



November 4, 2008

Michael Green
Woodland School District
800 Third Street
Woodland, WA 98674

Re: Woodland High School Wetland Mitigation Options

Dear Mr. Green:

In our meetings on October 1 and 24, 2008, we discussed a range of mitigation options for the potential future Woodland High School at the intersection of Robinson Road and Dike Access Road. For the purpose of hypothetical analysis, we will assume that most or all of the 3.82 acres of Wetland A and Wetland C (0.01 acre) will be filled for development. Wetland A was chosen for fill due to its central location and the large area of uplands absorbed by its buffers. In speaking with Mark Cline of the Washington Department of Ecology, he expressed that 3.83 acres of fill is a large number but not impossible to permit. The alternatives analysis will help to ease the minds of the agencies.

Please note that the agency representative that I spoke with expressed a preference for off site mitigation. Past school projects near wetlands have proven problematic due to future needs for expansion. It is difficult to guarantee that on-site wetlands and buffers will not need to be impacted in the future should the school need to grow. The two sites discussed here for off-site mitigation were chosen due to their location, size, and the willingness of their owners to sell the properties.

A method that may be utilized to decrease the amount of mitigation area needed is one called Programmatic, or Advance, mitigation. The required mitigation ratio may be reduced if the mitigation is shown to be successful prior to the impact taking place. This would require at least two years between the completion of the mitigation efforts and the commencement of fill activities in the impacted wetlands. With this method, it may be possible to propose a 1.5:1 ratio of creation to impact, instead of the required 2:1 ratio.

Option 1: On-site Wetland Creation and Enhancement

Create 6.56 acres of Category III wetlands on site (a 2:1 ratio)

Where? On site at northern property boundary, west of Wetland X. (Figure 2)

- Why?**
- 1) The proximity to a potential US Army Corps of Engineers (USACE) mitigation site adds to the value of the wetland habitat on site and makes the value of the creation area similar to a mitigation banking site.
 - 2) Relocating the wetlands on site will allow them to perform the same water quality and hydrologic functions following development.
 - 3) The school district already owns the land.

Enhance 0.98 acres of Category III and IV wetlands on site (an 8:1 ratio)

Where? Wetlands X, Y, and Z

- Why?**
- 1) Enhancing the existing wetlands will reduce the amount of land that will need to be purchased for wetland creation or enhancement
 - 2) Improves water quality on site.

Option 2: Off-site Wetland Creation and Off-site and On-site Wetland Enhancement

Create 3.46 acres of wetlands off site (a 2:1 ratio)

Where? Site 1 (Figures 1 and 3)

- Why?**
- 1) Increases useable acres on site to approximately 35.8 acres.
 - 2) Agencies will be more inclined to approve due to reduced risk of further impacts at school site from future expansion.

Enhance 15.80 acres of wetlands off site (an 8:1 ratio)

Where? Site 1 (Figures 1 and 3)

- Why?**
- 1) Increases useable acres on site to approximately 35.8 acres.

Enhance 0.98 acres of wetlands on site (an 8:1 ratio)

Where? Wetlands X, Y, and Z

- Why?**
- 1) Enhancing the existing wetlands will reduce the amount of land that will need to be purchased for wetland creation or enhancement
 - 2) Improves water quality on site.

Option 3: Off-site Wetland Creation and On-site Wetland Enhancement

Create 7.42 acres of wetlands off site (a 2:1 ratio)

Where? Site 1 (Figures 1 and 3)

- Why?**
- 1) Increases useable acres on site to approximately 35.8 acres.

- 2) Agencies will be more inclined to approve due to reduced risk of further impacts at school site from future expansion.
- 3) Need to purchase less property than combination enhancement and creation on the site.

Enhance 0.98 acres of Category IV wetlands on site (an 8:1 ratio)

Where? Wetlands X, Y, and Z

- Why?**
- 1) Enhancing the existing wetlands will reduce the amount of land that will need to be purchased for wetland creation or enhancement
 - 2) Improves water quality on site.

Option 4: Off-site Wetland Creation and On-site Wetland Enhancement

Create 7.42 acres of wetlands off site (a 2:1 ratio)

Where? Site 2 (Figures 1 and 4)

- Why?**
- 1) Increases useable acres on site to approximately 35.8 acres.
 - 2) Agencies will be more inclined to approve due to reduced risk of further impacts at school site from future expansion.

Note: The Port of Woodland is willing to sell their property and have been planning to do so for the purposes of mitigation. However, this site has a disadvantage due to its elongated shape, location adjacent to a railroad, a road, and commercial development, making it difficult to establish the necessary buffers. The buffers would need to be negotiated with the agencies in order to make this a feasible option.

Enhance 0.98 acres of Category IV wetlands on site (an 8:1 ratio)

Where? Wetlands X, Y, and Z

- Why?**
- 1) Enhancing the existing wetlands will reduce the amount of land that will need to be purchased for wetland creation or enhancement
 - 2) Improves water quality on site.

Option 5: Purchase Mitigation Bank Credits

Purchase banking credits to mitigate 3.83 acres (1 credit per acre)

Where? Port of Vancouver Mitigation Bank / Clark County Mitigation Partners LLC

- Why?**
- 1) Banking is now the preferred mitigation method by the USACE.
 - 2) Responsibility for ongoing maintenance is the Bank's
 - 3) No further obligation for the District

Table 1. Mitigation Options Summary:

Option	Area of Enhancement	Area of Creation	Costs	Additional costs	Developable Acres On Site	Considerations	
1	0.98 ac. (On site)	6.56 ac. (On site)	Excavation	\$ 59,040	None	25.9	On site creation is not preferred by agencies because of limited room for future school facility expansion and the resulting possibility for future impacts
			Plants/Materials	\$ 60,320			
			Labor (install)	\$ 11,000			
			3 years of Maintenance	\$ 13,500			
			10 years of Monitoring	\$ 8,400			
			Total	\$152,260			
2	15.8 ac. (Site 1) 0.98 ac (On site)	3.46 ac. (Site 1)	Excavation	\$ 31,185	Purchase of property	35.8	Entire 40 acre property may need to be utilized
			Plants/Materials	\$161,920			
			Labor (install)	\$ 30,360			
			3 years of Maintenance	\$ 40,000			
			10 years of Monitoring	\$ 7,600			
			Total	\$271,065			
3	0.98 (On site)	7.42 ac. (Site 1)	Excavation	\$ 75,600	Purchase of property	35.8	May be possible to purchase only a portion of property
			Plants/Materials	\$ 67,200			
			Labor (install)	\$ 12,600			
			3 years of Maintenance	\$ 13,500			
			10 years of Monitoring	\$ 7,600			
			Total	\$176,500			
4	0.98 ac. (On site)	7.42 ac. (Site 2)	Excavation	\$ 75,600	Purchase of property	35.8	Buffers would need to be negotiated due to lack of adequate area on site
			Plants/Materials	\$ 67,200			
			Labor (install)	\$ 12,600			
			3 years of Maintenance	\$ 13,500			
			10 years of Monitoring	\$ 7,600			
			Total	\$176,500			
5	---	3.83 credits @ Mitigation Bank	3.83 Credits	\$125,000 – \$150,000 each	None	35.8	The bank is not yet approved and available credits are limited
			Total	\$478,750 – 574,500			

*Note: These estimates are for wetland areas only. Buffers must also be provided and may need to be planted.

On Site Mitigation

Advantages:

- 1) A wetland ecosystem on school property could be a valuable learning opportunity for students.
- 2) The wetland may potentially be utilized as a stormwater detention facility.
- 3) No need to purchase additional land or land rights.

Disadvantages:

- 1) Wetland creation on site takes land from the potential developable area, leaving only 25.9 acres of developable land if a 2:1 ratio is used.
- 2) The mitigation land is placed under a Conservation Easement and is not accessible for future development or expansion.

Off Site Mitigation

Advantages:

- 1) Frees developable area on site not used for mitigation
- 2) Agencies will be more inclined to approve due to reduced risk of further wetland impacts at school site from future expansion.
- 3) Site 1 is next to USACE owned property, allowing purchase of less property due to no need for a buffer on the east side of the property.

Disadvantages:

- 1) Need to purchase or obtain an easement for property to be used for wetlands, plus buffers.

If you have any questions or I may be of further assistance, please feel free to contact me by email at lisa@eco-land.com or at (360) 578-1371.

Sincerely,



Lisa F. Willis

Attachments: Figures 1 through 5