



MEMORANDUM

DATE: March 30, 2007
TO: Steve Cherry, ODFW District Wildlife Biologist in Heppner
FROM: Phil Rickus
SUBJECT: **Habitat Mitigation Plan**
PROJECT: Columbia Ethanol Power Project
PROJECT NO: PEIN0000-0004
COPIES: Tom Koehler / Paul Koehler, Pacific Ethanol, Inc.,
Russ Morgan, ODFW;
Adam Bless, Oregon Department of Energy;

This memorandum describes the approach for mitigation for habitat impacts from the Columbia Ethanol Power Project (Project). The plan is based on personal communications between Oregon Department of Fish and Wildlife (ODFW) District Wildlife Biologist Steve Cherry and DEA Ecologist Phil Rickus in February and March, 2007. Columbia Pacific Ethanol, LLC will be the Certificate Holder (CH) for the project.

As described in the Application for Site Certificate (ASC), the project area is highly degraded and impacted historically by agriculture and other uses. Wildlife habitat within the project area is extremely limited and wildlife use of the site is expected to be limited to common, generalist species. Surveys were conducted to determine the acreage of impacted habitat classified into the various Fish and Wildlife Habitat Mitigation Policy categories, which are shown in Table 1 below.

Table 1: Impacts to Wildlife Habitat from the Columbia Ethanol Project

	IMPACTS (acres)	
	Temporary	Permanent
Category 5		
Grassland	7.3	6.7
Category 6		
Developed	3.4	2.8

Potential impacts to wildlife habitat include temporary and permanent habitat loss, habitat alteration, and disturbance during construction and operation. Temporary impacts are the construction-related impacts associated with the laydown areas, proposed ethanol pipeline, and the underground gas pipeline. These areas will be temporarily disturbed during construction and will be restored to pre-construction condition or better after the construction-related activities are complete.

March 30, 2007

Page 2

The mitigation goal for Category 6 impacts is to minimize impacts. The mitigation goal for category 5 impacts is to provide a net benefit in habitat quantity or quality. As shown below, the proposed mitigation meets these goals.

As requested by ODFW (Cherry, pers. comm. 2007), the ODFW Coyote Springs Wildlife Area (CSWA) would be enhanced in coordination with the Refuge Manager (Figure 1). ODFW originally requested that 10 acres of degraded grassland habitat be restored as mitigation for these impacts. However, a discreet area of potential mitigation covering 23 acres was identified by the refuge manager. The CH will attempt to cover the entire 23 acres.

Mitigation Area Description and Procedures Summary

The 23-acre mitigation area consists of a small patch of disturbed grassland habitat between existing agricultural center pivot fields immediately north of I-84 (Figure 2). This area is dominated by non-native vegetation, and would require considerable preparation and maintenance to forestall the return of weeds to the project area.

Mitigation will proceed in phases, with the responsibility for separate phases split between ODFW and the CH. The first phase is to clear non-native species and weeds through a combination of spraying and mowing (ODFW). This will be followed by planting with desirable grasses and forbs (CH). This would provide cover and forage for wildlife within the CSWA. After the new vegetation is established, the quality of the habitat will be maintained for the life of the Project by ODFW unless it is determined by ODFW that there is a more beneficial use for the mitigation area. ODFW is also currently managing similar restoration projects within the wildlife area. The following steps provide greater detail concerning the process:

Seeding and Planting (CH)

Native-like grass and forbs will be planted in the fall or early winter, so that seeds can soak up moisture during the winter. The final mitigation seed mix will be determined in consultation with the CH and ODFW, but would likely include such native species as basin wildrye, bluebunch wheatgrass, Indian ricegrass, western needle-and-threadgrass, and sand dropseed. A rangeland drill would likely be used for seeding. The rangeland drill uses a series of smaller disks to create divots in the ground, and then plants the seeds in these divots with a seeding tube. The rangeland drill does not require that site be tilled or disked prior to seeding and can be used in terrain that is uneven. The drill will be used in several directions to mask the appearance of row crops and provide a more natural "bunchgrass" appearance over time.

Monitoring Procedures- Year 1 – 2 (CH)

CH responsibility for seeding includes only germination and survival of the grasses and forbs through the second growing season. Thereafter, ODFW will maintain the area to the desired criteria. Following the second growing season, DEA, in consultation with ODFW, shall evaluate the percentage of the mitigation site that has successfully germinated and survived.

March 30, 2007

Page 3

Areas within the mitigation site are considered successfully revegetated when 50 percent of the planted seed has germinated and survived through the second growing season. This will be determined through random sampling of planted rows during a monitoring visit to be conducted after the second growing season. A brief report, to be provided to ODFW and The Oregon Department of Energy (The Department), will summarize methods and results.

If the site falls below the success criteria levels, the CH shall initiate corrective measures, and a second year of germination monitoring shall be initiated. After the second year, the Department may require reseeding or other corrective measures in those areas that do not meet the success criteria.

Monitoring Procedures- Year 2-5 (ODFW)

Once the 50% germination criterion has been met (regardless of which year that occurs) ODFW shall verify, during subsequent visits, that the plant communities within the mitigation site continue to meet the success criteria for revegetation.

If, after attaining the 50% germination standard, all or part of the habitat within the site falls below the mitigation guideline of providing a net gain in habitat quantity or quality, ODFW shall initiate corrective measures. The Department may require reseeding or other corrective measures in those areas that do not meet the success criteria. The Department may exclude small areas from the reseeding requirement where the potential for erosion is low and if total vegetative cover (of native and non-native species together) exceeds 25 percent.

Sincerely,

Philip Rickus

DEA Ecologist

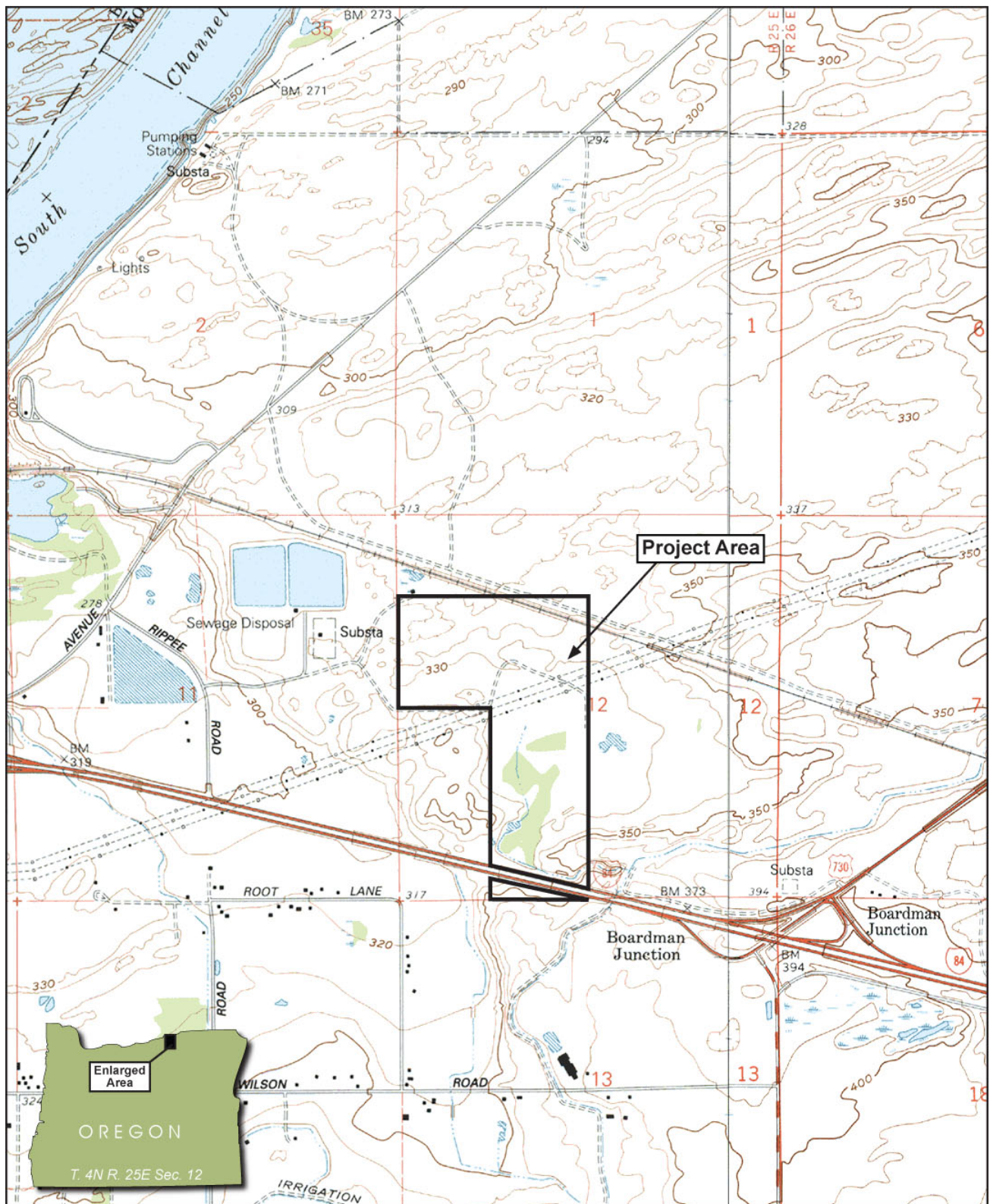
Attachments/Enclosures:

Figure 1: Site Vicinity

Figure 2: CSWA Site Plan Aerial

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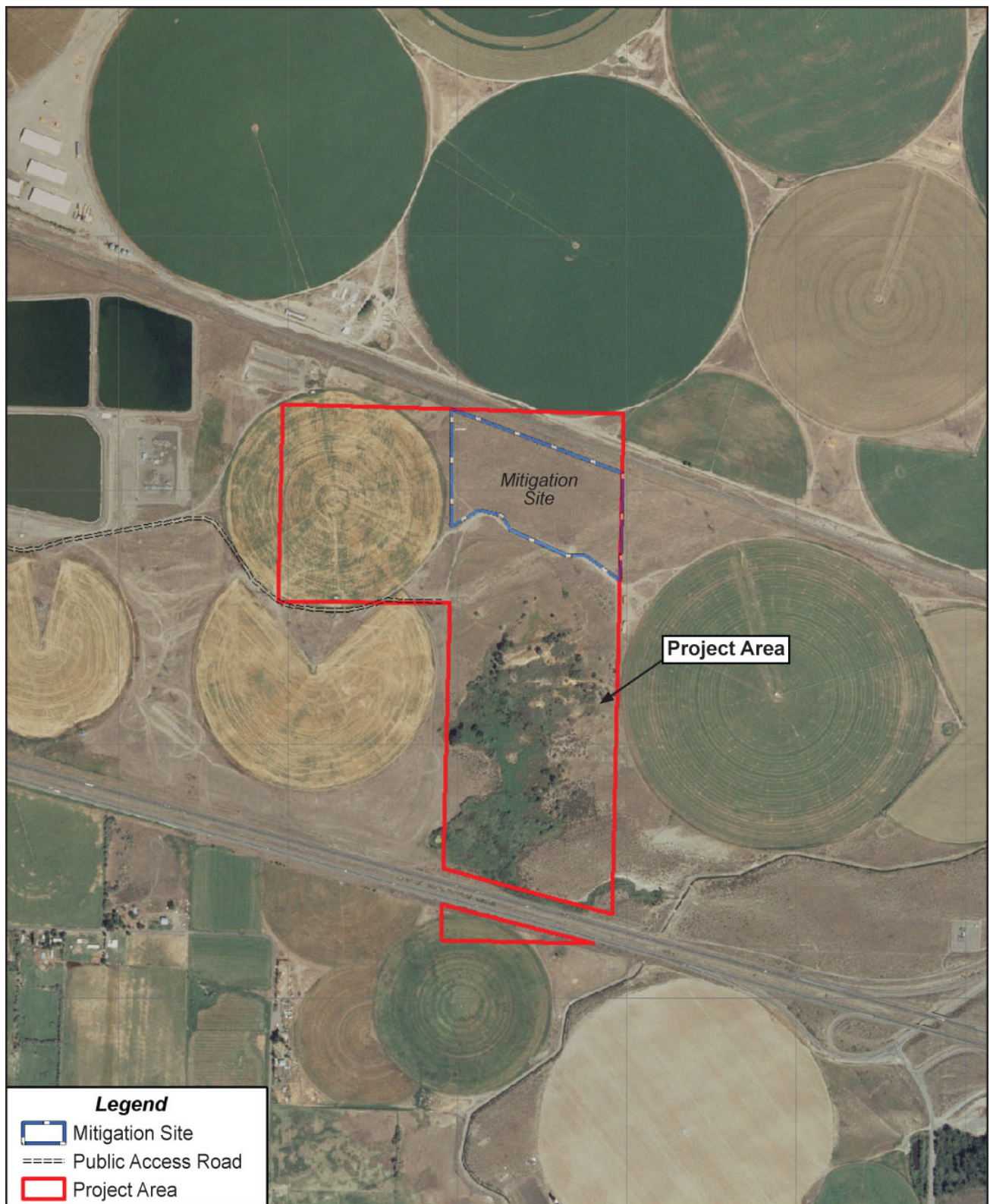
USGS Quadrangles: Boardman, OR-WA 1993 and Clarke, OR 1993

Figure 1
Vicinity



Scale - 1 : 24,000





Oregon Department of Fish and Wildlife (ODFW)

Figure 2
Coyote Springs Wildlife Area Site Plan Aerial