Other Issues:
Rock Removal: Subarea 1 & 2

Nursery stock Growing Area: Prepare now for future revegetation

Review of Subarea 3 Vegetation Establishment Specs:
Performance Review: Regreen/fertilization/compost/timing/above ground piping

Riparian Test Plot Establishment

SJL Vegetation Advisory Committee

Metro's Parks & Greenspaces Role