March 2, 1997

memorandum

TO: Dennis O'Neil
SUBJECT: Draft Native Vegetation Restoration Plan

Dear Dennis,
I spent about an hour looking over your draft document. It was good to see the whole history in one place, especially the regulatory underpinnings. In summary, it looks good with a couple of exceptions noted below. I hope you don't mind that the editor in me also identified some misspellings, and awkward sentences, etc. that I encountered along the way.

page 4-comment #1

According to my understanding of IVM practices, the use of preventative pest plant control measures is or may be warranted in order to prevent problems from quickly worsening. To allow things to go along until an economic or ecological threshold is reached may make control efforts very difficult especially when dealing with extremely aggressive species such as reed canary grass.

page 8-comment #2

The 1992 SJL Cover Vegetation Plan (Fishman, Wilson, et all) proposed the planting of two primary plant communities for the capped area: an open prairie and drainages planted to shrubby hedgerows (rose, snowberry, etc.). There were two types of proposed prairies specified for seeding according to landscape position [catina]: mesic on ridgetops and drainages, and xeric on side slopes. The hedgerow shrubs were proposed for planting in the drainages with deeper soil profiles after suitable drainages were seeded with mesic prairie species. The Subarea 1 shrub testplots were planted to identify the minimal soil depth and ground moisture requirements needed to support woody vegetation. The 1992 SJL Cover Vegetation Plan also proposed the planting of bioswales and restoration of existing riparian woodlands adjacent to the Columbia Slough and Smith & Bybee Lakes. See cover drawing (and inside cover explanation) of Fishman SJL Final Plan (1992) and page 2 for specific language.

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page 9-comment #3

Third paragraph of **Native Vegetation Establishment Efforts**...

The Fishman Plan (1992) specified that soil containing "no weed or crop seeds" be used for the establishment of the initial prairie testplots on Subarea 1, but project economics and construction deadlines prevented its acquisition and use. Soil seedbank tests, taken after soil placement, determined that the imported soils, the recycled soils and the compost all contained huge quantities of non-native grasses and pest plant seedbanks.

Fourth paragraph...

It was initially thought that the seeding of a mix of native and non-native grasses would, in a short time result in a largely native stand. It did not due to the aggressiveness of Regreen/shading out of natives, an extremely wet spring and the resultant delays in management.

Page 11-comment #4

1994 Test Plots...

A series of testplots were set up in 1994 to determine the best means of preparing areas for the planting of native grasses (Testplots 1A, 1B through 4) and to determine the best methods of managing the remaining areas of the landfill grasslands slated to eventually be planted to native vegetation (Testplots 5A & 5B). additionally, two "no management" plots (Testplots 6 in Subareas 1 & 2) were established to serve as controls.

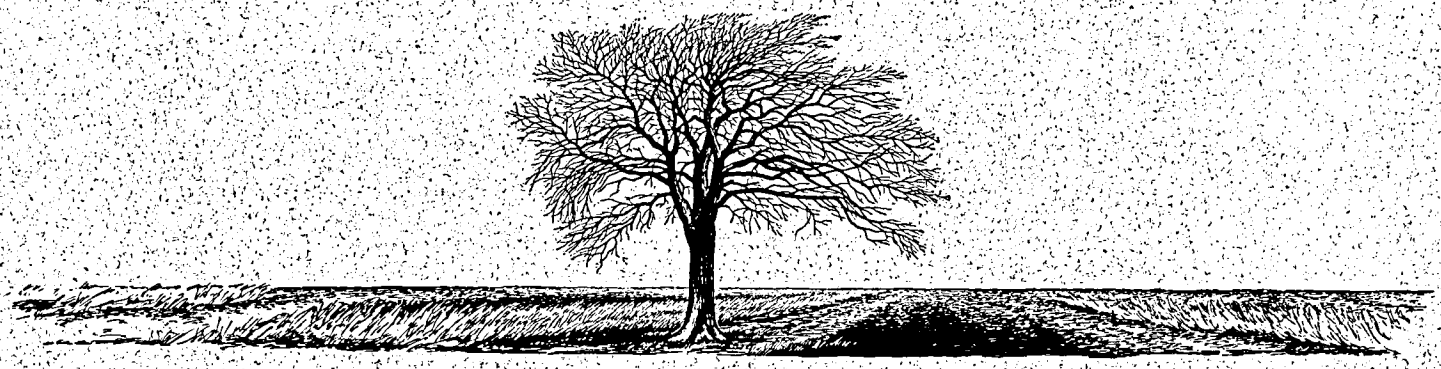
page 14-comment #5

All native grasses used on all testplots planted to date were supplied from sources and growers located outside the Willamette Valley. Recent research has determined that poor results often occur when out of area seed is used for reveg. **[Within the past year (1996), several Willamette Valley growers began supplying upland grass seed to the local market.]**

page 18-comment #6

Populations of invasive pest plants have been observed on the landfill perimeter and throughout the subarea grasslands. Observed species include:

Scotch Broom (Cytisus scoparius)
Ripgut Brome (Bromus rigidus)
Cheatgrass (Bromus secalinus)
Medusahead Rye (Taeniatherum caput-medusa)
Reed Canary Grass (Phalaris arundinacea)
Canadian Thistle (Cirsium arvense)
Bull Thistle (Cirsium vulgare)
Hemlock [Carrot family] (Cicuta spp. or Conicum spp.)
Himalaya Blackberry (Rubus discolor)



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M E M O R A N D U M

METRO

Date: November 20, 1997

To: Dennis O'Neil, REM

From: Emily Roth, RPG

RE: Final Draft of the Establishment of Native Vegetation at St. Johns Landfill

Thanks for giving me the opportunity to review the final draft. Overall, the consultant team did a thorough job of describing the experimental design, delineating tasks and preparing a realistic budget.

There are a few issues that need to be clarified concerning site preparation, monitoring and measures of success to ensure everyone understands the entire process.

Site Preparation
On page 4, the consultants state that further applications of herbicide may be necessary. My questions are what indicators will constitute the need for additional application? Will any resprout? Greater than 10%? A particular weed or weed assemblage?

Monitoring
Percent cover, frequency and density are standard techniques used to quantitatively monitor individual species of interest and plant communities. If the budget allows, soil mycorrhizal should be monitored after the first year to measure their survival rate. Also, the non-mycorrhizal plots need to be examined to see is they have been colonized. If the mycorrhiza have colonized the plots then the experiments will no longer be valid for this variable.

Experimental success and best growth need to be quantitatively defined. What percent cover, frequency or density defines success? For instance, if best growth is only 30% native dominant after five years, is that considered a successful plot?

The monitoring does not include seed collection and weighing for the different trials. This is an expensive monitoring technique. If the money is available, this would be valuable information to gather over the five year period. It would give an indication of plant vigor and sustainability within each type of treatment. Though a note of caution, seed production is directly related to weather conditions. There will probably be variability over the years within the same plots, but it may be used as an indicator for yearly comparison between treatments.

Experimental design
To answer your question concerning the "most critical unknown", I feel the combinations of grass or grasses and legumes, and inoculation or not will answer the most critical unknowns for establishment of native vegetation. Questions about site preparation still need to be addressed, perhaps in a different RFP or with some simple experiments that can be designed within Metro.

If you have any questions about my comments or would like additional input, let me know.

c: Mark Wilson, consultant
Dan Kromer, Metro

Mark Griswold Wilson Restoration Ecologist 1123 SE Harney Street Portland, Oregon 97202 (503) 234-2233

December 10, 1997

MEMORANDUM

TO: Dennis O'Neil
SUBJECT: [D. O'Neil] cover letter & review of Phase I Final Draft Report

Dear Dennis,

I have received your December 3rd cover letter and review of my project team's Phase I Final Draft Report on the establishment of native vegetation at the St. Johns Landfill.

My project team and I are dismayed at the one month delay in your response to our November 3rd submittal and your refusal to authorize full payment of my invoice Number 9711-31 [dated November 5, 1997] for my project teams work to date. It is our belief that the Phase I Final Draft Report that we submitted met or exceeded the Scope of Work as specified in Personal Services Agreement Number 905795. We think that your refusal to authorize full payment is itself in violation of Section 2 of the Scope of Work, which states that: "Metro will pay contractor within 30 days of receipt of an approved billing statement." Additionally, if I understand your cover letter correctly, you also refuse to approve the current Scope and Budget for future project work which I FAX'ed to you on November 10th, as per our submittal dates schedule. At this time, as you know, there is only $.37 in the approved budget fund.

We would welcome the opportunity to respond to your request for additional information and revision of the Final Draft Report but, given the reality of no payment and no approved budget, we are unable to comply with your request at this time.

By way of seeking solution to this unfortunate situation, I have revised the 11/10/97 Scope of Work and Budget. This revision is attached. I have re-worked Proposed Work Task numbers 1 & 4, reducing the labor and expense budgets and deleting all items relating to our proposed work on an additional series of testplots in 1998 & 1999. I have also increased the labor budget for Work Tasks 9 & 10 in order to allocate funds to pay

for the time needed by my project team to respond to your request for Final Phase I Draft Report revisions and additional information.

Upon reflection, I would like to withdraw my project teams proposal to seek funding for the establishment of an additional series of testplots in 1998 and 1999 due to anticipated budgetary constraints. I would also like to wait until after the issue of the advisability of establishing "native dominant vegetation" at the St. Johns Landfill is resolved by Metro staff. Hopefully a decision will be made after advice from Metro Parks and Greenspaces staff and the Smith & Bybee Lakes Technical Advisory and Management Committees is sought and received. I foresee many problems if my project team proceeds to expand our research project before a policy decision on this matter is made.

In summary, my team would happy to respond to your request for revisions to the Phase I Final Draft Report and additional information. But, in order to do so, we need to receive payment for Invoice Number 9711-31 in full and your approval of the attached Scope of Work & Budget (or an agreed upon substitute). Upon receipt of payment and an approved budget we will submit revisions to the Final Draft Report and our responses to your review within one week.

Mark Griswold Wilson

cc: Jim Watkins- Metro REM Engineering
Emily Roth- Metro RP&G
Dan Kromer- Metro RP&G Operations & Maintenance Manager