

Wetland Resources, Inc.

Delineation / Mitigation / Restoration / Habitat Creation / Permit Assistance

9505 19th Avenue S.E.
Suite 106
Everett, Washington 98208
(425) 337-3174
Fax (425) 337-3045

WETLAND DELINEATION REPORT

FOR

HERITAGE BAPTIST FELLOWSHIP *MONROE, WASHINGTON*

WETLAND RESOURCES, INC. PROJECT #99312

Prepared By:

Wetland Resources, Inc.
9505 19th Avenue SE, Suite 106
Everett, Washington 98208
(425) 337-3174

For:

Heritage Baptist Fellowship
P.O. Box 1090
Monroe, WA 98272

December 13, 1999

TABLE OF CONTENTS

Project Site Description	1
Wetland Classification – City of Monroe	1
Native Growth Protection Easements and Signs	2
Shoreline Designation	2
Wetland Determination Report	2
Boundary Determination Findings	4
Use of this Report	5
Field Data Sheet	6
NGPA Sign Detail	8
Wetland Delineation Report Map	1/1

PROJECT SITE DESCRIPTION

Wetland Resources, Inc. delineated the on-site wetlands and the southern boundary of the on-site slough/stream in June, 1998, on the approximately 43 acre site located west of the intersection of SR 2 & Calhoun Road in the City of Monroe, Washington. The site is located in a portion of Section 5 and 6, Township 27N, Range 7E, W.M. A four lot short plat is proposed on the eastern portion of the subject property.

The majority of the site is relatively flat. A steep south aspect slope lies along the northerly edge of the property and S.R. 2 lies just off the southern edge of the site. The subject property has historically been used for agriculture and is currently dominated by pasture grasses. An oxbow slough that was once a channel of the Skykomish River enters the site near the southeast property corner from a ditch adjacent to the north side of Highway 2. The slough continues northwest to the base of the steep slope, then goes southwest along the toe of the slope and eventually feeds into a four foot concrete box culvert located off-site to the southwest. This culvert is several hundred feet long and goes under Highway 2. Approximately 30 feet south of where the culvert under HWY 2 daylights, hydrology from the slough continues through a second four foot concrete round culvert under the railroad tracks. The railroad culvert is approximately 55 feet long and daylights directly into the Skykomish River. There are no significant barriers that would impede the passage of fish from the Skykomish River into the on-site slough during high flow periods and flood events.

The entire on-site slough is bordered by 50 - 100 foot wide stand of Himalayan blackberry. Two riparian wetland areas are associated with the slough. Both riparian wetland areas are dominated by soft rush. An isolated emergent wetland dominated by soft rush and velvet grass is located near the northeast property corner and extends off-site to the east. Our delineation of the isolated wetland only extends as far as a barb wire fence which was assumed to be the eastern property boundary at the time of investigation. The actual eastern property boundary is located east of the fence. The wetland extends to the property boundary and continues off-site to the east.

WETLAND CLASSIFICATION - CITY OF MONROE, WASHINGTON

The on-site slough/stream and wetlands fall under the jurisdiction of the City of Monroe's Sensitive Area Guidelines, September 26, 1990. Final stream and wetland classification must be approved by the City of Monroe. The slough and wetlands appear to be classified as follows:

Slough: Class 2 stream. The on-site slough/stream is not inventoried as a shoreline of the state, appears to have year round water and the potential to support salmonids due to connectivity with the Skykomish River. Class 2 Streams with these characteristics are typically designated 100 foot protective buffers as measured from the ordinary high water mark (OHWM).

Riparian Wetlands: Class II wetlands. All riparian wetlands that do not meet the criteria for Class I wetlands are classified as Class II wetlands. The on-site riparian wetland areas associated with the slough appear to meet these criteria. Class II wetlands are typically designated 35 foot protective buffers as measured from the wetland edge.

Isolated Wetland: Class III wetland. All wetlands which are of minimum habitat value as evidenced by the lack of food plants for wildlife, are characterized by monotypical vegetation of similar age class, lack open water areas and special habitat features and are hydrologically isolated from other aquatic systems are classified as Class III wetlands. The on-site isolated wetland meets these criteria. Class III wetlands typically receive 25 foot protective buffers as measured from the wetland edge.

NATIVE GROWTH PROTECTION EASEMENTS AND SIGNS

The City of Monroe requires streams, wetlands, and their buffers remain undeveloped and be designated as Native Growth Protection Easements (NGPEs). NGPE monuments shall be placed at the corners of the NGPE Boundary. Monuments shall be constructed of 6" X 24" PVC pipe filled with concrete. A 3" diameter brass cap stating , "Native Growth Protection Easement. Do Not Disturb", shall be placed in the concrete at the top of the monument. Refer to attached Wetland Delineation Report Map for NGPE monument locations.

The City of Monroe requires Type I Native Growth Protection Area (NGPA) signs to placed along the outer edge of the NGPA every 150 feet. Refer to the attached Wetland Delineation Report Map and Wetland Signage Detail for locations and sign details.

SHORELINE DESIGNATION

Due to the close proximity and association with the Skykomish River, the on-site slough and associated riparian wetlands fall under the jurisdiction of the Shorelines Management Act WAC 173 and the City of Monroe's Shoreline Master Program. A 200 foot Shoreline Designation from the edge of the ordinary high water mark of the slough and riparian wetlands associated with the Skykomish River applies to this site (City of Monroe's Shoreline Master Program). The ordinary high water mark within the slough associated with the Skykomish River was agreed upon during the November 30, 1999, on-site meeting with Erik Stockdale, WA Dept. of Ecology Wetlands Specialist. The placement of fill or other disturbance to the slough/stream, associated wetlands, or areas within the 200 foot Shoreline Designation would require a Shoreline Permit from the City of Monroe.

Cowardin System

The wetlands and stream classifications on site, as described by the Cowardin System in Classification of Wetlands and Deepwater Habitats of the United States, 1979 edition, are as follows:

On-site-Wetlands: Palustrine, Emergent Wetland, Persistent, Seasonally Flooded.

Class 2 Stream/Slough: Riverine, Lower Perennial, Unconsolidated Bottom, Mud.

WETLAND DETERMINATION REPORT

Methodology: On site, routine methodology as described in the Washington State Wetlands Identification and Delineation Manual (Washington State Department of Ecology Publication #96-94, March 1997), was used for this determination, as required by Snohomish County. Under this method, the process for making a wetland determination is based on three sequential steps:

- 1.) Examination of the site for hydrophytic vegetation (species present and percentage cover).

- 2.) If hydrophytic vegetation is found, then the presence of hydric soils is determined.
- 3.) The final step is determining if wetland hydrology exists in the area examined under the first two steps.

The following criteria descriptions were used in the boundary determination:

Vegetation

The Washington State Wetlands Identification and Delineation Manual, 1997 edition, defines hydrophytic vegetation as the sum total of macrophytic plant life that occurs in areas where the frequency and duration of inundation or soil saturation produce permanently or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present. One of the most common indicators for hydrophytic vegetation is when more than 50 percent of a plant community consists of species rated "Facultative" and wetter on lists of plant species that occur in wetlands.

Soils

The Washington State Wetlands Identification and Delineation Manual, 1997 edition, defines hydric soils as those that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part. Field indicators are used for determining whether a given soil meets the definition and criteria for hydric soils.

The subject property is mapped in the Soil Survey of Snohomish County Area Washington as Puyallup fine sandy loam and Sultan silt loam.

Puyallup fine sandy loam is described as very deep, well drained soil on stream terraces that formed in alluvium. Permeability of Puyallup fine sandy loam is described as moderately rapid and available water capacity as moderate. Included within this soil unit are areas of Puget soils in depressional areas on flood plains and Pilchuck, Sultan, Sultan Variant, and Sumas soils on flood plains. The Puget and Sultan soils are included on the Snohomish County List of Hydric Soils.

Sultan silt loam is described as very deep, moderately well drained soil on flood plains that formed in alluvium. Permeability of this Sultan soil is described as moderately slow and available water capacity as high. Included in this soil unit are small areas of Menzel soils on terraces, Puget soils in depressional areas on flood plains, Puyallup soils on stream terraces, and Sultan Variant soils on flood plains.

Hydrology

The Washington State Wetlands Identification and Delineation Manual, 1997 edition, states that "areas which are seasonally inundated and/or saturated to the surface for a consecutive number of days ≥ 12.5 percent of the growing season are wetlands, provided the soil and vegetation parameters are met. Areas inundated or saturated between 5 and 12.5 percent of the growing season in most years may or may not be wetlands. Areas saturated to the surface for less than 5 percent of the growing season are non-wetlands." Field indicators are used for determining whether wetland hydrology parameters are met.

BOUNDARY DETERMINATION FINDINGS

Riparian Wetlands and Slough

Vegetation: The riparian wetland areas associated with the slough are dominated by soft rush (*Juncus effusus*, Fac) with trace amounts of common velvet-grass (*Holcus lanatus*, Fac) and Himalayan blackberry (*Rubus discolor*, FacU) also present. The dominance of vegetation rated "Facultative" and wetter meets the criteria for a hydrophytic vegetation community in the areas mapped as riparian wetland associated with the slough.

Soils: The riparian wetland areas are underlain by dark greenish gray (5GY 4/1) soils from the surface to greater than eighteen inches below. The soils sampled within these areas were moist to saturated at the time of investigation and are clay loam textured. The presence of low chroma, saturated soils suggests that reducing conditions are present long enough during the growing season to develop anaerobic conditions in the upper part.

Hydrology: The areas mapped as the slough and riparian wetlands appear to be seasonally inundated and/or saturated to the surface for a consecutive number of days ≥ 12.5 percent of the growing season, thereby, fulfilling the wetland hydrology criteria.

Isolated Wetland

Vegetation: The isolated wetland area is dominated by soft rush (*Juncus effusus*, Fac) and common velvet-grass (*Holcus lanatus*, Fac), with trace amounts of Himalayan blackberry (*Rubus discolor*, FacU) also present. The dominance of vegetation rated "Facultative" and wetter meets the criteria for a hydrophytic vegetation community in the area mapped as the isolated wetland.

Soils: The soils underlying this wetland are very dark grayish brown (10YR 3/2) with mottles and olive gray (5Y 4/2) with mottles from the surface to greater than eighteen inches below. The soils sampled within the wetland were moist at the time of investigation and are silt loam to clay loam in texture. The presence of low chroma, saturated soils suggests that reducing conditions are present long enough during the growing season to develop anaerobic conditions in the upper part.

Hydrology: The area mapped as the isolated wetland appears to be seasonally inundated and/or saturated to the surface for a consecutive number of days ≥ 12.5 percent of the growing season, thereby, fulfilling the wetland hydrology criteria.

Non-wetland

Vegetation: The non-wetland pasture areas of the site are dominated by velvet grass (*Holcus lanatus*, Fac) and orchardgrass (*Dactylis glomerata*, FacU). These areas do not have hydric soils or wetland hydrology and therefore do not meet the criteria for wetlands.

Soils: The soils in these areas were slightly moist at the time of investigation and range in color from dark grayish brown (2.5Y 4/2) to olive brown (2.5Y 4/3) with no mottles, and dark brown (10YR 3/3 - 10YR 4/3) with no mottles. The presence of high chroma soils and the lack of redoximorphic features suggests that anaerobic conditions are not present within the upper part of the soil horizon in the areas mapped as non-wetland.

Hydrology: It appears that the non-wetland areas of the site are saturated to the surface for less than five percent of the growing season and therefore do not meet the criteria for wetland hydrology.

USE OF THIS REPORT

This Wetland Delineation Report is supplied to Heritage Baptist Church as a means of determining on-site wetland conditions, as required by the City of Monroe during the permitting process. This report is based largely on readily observable conditions and to a lesser extent, on readily ascertainable conditions. This report has been prepared using the best available science. No attempt has been made to determine hidden or concealed conditions. Reports may be adversely affected due to the physical condition of the site and the difficulty of access which may lead to observation or probing difficulties.

The laws applicable to wetlands are subject to varying interpretations and may be changed at any time by the courts or legislative bodies. This report is intended to provide information deemed relevant in the applicant's attempt to comply with the laws now in effect.



Sean Curran
Wetland Ecologist
Wetland Resources, Inc.

Field Data Sheet
Heritage Baptist Fellowship- WRI # 99312
Investigation Date: 6/11/98

Pit	Depth	Texture	Color	Moisture	Species	%	Status	Strata
S1	0"-15"	sil	10YR 3/3	very moist	<i>Holcus lanatus</i>	80	Fac	herb
Non- Wetland	15"-18"	sil	10YR 4/3	very moist	<i>Dactylis glomerata</i>	20	FacU	herb
	18"+"	sl	2.5Y 4/3	very moist				

Conclusion: Wetland - Parameters for hydric soils and wetland hydrology are not met.

S2	0"-18+"	sil	2.5Y 4/2	sl. moist	<i>Holcus lanatus</i>	80	Fac	
Non- Wetland			no mottles		<i>Dactylis glomerata</i>	10	FacU	

Conclusion: Non-wetland - Parameters for hydric soils and wetland hydrology are not met.

S3	0"-18+"	cl	5GY 4/1	moist	<i>Juncus effusus</i>	70	Fac	herb
Wetland			w/ motts		<i>Holcus lanatus</i>	10	Fac	herb
					<i>Rubus discolor</i>	Tr.	FacU	shrub

Conclusion: Non- Wetland - Parameters for hydrophytic vegetation, hydric soils, and wetland hydrology are met.

S4	0"-6"	sil	10YR 3/2	moist	<i>Juncus effusus</i>	40	FacW	herb
Wetland			w/ motts		<i>Holcus lanatus</i>	80	Fac	herb
	6"-16+"	cl	10YR 3/2	moist	<i>Rubus discolor</i>	Tr.	FacU	shrub
			w/ motts					
	16"-18+"	sicl	5Y 4/2	moist				
			w/ motts					

Conclusion: Non-wetland - Parameters for hydrophytic vegetation, hydric soils, and wetland hydrology are met.

S5	0"-10"	sil	10YR 3/3	sl. moist	<i>Holcus lanatus</i>	90	Fac	tree
Non- Wetland	10"-18+"	sicl	2.5Y 5/4	sl. moist	<i>Dactylis glomerata</i>	10	FacU	tree

Conclusion: Non-wetland - Parameters for hydric soils and wetland hydrology are not met.

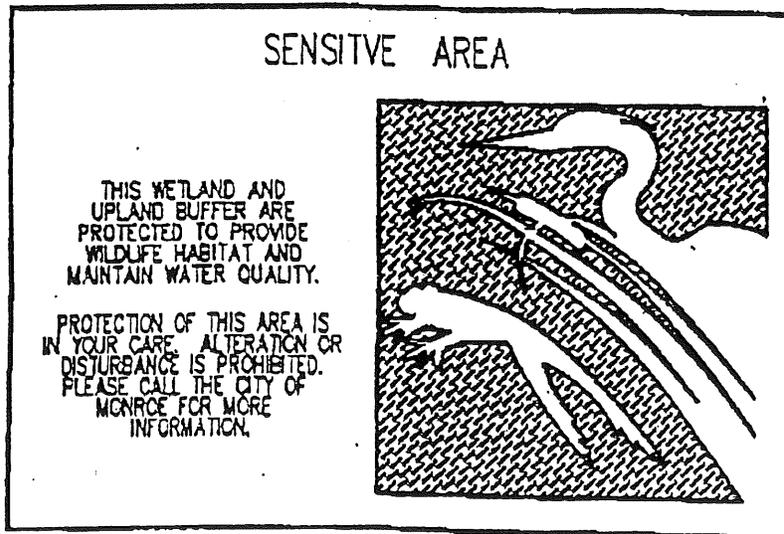
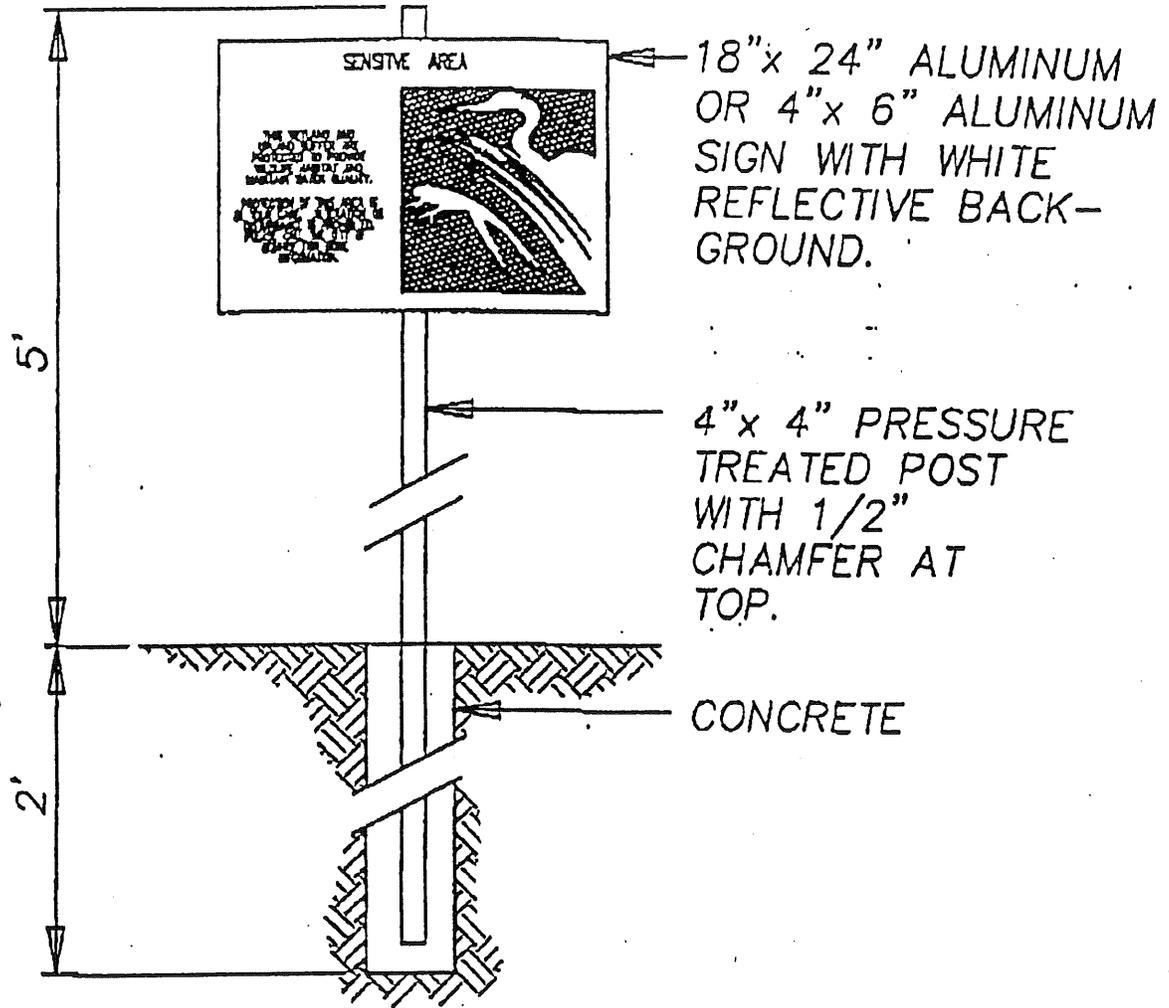
Field Data Sheet
Heritage Baptist Fellowship- WRI # 99312
Investigation Date: 6/11/98

Pit	Depth	Texture	Color	Moisture	Species	%	Status	Strata
S6	0"-6"	sicl	10YR 4/3	sl. moist	<i>Dactylis glomerata</i>	30	FacU	herb
Non- Wetland	6"-18+"	sicl	10YR 4/3 w/ motts	sl. moist	<i>Holcus lanatus</i>	30	Fac	herb
					<i>Cirsium arvense</i>	Tr.	FacU+	herb
					<i>Rubus discolor</i>	Tr.	FacU	herb
					<i>Rumex crispus</i>	Tr.	Fac+	herb

Conclusion: Non-Wetland-Parameters for hydrophytic vegetation, hydric soils, and wetland hydrology are not met.

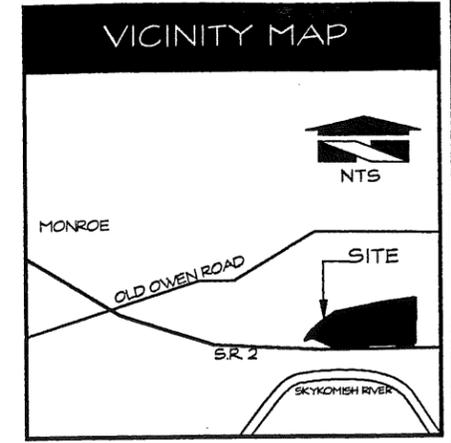
WETLAND SIGNAGE DETAIL

NOT TO SCALE.



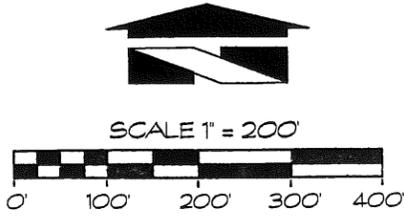
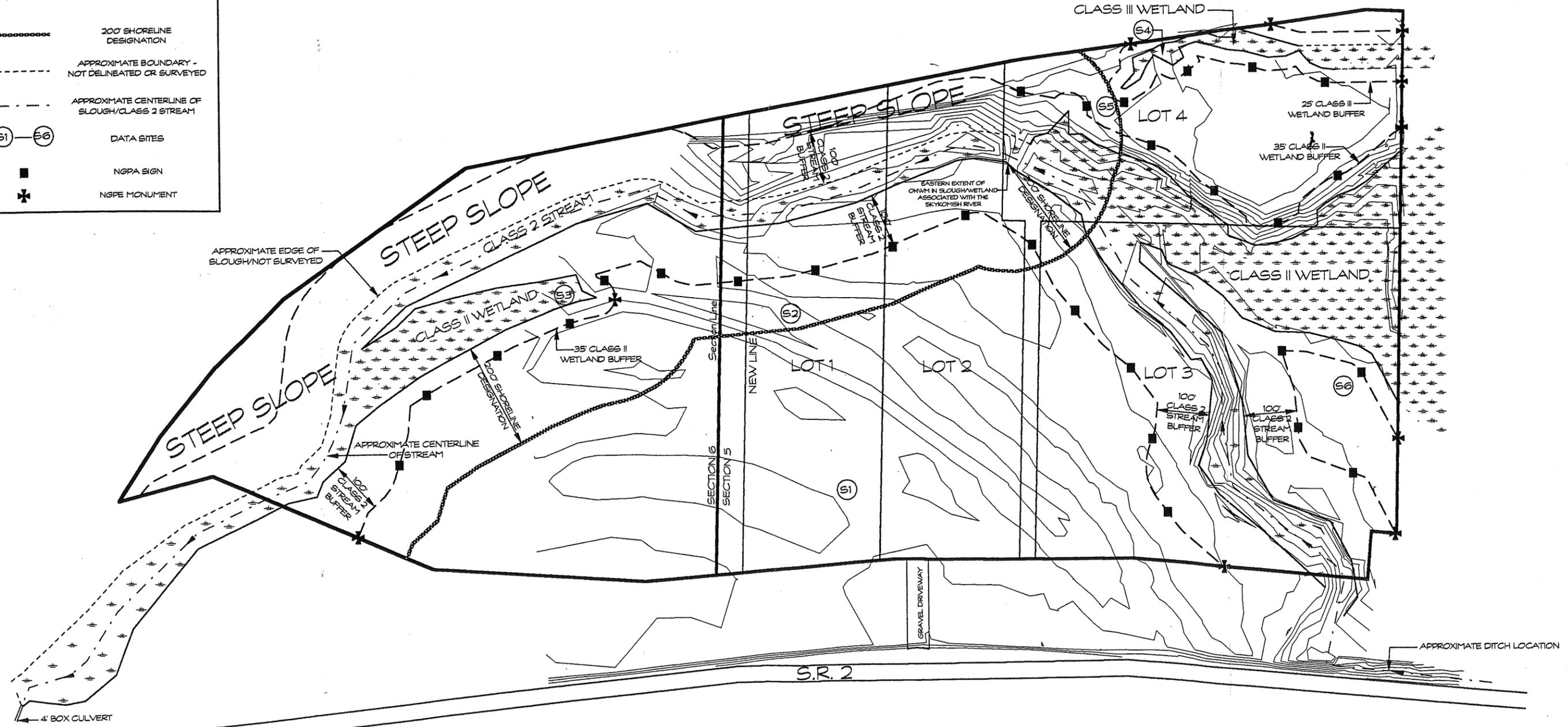
WETLAND DELINEATION REPORT MAP FOR HERITAGE BAPTIST FELLOWSHIP

AS PART OF SECTION 5 & 6, TOWNSHIP 27N, RANGE 7E, W.M.



LEGEND

- WETLAND
- STANDARD BUFFER
- 200' SHORELINE DESIGNATION
- APPROXIMATE BOUNDARY - NOT DELINEATED OR SURVEYED
- APPROXIMATE CENTERLINE OF SLOUGH/CLASS 2 STREAM
- DATA SITES (S1 - S6)
- NGPA SIGN
- NGPE MONUMENT



Wetland Resources, Inc.
 Delineation / Mitigation / Restoration / Habitat Creation / Permit Assistance
 9505 19th Avenue S.E. Suite 106 Everett, Washington 98208
 Phone (425) 337-3174
 Fax (425) 337-3045
 email wetlands@halcyon.com

**WETLAND DELINEATION
REPORT MAP FOR
HERITAGE BAPTIST FELLOWSHIP**
CITY OF MONROE, WA

SHEET 11
WRI # 99012
DRAWN BY: Sean Curran
DATE: December 13, 1999