Table 2. Critical Areas in Duffner Basin.

1.	**Duffner Creek Birch Bay Lynden to Tromp Road**	
	Roads:	Birch Bay Lynden, Tromp Roads.
	Critical Area/Descrip:	Riparian Wetland (PFOC), Fish & Wildlife HCA
	Vegetation:	Paper birch, western red cedar, red alder, hazelnut. Predominantly deciduous. West side riparian wetland vegetation with blackberry, reed canarygrass. East side with canarygrass, skunk cabbage, ranging 50-100 feet from OHWM. Forested buffer on west side with alder, salmonberry. Riparian wetlands with skunk cabbage
	Category/Class:	Category II Wetland. Class (B) River/stream Habitat.
	NRCS Soil Unit:	(100) Lynden sandy loam, 3 to 8 percent slopes, (80) Kickerville silt loam, 3 to 8 percent slopes, and (116) Pangborn muck, drained, 0 to 2 percent slope (Hydric, 1, depressions).
	Notes:	Near Birch Bay Lynden, wetlands extend east fence and west to slope. Channel is still somewhat exposed due to sparse canopy, particularly on east side. Water has is reddish tinge due to iron fixing bacteria and high turbidity. Riparian wetland can also be seen from above on Tromp Road. Tromp Road culvert may pose a barrier as noted by 1995 Shoreline Inventory and by WDFW. Splash rocks have been placed below culvert to improve passage. Upland forested buffer on west provides upland wildlife habitat.
2.	**Duffner Riparian Wetlands, W. Front Road (Tromp) to Tributary Confluence**	
	Roads:	Tromp Road 100 feet north to confluence of North Tributary and Guide Tributary.
	Critical Area/Descrip:	Forested Riparian Wetlands (PFOC), Fish & Wildlife HCA, wetland in ravine north of Tromp Road.
	Vegetation:	Red alder, black cottonwood, salmonberry, willow, black cottonwood, skunk cabbage.
	Category/Class:	Category II Wetland; Class (B) River/stream Habitat.
	NRCS Soil Unit:	(100) Lynden sandy loam, 3 to 8 percent slopes, (99) Lynden sandy loam, 0 to 3 percent slopes, and (165) Tromp loam, 0 to 2 percent slopes.
	Notes:	Wetland is more extensive than indicated by shorelands inventory. On west side is cleared wetland drainage pattern.
3.	**Duffner Creek Riparian Wetlands, Tributary Confluence to Guide Meridian Tributary**	
	Roads:	Guide Meridian, downstream.
	Critical Area/Descrip:	Forested Riparian Wetlands (PFOC). Fish & Wildlife HCA.
	Vegetation:	Western red cedar, red alder, birch, salmonberry, skunk cabbage, creeping buttercup, lady fern.
	Category/Class:	Category II Wetland. Class (B) River/stream Habitat.
	NRCS Soil Unit:	(165) Tromp loam, 0 to 2 percent slopes, and (96) Laxton loam, 0 to 3 percent slopes
	Notes:	Confluence of North and East Forks to Guide Meridian. Riparian wetlands on north banks then shifting to south side then both sides on riparian shelves. Wetlands extensive, resident cutthroat trout may be present.

Table 2. Critical Areas in Duffner Basin (Continued).

3a.	**Duffner Creek Wetlands, 600 feet west of Guide Meridian**	
	Roads:	Guide Meridian, downstream.
	Critical Area/Descrip:	Forested Riparian Wetlands (PFOC). Fish & Wildlife HCA.
	Vegetation:	Western red cedar, red alder, birch, salmonberry creeping buttercup, lady fern.
	Category/Class:	Category III Wetland. Class (C) River/stream Habitat.
	NRCS Soil Unit:	(165) Tromp loam, 0 to 2 percent slopes, and (96) Laxton loam, 0 to 3 percent slopes
	Notes:	Northeastern portion of forks to Guide Meridian, north of confluence Wetlands present with seasonal waterflow from street runoff .
4.	**Duffner Creek North Tributary, Confluence to West Main Street**	
	Roads:	West Main Street.
	Critical Area/Descrip:	Riparian Wetlands (PEMC) (PFOC) at confluence; Fish & Wildlife HCA.
	Category/Class:	Category III Wetland. Class (C) River/stream Habitat.
	NRCS Soil Unit:	(165) Tromp loam, 0 to 2 percent slopes.
	Notes:	North Tributary heavily impacted by recent industrial development. Clearing of riparian wetlands to edge of OHWM. Stream from the pond to West Main was enclosed in February 2000. Downstream of the settling pond, forested riparian wetlands have been cleared of timber. Old irrigation pond now functions as settling pond.
5.	**Duffner Creek Potential Riparian (UGA)**	
	Roads:	south of Bay-Lyn Road.
	Critical Area/Descrip:	Fish & Wildlife HCA.
	Category/Class:	Class (B) River/stream Habitat.
	NRCS Soil Unit:	(116) Pangborn muck, drained, 0 to 2 percent slope (Hydric, 1, depressions).
	Notes:	
6.	**Guide Meridian Forested Wetlands**	
	Roads:	Guide Meridian, upstream.
	Critical Area/Descrip:	Forested Wetlands (PEMC, POW, PFOC).
	Vegetation:	weeping willow, western red cedar, red alder, reed canarygrass.
	Category/Class:	Category II Wetland.
	NRCS Soil Unit:	(96) Laxton loam, 0 to 3 percent slopes.
	Notes:	Headwater tributary to Duffner Creek but now is isolated from creek.
7.	**Forested Wetland (UGA)**	
	Roads:	Birch Bay-Lynden Road and Tromp Road (UGA).
	Critical Area/Descrip:	Forested Wetlands (PFOC), with forested upland buffer and wildlife habitat.
	Vegetation:	cottonwood, red alder, paper birch, salmonberry, skunk cabbage.
	Category/Class:	Category III Wetland.
	NRCS Soil Unit:	(80) Kickerville silt loam, 3 to 8 percent slopes.
	Notes: .	The SE half of these woods are wetlands.

Table 2. Critical Areas in Duffner Basin (Continued).

8.	**Emergent Wetland in Field North of West Main Street (50) (UGA)**	
	Roads:	West Main, north of in field.
	Critical Area/Descrip:	Emergent Wetland (PEMC).
	Vegetation:	reed canarygrass, shrubs, scattered trees in vicinity.
	Category/Class:	Category IV Wetland.
	NRCS Soil Unit:	(62) Hale silt loam, drained, 0 to 2 percent slopes (Hydric, 2A, terraces).
	Notes:	Duffner Creek headwaters, forms sliver near agricultural ditches.
9.	**West Main Farm Pond (UGA)**	
	Roads:	east of Duffner Creek, south of Red Barn.
	Critical Area/Descrip:	Emergent Wetland (POW, PEMC).
	Vegetation:	soft rush and grasses grow around margins.
	Category/Class:	Category IV Wetland.
	NRCS Soil Unit:	(45) Edmonds-Woodlyn loams, drained, 0 to 2 percent slopes (Hydric, 2b3, depression).
	Notes:	open water, probably shallow, agricultural water source for horses. surrounded by horse field and corn field.

Fishtrap Creek / Double Ditch Drainage

Fishtrap Creek flows into the Nooksack River just upstream of Bertrand Creek. Headwaters originate in Canada with a mean annual flow of (37.8) cfs (City of Lynden 1995). The reaches of Fishtrap Creek that flow through the City of Lynden offer relatively good quality habitat. Despite the proximity of a variety of land-uses, the reaches of Fishtrap Creek that extend through the City Limits and the UGA have generally retained their natural meanders with limited diking and ditching. In some locations Fishtrap Creek lacks a canopy and is encroached by residential lawns or retaining walls at the edge of the creek.

Fishtrap Creek has five species of salmonids including chum, coho, chinook, steelhead, sea-run cutthroat, resident trout and Dolly Vardin (City Pamphlet). Problems with fecal coliform and low in-stream flows have been identified for Fishtrap Creek.

Double Ditch Creek is a tributary to Fishtrap Creek, entering Fishtrap Creek within City Limits. Double Ditch has a mean annual flow of 5.3 cfs (City of Lynden 1995). Originating in headwater in British Columbia, Double Ditch runs down Double Ditch Road in two ditched channels though agricultural land for several miles before it enters City Limits. The best quality habitat for Double Ditch Creek exists at the confluence with Fishtrap Creek and extending upstream to 17th Street. Like Fishtrap Creek, Double Ditch has been identified as having problems with fecal coliform.

In the lower reaches of Double Ditch Creek, forested conditions prevail with riparian wetlands and stream habitat. Seventeen critical areas including those in Double Ditch Creek were identified for the Fishtrap Creek basin.

Table 3. Critical Areas in Fishtrap Basin.

10. Fishtrap Creek Riparian Wetlands, south of KOK (UGA)	
Roads:	KOK, Guide Meridian.
Critical Area/Descrip:	Riparian Wetlands, Fish & Wildlife HCA.
Vegetation:	Reed canarygrass.
Category/Class:	Category I or II Wetland. Class (A) River/stream habitat.
NRCS Soil Unit:	(22) Briscot silt loam, drained , 0 to 2 percent slopes (Hydric, 2b3, floodplains).
Notes:	lowland riparian shelf, channel has tight meanders.
11. Fishtrap Creek Riparian Wetlands, west of Fair grounds	
Roads:	KOK Road north to Front Street, 19th.
Critical Area/Descrip:	Riparian Wetlands (PFOC, PEMC); Fish & Wildlife HCA.
Vegetation:	Big leaf maple, red alder, Douglas fir, reed canarygrass.
Category/Class:	Category II or III Wetland. Class (A) River/stream habitat.
NRCS Soil Unit:	(22) Briscot silt loam, drained , 0 to 2 percent slopes (Hydric, 2b3, floodplains).
Notes:	Lowland riparian shelf with a few scattered alders; west side is mostly open. East side mowed lawn below fair grounds. Area has high revegetation opportunities. Forested and scrub shrub wetlands to north on west side. Sloping uplands form ravine and provide well vegetated upland buffer to this system. Access road down to riparian shelf with cedar trees occurring further north.
12. Fishtrap and Double Ditch Creek Confluence	
Roads:	Front Street to 17th Street.
Critical Area/Descrip:	Riparian Wetland, forested; Fish & Wildlife HCA.
Vegetation:	Mature lowland forest with western red-cedar, Douglas fir. with red alder, salmonberry, skunk cabbage, red elderberry.
Category/Class:	Category II Wetland. Class (A) River/stream habitat.
NRCS Soil Unit:	(103) Lynnwood sandy loam, 5 to 20 percent slopes.
Notes:	Private residence near confluence. Old side channels are evident within wetland/upland complex in floodplain. Riparian wetland associated with mouth of Double Ditch Creek offers good quality salmonid habitat for spawning, good shade, presence of wood, and cover, fisheries utilization and quality habitat. An upland forested ridge divides Fishtrap Creek from Double Ditch.

Table 3. Critical Areas in Fishtrap Basin (Continued).

13. Mouth of Double Ditch Creek at Fishtrap Creek (42)	
Roads:	Front Street to 17th Street. (Fishtrap Way, Double Ditch Road, Wood Creek Drive).
Critical Area/Descrip:	Wetlands. Fish & Wildlife HCA.
Vegetation:	Red alder, cedar, salmonberry, skunk cabbage, red elderberry.
Category/Class:	Category II Wetland; Class (A) River/stream habitat.
NRCS Soil Unit:	(103) Lynnwood sandy loam, 5 to 20 percent slopes.
Notes:	Riparian wetland associated with mouth of Double Ditch Creek. Wetlands associated with Double Ditch formed by seepage at toe of slope. An upland forested ridge divides Fishtrap Creek from Double Ditch. Stream offers good quality salmonid habitat: spawning, shade, presence of wood and cover, habitat structure, and presence of moderate buffer. This area, from the mouth to 17th Street, offers the highest quality aspects of Double Ditch Creek system. Possibly steep and unstable slopes.
14. Double Ditch Creek, 17th to Main	
Roads:	17th to Main Street.
Critical Area/Descrip:	Fish & Wildlife HCA.
Vegetation:	Several large cedar trees grow along the straightened channel to the north of Main Street.
Category/Class:	Class (B) River/stream habitat.
NRCS Soil Unit:	(96) Laxton loam, 0 to 3 percent slopes.
Notes:	Double Ditch has steep ravine banks. Forested areas has red alder, hazelnut, willow. New culvert work has been completed at the 17th street crossing on Double Ditch, where a ten foot wide culvert is set low enough but still shoots water through it. Natural meanders through residential areas with minimal buffer.
15. Double Ditch Creek, Mainstem	
Roads:	Main Street to Double Ditch Road.
Critical Area/Descrip:	Fish & Wildlife HCA.
Vegetation:	Cedar north of Main Street.
Category/Class:	Class (B) River/stream habitat.
NRCS Soil Unit:	(96) Laxton loam, 0 to 3 percent slopes.
Notes:	downstream of N/S segment but this reach straightened.
16. Fishtrap Creek Riparian, 17th to 14th	
Roads:	17th to 14th Street, east of 17th Street.
Critical Area/Descrip:	Fish & Wildlife HCA, Riparian Wetlands.
Vegetation:	tansy, Himalayan blackberry, orchard grass, conifer plantings.
Category/Class:	Category II Wetland; Class (A) River/stream habitat.
NRCS Soil Unit:	(103) Lynnwood sandy loam, 5 to 20 percent slopes.
Notes:	Enhancement opportunity. Reach exposed and poorly vegetated, degraded lowland riparian area on left (south bank). Residential lawn area in riparian zone.

Table 3. Critical Areas in Fishtrap Basin (Continued).

17.	**Fishtrap Creek Riparian, 14th to Main Street**	
	Roads:	14th to Main Street.
	Critical Area/Descrip:	Fish & Wildlife HCA, Wetland Potential.
	Vegetation:	Reed canarygrass, Himalayan blackberry, lawn grass.
	Category/Class:	Class (A) River/stream habitat; Category II Wetland.
	NRCS Soil Unit:	(22) Briscot silt loam, drained , 0 to 2 percent slopes (Hydric, 2b3, floodplains).
	Notes:	Lowland shelf, riparian with steep upper banks (potential Geologic Hazard).
18.	**Fishtrap Creek, Main Street to Depot Road**	
	Roads:	Main Street to Depot Road.
	Critical Area/Descrip:	Fish & Wildlife HCA.
	Vegetation:	
	Category/Class:	Class (A) River/stream habitat.
	NRCS Soil Unit:	(103) Lynnwood sandy loam, 5 to 20 percent slopes, (62) Hale silt loam, drained, 0 to 2 percent slopes (Hydric, 2A, terraces).
	Notes:	Recently cleared lowland shelf (of blackberry) and potential wetland pasture, mowed. Tributary drainage enters Fishtrap Creek from the north. Segment near the school is poorly buffered with exposed channel.
19.	**Fishtrap Creek Riparian Depot Road to Bender Road**	
	Roads:	Depot Road to Bender Road, Jim Kaemingk Sr. Trail.
	Critical Area/Descrip:	Fish & Wildlife HCA.
	Vegetation:	Mature red alder, cedar, birch, bigleaf maple, knotweed, Indian plum.
	Category/Class:	Class (A) River/stream habitat.
	NRCS Soil Unit:	(96) Laxton loam, 0 to 3 percent slopes.
	Notes:	Minimum buffer on both sides, trees provide some shade. South with residential lawns and patios to edge of creek. To north is a 30-foot well vegetated buffer, then Jim Kaemingk Sr. Trail. Mowed lawn near large residential houses. Riparian wetland upstream of City Trail Bridge, track and field area. Recreational, Residential, Public Use.
20.	**Fishtrap Creek at City Park**	
	Roads:	Depot Road on east side.
	Critical Area/Descrip:	Fish & Wildlife HCA.
	Vegetation:	Douglas fir and sparse understory.
	Category/Class:	Class (A) River/stream habitat.
	NRCS Soil Unit:	(103) Lynnwood sandy loam, 5 to 20 percent slopes, (96) Laxton loam, 0 to 3 percent slopes, and (62) Hale silt loam, drained, 0 to 2 percent slopes (Hydric, 2A, terraces).
	Notes:	Riparian area at Fishtrap Cr. running along north side with sparse limited buffer. Evidence of stream restoration activities. A city trail runs through with playgrounds. Residential lawnscapes abut to north. Park-like and well-trodden. Mature upland coniferous forest to south.

Table 3. Critical Areas in Fishtrap Basin (Continued).

21. Wetland Swale	
Roads:	Jim Kaemingk Sr. Trail.
Critical Area/Descrip:	Emergent Wetland (PEMC).
Vegetation:	soft rush, grass, creeping buttercup.
Category/Class:	Category IV Wetland.
NRCS Soil Unit:	(96) Laxton loam, 0 to 3 percent slopes.
Notes:	Mowed lawn to edge forms buffer.
22. Enhanced Tributary to Fishtrap Creek	
Roads:	West of Bender Road.
Critical Area/Descrip:	Fish & Wildlife HCA.
Vegetation:	Red-osier dogwood, red alder, birch, cedar.
Category/Class:	Class (B) River/stream habitat.
NRCS Soil Unit:	(96) Laxton loam, 0 to 3 percent slopes.
Notes:	Enters right bank of Fishtrap Creek: log weirs, woody vegetation, spawning gravels, shaded. Originates from golf course pond to north.
23. Fishtrap Creek Riparian Meanders	
Roads:	Bender Road to Aaron Road. Bender Road Ball Fields to north, residential to south.
Critical Area/Descrip:	Riparian Wetlands and Buffer; Fish & Wildlife HCA.
Vegetation:	Red alder, salmonberry, ninebark, red elderberry, bigleaf maple, mature alders.
Category/Class:	Category II Wetland; Class (A) River/stream habitat.
NRCS Soil Unit:	(165) Tromp loam, 0 to 2 percent slopes.
Notes:	This reach has many meanders and has good riparian wetland potential. Much of the channel is exposed and could use a buffer gain where acceptable. The ball field foot bridge access has rip wrapped banks. To east are cows and low wet spots, snags present.
24. Fishtrap Creek Riparian Wetland and Stream Enhancement	
Roads:	Aaron Drive to Badger Road.
Critical Area/Descrip:	Fish & Wildlife HCA and Riparian Wetland.
Vegetation:	fir and other plantings. Canarygrass is a problem with disturbed conditions.
Category/Class:	Class (A) River/stream habitat; Category III Wetland.
NRCS Soil Unit:	(96) Laxton loam, 0 to 3 percent slopes.
Notes:	At Badger Road stream reach has recent enhancement activities and riparian wetlands. Evidence of beaver mortality on plantings. Near northeast entrance to city limits and fronted by field and apartments. To the west a new backwater channel has been excavated in a former tributary drainage. Pileated woodpecker noted in mature alder tree. Red winged blackbirds present. Stream bank erosion.

Table 3. Critical Areas in Fishtrap Basin (Continued).

25. Ponds and miscellaneous golf course swales and created wetlands	
Roads:	Depot Road, Homestead Boulevard.
Critical Area/Descrip:	Fish & Wildlife HCA and created wetlands/ponds.
Vegetation:	Grass.
Category/Class:	Class (C) HCA; Open water - Non regulated wetlands.
NRCS Soil Unit:	(62) Hale silt loam, drained, 0 to 2 percent slopes (Hydric, 2A, terraces).
Notes:	Approximately 16 created ponds are present in the golf course area.
26. Potential Agricultural Wet Spots (UGA)	
Roads:	East of Benson Road.
Critical Area/Descrip:	Wetland Potential.
Vegetation:	Pasture or row crops.
Category/Class:	Category IV Wetland, Emergent.
NRCS Soil Unit:	(62) Hale silt loam, drained, 0 to 2 percent slopes
Notes:	Based only on aerial interpretation.

Nooksack River Basin and Floodplain Areas

A small portion of the City of Lynden lies within the basin of the Nooksack River. This area falls between Fishtrap/Bertrand and Kamm Creeks. Surface water from these units would drain directly into the Nooksack River. The inventory resulted in the identification of a number of wetland areas, and several potential Geologic Hazard Areas as a result of the areas of Pangborn Muck and Shalcar Muck. These hazard areas are discussed separately in the Geologically hazardous Areas section, below. Much of this area is within the 100-year floodplain. Floodplain review has not been part of this inventory.

There are five wetland or potential wetland areas in the Nooksack River Basin and Floodplain Areas. In addition, the Nooksack River, itself, is classified as a Class A River/stream habitat due to the presence of both Chinook salmon and Bull Trout.

Table 4. Critical Areas in Nooksack River and Floodplain Areas.

27. Emergent Wetland Pasture	
Roads:	Front Street, Judson Alley.
Critical Area/Descrip:	Emergent Wetland, wet pasture.
Vegetation:	Soft rush, grasses.
Category/Class:	Category III Wetland.
NRCS Soil Unit:	(116) Pangborn muck, drained, 0 to 2 percent slope (Hydric, 1, depressions).
Notes:	South of Lynden Roller Rink. Other potential wetlands in vicinity.
28. Forested Wetland Fringing Treatment Plant	
Roads:	On drive to treatment plant.
Critical Area/Descrip:	Forested Wetland (PFOC).
Vegetation:	Willow, canarygrass, Himalayan blackberry, salmonberry, creeping buttercup, Pacific willow, red alder, cottonwood.
Category/Class:	Category III Wetland.
NRCS Soil Unit:	(116) Pangborn muck, drained, 0 to 2 percent slope (Hydric, 1, depressions). (22) Briscot silt loam, drained , 0 to 2 percent slopes (Hydric, 2b3, floodplains).

Table 4. Critical Areas in Nooksack River and Floodplain Areas (Continued).

29. Emergent Wetland North of Treatment Plant	
Roads:	Treatment plant access road.
Critical Area/Descrip:	Emergent Wetland (PEMC).
Vegetation:	Soft rush, grasses.
Category/Class:	Category III Wetland.
NRCS Soil Unit:	(116) Pangborn muck, drained, 0 to 2 percent slope (Hydric, 1, depressions).
Notes:	Grazed land, cows.
30. Potential Emergent Wetlands (UGA)	
Roads:	Judson Street.
Critical Area/Descrip:	Potential wetland.
Vegetation:	Pasture.
Category/Class:	Category III Wetland.
NRCS Soil Unit:	(116) Pangborn muck, drained, 0 to 2 percent slope (Hydric, 1, depressions)
31. Potential Emergent Wetlands (UGA)	
Roads:	South of B.C. Avenue.
Critical Area/Descrip:	Potential Wetland.
Vegetation:	Pasture.
Category/Class:	Category III Wetland.
NRCS Soil Unit:	(116) Pangborn muck, drained, 0 to 2 percent slope (Hydric, 1, depressions).

Kamm Creek Basin

Kamm Creek flows into the Nooksack River south of the City of Lynden. Most of the drainage is outside the City limits and UGA. A tributary drainage to Kamm Creek is located within City Limits. There are a series of ponds situated around the KOA campground. The 1995 shoreline inventory reports a water control structure near the intersection of Line Road and Kamm Road that helps to regulate pond levels. Kamm Slough has been identified as having problems associated with dissolved oxygen, pH, and fecal coliform

There are 14 identified Critical Areas and potential critical areas in the Kamm Basin. This includes 6 wetlands within City Limits, and 8 potential wetland and riparian areas within the UGA.

Table 5. Critical Areas in Kamm Basin.

32. Front Street Oxbow, Kamm Creek	
Roads:	East Front Street between Hannegan and Nooksack Bridge crossings.
Critical Area/Descrip:	Forested wetland, emergent wetland. (PFOC) (PSSC)(PEMC).
Vegetation:	Red alder, bigleaf maple, cottonwood, willow, salmonberry, skunk cabbage, horsetail, reed canarygrass, water lily, cattail.
Category/Class:	Category II Wetland.
NRCS Soil Unit:	(22) Briscot silt loam, drained, 0-2 percent slopes (Hydric, 2b3, floodplains). (124) Puyallup fine sandy loam, 0 to 2 percent slopes.
Notes:	Wetland has formed at base of steep slope. Wetland could be remnant oxbow. Springs are shown to occur by USGS. Standing water noted and a flowing channel (>2' wide) at base of slope.

Table 5. Critical Areas in Kamm Basin (Continued).

33. East Front Street Wetlands at Base of Slope	
Roads:	East Front Street.
Critical Area/Descrip:	Forested Wetland, Emergent Wetland.
Vegetation:	Willow, red alder, salmonberry, skunk cabbage.
Category/Class:	Category II Wetland (PFOC) (PEMC).
NRCS Soil Unit:	(124) Puyallup fine sandy loam, 0 to 2 percent slopes. (116) Pangborn muck, drained, 0 to 2 percent slope (Hydric, 1, depressions).
Notes:	Similar to #(51), ponding in woods extends out to ponding in emergent wetlands. Lowland area forms riparian wetland adjacent to Kamm Creek.
34. Terrace Drive wetlands	
Roads:	Terrace Drive.
Critical Area/Descrip:	Emergent Wetland (PEMC).
Vegetation:	Soft rush, cattail, grasses.
Category/Class:	Category III Wetland.
NRCS Soil Unit:	(116) Pangborn muck, drained, 0 to 2 percent slope (Hydric, 1, depressions). (124) Puyallup fine sandy loam, 0 to 2 percent slopes.
Notes:	May be a contrived treatment or detention basin related to future development.
35. Lowlands south of East Front Street Potential Wetlands	
Roads:	East Front Street, Terrace Drive.
Critical Area/Descrip:	Potential Wetlands in and around City limits, near "Miracle Ridge".
Vegetation:	Reed canarygrass.
Category/Class:	Category IV Wetland.
NRCS Soil Unit:	(116) Pangborn muck, drained, 0 to 2 percent slope (Hydric, 1, depressions).
Notes:	Sloping pasture.
36. Lynden High School Forested/Scrub Shrub wetland	
Roads:	RR Tracks, school access.
Critical Area/Descrip:	Forested and scrub-shrub wetland (PFOC, PSS).
Vegetation:	Red alder, red-osier dogwood, willow, spirea.
Category/Class:	Category III Wetland.
NRCS Soil Unit:	(80) Kickerville silt loam, 3 to 8 percent slopes. (143) Shalcar muck, drained, 0 to 2 percent slopes (Hydric, 1, depressions).
Notes:	Hydrologically connected to sloping wetland to the east.
37. Sloping Emergent Wetland with Woods and Pond (UGA)	
Roads:	RR Tracks, south of Bradley Road, SE study area.
Critical Area/Descrip:	Emergent wet pasture (PEMC), slope wetlands.
Vegetation:	Soft rush, eastern portions dense. Red alder, grasses.
Category/Class:	Category III Wetland.
NRCS Soil Unit:	(80) Kickerville silt loam, 3 to 8 percent slopes. (143) Shalcar muck, drained, 0 to 2 percent slopes (Hydric, 1, depressions).
Notes:	Pasture well grazed by cows. Forested wetlands with ponds north of Railroad tracks. Slope wetland. Wetland is ditched and partially drained.

Table 5. Critical Areas in Kamm Basin (Continued).

38. Elm St Emergent Wetland, Voskuilen Tracts	
Roads:	Elm and Vinup, north of Bernice Vossbeck Elementary School.
Critical Area/Descrip:	Emergent Wetland (PEMC).
Vegetation:	Soft rush, buttercup, cattail, *Juncus spp, Juncus acuminatus*, water foxtail, American speedwell, mannagrass, *Scirpus microcarpus*.
Category/Class:	Category III Wetland.
NRCS Soil Unit:	(96) Laxton loam, 0 to 3 percent slopes. (62) Hale silt loam, drained, 0 to 2 percent slopes (Hydric, 2A, terraces).
Notes:	Depressional in either filled banks or marginal areas, serving larger as a detention and filtration basin. Wetland surrounded by residences and Bernice Vossbeck Elementary School. Drains to the east toward Kamm Creek basin. Depressional outflow. No inlet. Wetland is spring fed in one area with groundwater and surface water influence. Probably has a discharge or hydrologic support function. Outlet with watercress and is dammed with flow control structure. Could be enhanced with willow. No buffer.
39. Eastwood Forest, north of KOA Campground (UGA)	
Roads:	Eastwood Way, Line Road.
Critical Area/Descrip:	Forested Wetland, ponds, stream drainage (HCA).
Vegetation:	Western red cedar, red alder.
Category/Class:	Category III or II Wetland. Class (C) River/stream Habitat.
NRCS Soil Unit:	(99) Lynden sandy loam, 0 to 3 percent slopes. (62) Hale silt loam, drained, 0 to 2 percent slopes (Hydric, 2A, terraces). (80) Kickerville silt loam, 3 to 8 percent slopes.
Notes:	difficult to access, fences etc. Within UGA. (not field verified). Possible utilities bisect.
40. KOA ponds and drainage (UGA)	
Roads:	Line Road, Kamm Road.
Critical Area/Descrip:	Open Water wetlands (POW) and HCA potential.
Category/Class:	Category III or II Wetland. Class (C) River/stream Habitat.
NRCS Soil Unit:	*w*, (80) Kickerville silt loam 3 to 8 percent slopes. (62) Hale silt loam, drained, 0 to 2 percent slopes (Hydric, 2A, terraces).
41. Woods and Drainage south of Kamm Road (UGA)	
Roads:	Line Road, Kamm Road, below KOA.
Critical Area/Descrip:	Stream drainage, tributary to Kamm Creek (HCA).
Vegetation:	Western red cedar.
Category/Class:	Class (C) River/stream Habitat.
NRCS Soil Unit:	(80) Kickerville silt loam, 3 to 8 percent slopes.
Notes:	Pools and tributary habitat, ditched drainage east, and with pond downstream. Potential forested wetlands.

Table 5. Critical Areas in Kamm Basin (Continued).

42. Emergent Wetland, Corner of Kamm and Northwood Roads (UGA)	
Roads:	Kamm Road, Northwood Road.
Critical Area/Descrip:	Emergent Wetland (PEMC).
Vegetation:	Soft rush, grass.
Category/Class:	Category III or IV Wetland.
NRCS Soil Unit:	(143) Shalcar muck, drained, 0 to 2 percent slopes (Hydric, 1, depressions).
Notes:	Partially ditched, possibly slope wetland.
43. Wetland Woods north of Kamm Road (UGA)	
Roads:	Kamm Road, Northwood Road.
Critical Area/Descrip:	Forested and Shrub Wetland (PSSC) (PFOC).
Vegetation:	Cottonwood, red alder, willow, salmonberry, red osier dogwood.
Category/Class:	Category III Wetland.
NRCS Soil Unit:	(143) Shalcar muck, drained, 0 to 2 percent slopes (Hydric, 1, depressions).
Notes:	
44. Shrub Wetland north of Kamm Road on Northwood Road (UGA)	
Roads:	Northwood, Kamm Road.
Critical Area/Descrip:	Shrub Wetland (PSSC).
Vegetation:	Willow.
Category/Class:	Category III Wetland.
NRCS Soil Unit:	(143) Shalcar muck, drained, 0 to 2 percent slopes (Hydric, 1, depressions).
Notes::	Small scrub-shrub wetland. Horses graze nearby pasture.
45. Residential pond South of Kamm (UGA)	
Roads:	Kamm Road.
Critical Area/Descrip:	Pond, potential wetlands (POW).
Vegetation:	
Category/Class:	Category IV Wetland.
NRCS Soil Unit:	(80) Kickerville silt loam, 3 to 8 percent slopes.
Notes:	Potential wetlands throughout this area.

Geologically Hazardous Areas

Two types of geologically hazardous areas within the City of Lynden were addressed through this inventory. These include steep slopes and earthquake-sensitive areas. Steep slopes (areas having a slope inclination greater than 35%) are associated with the Duffner and Fishtrap stream corridors and also occur in one area immediately south of East Front Street. Earthquake-sensitive areas are associated with the presence of organic soils, including Pangborn Muck and Shalcar Muck. This inventory identified six geologically hazardous areas within the city or UGA. In some cases a single hazard name refers to several locations within the study area where such conditions occur. Locations of Geologically Hazardous Areas are shown on Critical Areas Map #2 - Natural Hazards.

Table 6. Geologically Hazardous Areas.

46. Ravines Associated With Streams	
Roads:	Duffner Creek, Fishtrap Creek.
Critical Area/Descrip:	Geo-hazard Area.
Category/Class:	Steep slope.
Notes:	Steep slopes and scream bank erosion in some locations.
47. Steep Upper banks Fishtrap Creek	
Roads:	14th to Main Street, below Methodist Church.
Critical Area/Descrip:	Geo-hazard Area.
Category/Class:	Steep slope.
Notes:	lowland riparian shelf below steep banks Steep slopes
48. East Front Steep Slope Landslide Hazard	
Roads	East of Hannegan Road entrance to City
Critical Area/Descrip:	Geo-hazard Area
Category/Class:	Steep slope.
Notes	Notes: Slope > 40 %. Located above oxbow wetland.
49. Pangborn Muck, Organic Soil Mapped for south Lynden	
Roads:	Judson Alley.
Critical Area/Descrip:	Geo-hazard Area.
Category/Class:	Earthquake-sensitive area.
NRCS Soil Unit:	(116) Pangborn muck, drained, 0 to 2 percent slope (Hydric, 1, depressions).
Notes:	Floodplain, sloping pasture, wet meadow.
50. Shalcar Muck, Mapped for Eastern UGA in Kamm Basin	
Roads:	Kamm Road, Northwood.
Critical Area/ Descrip:	Geo-hazard Area.
Category/Class:	Earthquake-sensitive area.
NRCS Soil Unit:	(143) Shalcar muck, drained, 0 to 2 percent slopes (Hydric, 1, depressions).
Notes:	Floodplain, sloping pasture, wet meadow.
51. Pangborn Muck, Organic Soil Mapped for Duffner Creek	
Roads:	South of Birch Bay Lynden Road.
Critical Area/Descrip:	Geo-hazard Area.
Category/Class:	Earthquake-sensitive area.
NRCS Soil Unit:	(116) Pangborn muck, drained, 0 to 2 percent slope (Hydric, 1, depressions).
Notes:	

Remnant Tributary Drainages

Several former tributary drainages that flow into Fishtrap Creek have been identified. These drainages have been significantly modified to fit within established residential and agricultural areas. In the Fall of 2002, these areas were investigated further and in some cases the presence of salmonids was observed.

Table 7. Remnant Tributary Drainages.

59. Wetland Drainage Swale	
Roads:	West Park Road, South Park.
Critical Area/Descrip:	Fish & Wildlife HCA.
Vegetation:	Pasture grass.
Category/Class:	Class (B) River/stream habitat.
NRCS Soil Unit:	(96) Laxton loam, 0 to 3 percent slopes.
Notes:	Drainage retains a natural meander in otherwise straightened drainage. Anadromous fish observed upstream in Fall of 2002.
60. Cedar Woods Drainage Channel	
Roads:	North end of Park Street. Cedar Street; crosses east of Depot Road.
Critical Area/Descrip:	Fish & Wildlife HCA.
Vegetation:	Western red cedar.
Category/Class:	Class (B) River/stream Habitat.
NRCS Soil Unit:	(96) Laxton loam, 0 to 3 percent slopes.
Notes:	Small drainage in cedar woods with deep banks, possibly a remnant stream. Coho salmon observed during Fall of 2002.
61. Small woodland Drainage 8th Street	
Roads:	8th Street.
Critical Area/Descrip:	Fish & Wildlife HCA; tributary to Fishtrap Creek.
Vegetation:	Black cottonwood, cedar, bigleaf maple.
Category/Class:	Class (B) River/stream habitat.
NRCS Soil Unit:	(96) Laxton loam, 0 to 3 percent slopes.
Notes:	Stream has very minimal buffer with new retaining wall to west of 8th. Coho salmon carcasses observed in Fall of 2002. Area includes suitable spawning gravel.
62. Ditched Tributary Drainage Benson Road	
Roads:	West side of Benson Road, then on east side north of Sunrise.
Critical Area/Descrip:	Fish & Wildlife HCA.
Vegetation:	Grass.
Category/Class:	Class (C) River/stream habitat.
NRCS Soil Unit:	(165) Tromp loam, 0 to 2 percent slopes.
Notes:	Great Blue heron is stalking in channel. Looks similar to Double Ditch.

Non-Regulated Natural Resource Areas

These sites were noted for their habitat value. The community may want to consider as valuable habitats for their uniqueness and upland wildlife species. Many of these upland sites support older trees with forests having old growth characteristics.

While a comprehensive inventory of wildlife species was not conducted as part of this habitat inventory, wildlife observations include the following:

Eagles were noted near the northwest vicinity of Lynden, flying or perching or being chased by crows. Two mature eagles were perching in alder trees between farm field. A Bald eagle was noted over western part of golf course being harassed by a crow. Other Bald Eagles and two immature were spotted as well. Red tailed hawks were noted over Kamm basin area.

Most all of the upland woods support song birds. The liveliest patch was in at Duffner Creek Wetlands, west of the Guide Meridian and north of Front Street. Birds common to most of theses areas include Robin, Black Capped Chickadee, (smaller chestnut brown @ Duffner), Oregon Junco, Stellar Jay, Brown Creeper, and Crow. Great Blue Heron was noted at Oxbow wetland and in the Benson Road Ditch.

Table 8. Non-Regulated Natural Resource Areas.

52. Woodfield Woods, Mature Cedar Woods	
Roads:	Woodfield Drive, Depot Road, East Sunrise.
Habitat Description:	Non-regulated Upland Wildlife Habitat.
Vegetation:	Upland mature forest with cedars, big leaf maple, and paper birch, having a sparse understory.
NRCS Soil Unit:	(165) Tromp loam, 0 to 2 percent slopes.
Notes:	Woods join upland pasture to north. junco, chickadee, robins noted.
53. Woods - Two areas	
Roads:	Woodfield Drive, Depot Road.
Habitat Description:	Non-regulated Upland Wildlife Habitat.
Vegetation:	Mature cedar woods and small home. Also cedar and birch.
NRCS Soil Unit:	(165) Tromp loam, 0 to 2 percent slopes.
54. Woods off Benson at golf course	
Roads:	Benson Road b/w West Sunrise and East Homestead.
Habitat Description:	Non-regulated wildlife habitat, and possibly wetlands (needs field checking).
Notes:	Eagle being harassed by crow.
55. Vinup Woods	
Roads:	Vinup Road, Bradley Road.
Habitat Description:	Non-regulated wildlife habitat, large woods north of high school.
Vegetation:	Mature upland cedar forest at south with sparse understory, then broken canopy and shrub zone with birch, bigleaf maple salmonberry, spirea, snowberry, and osoberry Moving south into larger upland woodland with Douglas fir, thick growth and vegetative stratification.
NRCS Soil Unit:	(79) Kickerville silt loam, 0 to 3 percent slopes, (80) Kickerville silt loam, 3 to 8 percent slopes.
Notes:	Good species diversity in shrub layer and groundlayer. Several trails. No wetlands noted. Junco and jay observed..

Table 8. Non-Regulated Natural Resource Areas (Continued).

56. Upland Woods south of pond and KOA drainage	
Roads:	Line Road.
Habitat Description:	Non-regulated upland woods.
Vegetation:	Red alder, Indian plum dominated.
NRCS Soil Unit:	(80) Kickerville silt loam, 3 to 8 percent slopes
Notes:	Moist woods, appears to be non-wetland, upland wildlife habitat, songbirds.
57. Upland Conifer Woods at Duffner Creek	
Roads:	Guide Meridian - east side.
Habitat Description:	Non-regulated, mature second growth cedar.
Vegetation:	Western Red Cedar
NRCS Soil Unit:	
Notes:	Upland wildlife, natural stream buffer. Guide culvert is perched 5-12 inches (double 3 foot culverts).
58. Woods, unidentified in UGA	
Roads:	South of Badger Road between Line Road and Northwood Road.
Habitat Description:	Non-regulated forested wildlife habitat.
Vegetation:	
NRCS Soil Unit:	(80) Kickerville silt loam, 3 to 8 percent slopes.
Notes:	Forms western edge to large woods. There are several smaller wood patches in this eastern UGA.