United States Department of Agriculture

NRCS

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July 12, 2011

Dear Ryan,

In response to your request to the questions you raised regarding agricultural use on the Firlane property versus Luscher Farms, I have outlined three options below. We hope these options answer the questions you have posed.

Option #1 - Move the Community Supported Agriculture (CSA) to the Firlane property.

Analysis:

a) ***It is questionable whether the CSA could sustainably farm on the Firlane property.*** Attached is a soil survey map that rates soil susceptibility to degradation. This map shows the Firlane property is more susceptible to erosion than Luscher Farm because of steeper slopes. The CSA could grow the same crops on perhaps ¼ to 1/3 of the Firlane property on the south end. The CSA grows organic vegetables and must work the ground annually and use tillage to control weeds. The combination of tillage and slope increases the hazard for erosion and polluted runoff. On steeper slopes, additional conservation practices such as cover crops and vegetative buffers would be required to protect the soil. On the steepest slopes, it would not be practical to grow winter crops because of erosion and runoff from winter rain.

b) ***The CSA may be lost as a tenant because it would be less profitable to farm Firlane in the short term.*** It would likely take 5 years or more to raise the soil fertility and reduce the weeds on Firlane to a comparable level as Luscher Farm. It takes 5 years to build up soil organic matter to reliably release nitrogen, a major crop nutrient. The Firlane farm appears to have good pasture grasses in an area in the south end, but this area is small and may not be large enough to farm profitably. The remaining area appears to have low fertility, acid soils and is steep as mentioned above.

c) ***The steepest slopes may be a safety hazard for tillage and harvest.*** On steep slopes, tractors can tip during tillage. During vegetable harvest, safety is especially important when there are many people picking around the harvest equipment.

d) ***Converting the CSA area to ball fields would be converting prime farmland to a non-farmland use.***

Option #2 - Grow a different agricultural crop on the Firlane property.

Analysis:

a) ***A perennial crop such as grass, shrubs or trees is more sustainable for the erosive slopes on Firlane.*** Grass for pasture, hay or native seed production is a perennial crop that would protect the erosive slopes year round. A permanent crop such as blueberry shrubs or orchard

trees with grass planted between rows would protect the soil and reduce runoff. It is unknown whether a renter could be found to produce berry or orchard crops on Firlane. Establishing blueberries or an orchard would have high establishment costs. For example, the 2011 OSU Enterprise Budget estimates it would cost $15,315 per acre to establish blueberries and the berries would not come into full production for 7 years. A renter would likely want a long-term lease to recoup the investment. Grass hay would be less expensive to establish and it may be easier to find a renter

b) ***Existing water rights would need to be transferred from Luscher Farm to Firlane property or additional water rights would be needed.*** According to the City of Lake Oswego, this does not appear to be a problem. The transfer process would likely take one or more years.

c) ***Farm infrastructure would need to be added.*** Buildings, access roads, irrigation, fence, watering facilities for animals, farm equipment to handle steeper slopes and other items may be needed to create viable farmland.

Option #3 - Maintain Luscher Farm with the full complement of community gardens and existing CSA acreage.

Analysis:

a) **Luscher Farm has ideal soil and infrastructure conditions for agriculture.** Luscher Farm includes the highest class of prime farmland soils, has gentler slopes and has high fertility and organic matter developed from its history as a former dairy and current working organic farm. Water rights, irrigation, access roads, farm equipment and buildings are in place. Retaining the CSA on Luscher Farm maintains a working farm around a vibrant core of historic farm buildings.

b) ***The CSA provides a unique interaction between the community and the property.*** The CSA has a strong community ethic that invites regular community participation and provides opportunities that "grow" new farmers.

c) ***Luscher Farm is a leader and model example of urban farming.*** Few cities have viable farmland within their communities. Luscher Farms, with its strong agricultural partnerships, appears to be a rare and thriving example.

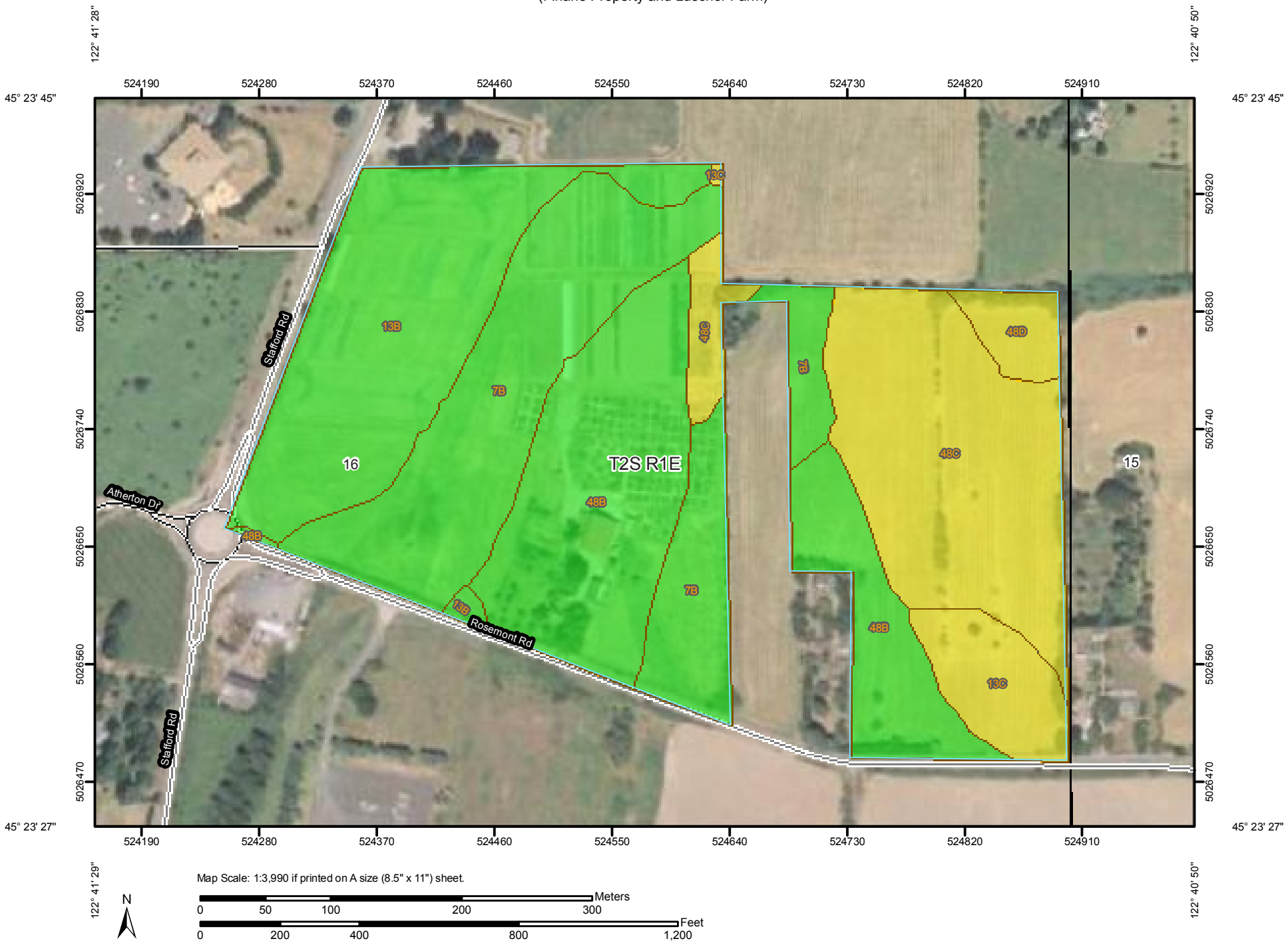
If you would like more input into the Master Plan, I can provide you contact information for the Farmland Protection Coalition. The Coalition is made up of the Oregon Department of Agriculture, Metro, local farm groups and the Clackamas County and Multnomah County Soil and Water Conservation Districts and was specifically formed to address farmland issues in this area.

Sincerely,

L. Ko

Lee Ko
USDA-NRCS Water Quality Specialist
Clackamas County, Oregon

Site Degradation Susceptibility—Clackamas County Area, Oregon
(Firlane Property and Luscher Farm)



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Units

Soil Ratings
- Highly susceptible
- Moderately susceptible
- Slightly susceptible
- not rated or not available

Political Features
- Cities
- PLSS Township and Range
- PLSS Section

Water Features
- Oceans
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

MAP INFORMATION

Map Scale: 1:3,990 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 10N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Clackamas County Area, Oregon
Survey Area Data: Version 6, Feb 9, 2010

Date(s) aerial images were photographed: 8/3/2005

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Site Degradation Susceptibility

Site Degradation Susceptibility— Summary by Map Unit — Clackamas County Area, Oregon						
Map unit symbol	**Map unit name**	**Rating**	**Component name (percent)**	**Rating reasons (numeric values)**	**Acres in AOI**	**Percent of AOI**
7B	Borges silty clay loam, 0 to 8 percent slopes	Slightly susceptible	Borges (80%)		12.1	25.8%
			Delena (6%)			
13B	Cascade silt loam, 3 to 8 percent slopes	Slightly susceptible	Cascade (80%)		9.7	20.7%
			Delena (3%)			
13C	Cascade silt loam, 8 to 15 percent slopes	Moderately susceptible	Cascade (80%)	Moderately susceptible for water erosion (0.04)	2.3	4.9%
48B	Kinton silt loam, 3 to 8 percent slopes	Slightly susceptible	Kinton (85%)		11.6	24.7%
			Delena (3%)			
48C	Kinton silt loam, 8 to 15 percent slopes	Moderately susceptible	Kinton (85%)	Moderately susceptible for water erosion (0.04)	10.1	21.6%
48D	Kinton silt loam, 15 to 30 percent slopes	Moderately susceptible	Kinton (85%)	Moderately susceptible for water erosion (0.96)	1.1	2.3%
Totals for Area of Interest					**46.9**	**100.0%**

Site Degradation Susceptibility— Summary by Rating Value		
Rating	**Acres in AOI**	**Percent of AOI**
Slightly susceptible	33.4	71.2%
Moderately susceptible	13.5	28.8%
Totals for Area of Interest	**46.9**	**100.0%**

Description

This interpretation rates each soil for its susceptibility for soil degradation to occur during disturbance, which is a function of resistance to degradation. Resistance to degradation of a rangeland or woodland site is a measure of its ability to function without change throughout a disturbance. The magnitude of decline in the capacity to function determines the degree of resistance to change. Resistance to degradation thus could be described as an area's buffering capacity. This depends upon soil type, vegetation, climate, land use, disturbance regime, temporal and spatial scales. The disturbance regime determines the type of stresses placed upon the soil, vegetation, and wildlife components of the site. Thus, soil factors of vulnerability will vary based upon the disturbance regime for a particular site.

The ratings represent the relative risk of water and wind erosion, salinization, sodification, organic matter and nutrient depletion and/or redistribution, and loss of adequate rooting depth to maintain desired plant communities. Dynamic soil properties which vary with time, e.g. microbial biomass/diversity and carbon/ nitrogen ratio, are not used since they are not contained within the soil database.

Steep slopes increase the potential for water erosion. Shallow rooting depth, and excess salt or sodium can reduce plant diversity, resistance to stress, and seedling survival.

This rating should be used with the objective to protect vulnerable sites from the type of degradation that would result in accelerated erosion, reduction in water and air quality, invasion by annual grasses or noxious weeds, and other large scale potential natural plant community conversions. When degradation of soil and natural plant community characteristics goes beyond the threshold for the ecological site, the ecological site characteristics cannot be restored without artificial restoration efforts.

There may be unique circumstances where accelerated soil processes that are normally considered contributing to site degradation are actually beneficial to some attribute of the site, such as Indian ricegrass (Achnatherum hymenoides) being more competitive in shifting sands than most species.

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the potential for degradation. "Highly susceptible" indicates that the soil has one or more features that are very favorable for degradation. "Moderately susceptible" indicates that the soil has features that are moderately favorable for damage to occur. "Slightly susceptible" indicates that the soil has features that generally make it unfavorable for degradation to occur.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is

shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher