

MEADOWRIDGE at TIMBERHILL TREE PRESERVATION PLAN

Tree preservation on private lots and in the common areas is required under the conditions of subdivision approval, the CC&R's, the policies of the Meadowridge Home Owners Association, and the Meadowridge Architectural Review Committee.

The plan has been developed by Justin Paulson, certified arborist and Vernon Esplin, certified arborist (Buena Vista Landscape Service) under the direction of John R. Stewart, Landscape Architect. Tree location surveys and maps are prepared by Pacwest Engineering.

The tree clearing for the grading and construction of streets has been limited to preserve as many trees as possible. Trees were retained where the trunks are five feet from the top of cut slopes and the bottom of fill slopes and in a few instances on the private streets and shared driveways trees remain in the fill areas. It was determined that any native tree where the cut or fill is within five feet of the outer drip-line are assumed to be impacted by the construction. Selected conifers and weak trees were removed from the impact area under the direction of the arborist prior to construction. The remaining impacted trees will be observed for decline and may be removed in the future only with the written advice of a certified arborist.

Significant trees (over 8 inches dbh) that are growing within the common areas and with drip-lines extending on to adjacent private building lots must be protected by the Conditions of Subdivision Approval and the CC&R's. These trees have been identified with metal tags by the arborist and have been survey located by the engineer. A map(s) is attached showing the protected tree locations by number and drip-line radius. A listing of all protected trees by tag number, diameter (dbh), species, and drip-line radius is also attached. Special protections for these trees and other protected trees on individual lots are required. (see CC&R's).

Trees in the common areas may be removed or pruned only with the written recommendation of a certified arborist and the approval of the Meadowridge Home Owners Association. The common areas will be maintained to preserve the general tree canopy. Non-native invasive vegetation will be removed from the common areas by the Meadowridge Homeowners Association contractor. Where conifers compete with native oak trees, these may be removed to protect the oaks by certified arborist only. No tree or vegetation removal in the common areas will be done by individual lot owners.

Cut and fill slopes of the street construction adjacent to the common areas and on the cut slopes within certain lots are planted to native species by the developer to city approved plans. These areas are identified on the tree preservation plan. These areas are to be protected and maintained by the developer during the establishment period and then by the Meadowridge Homeowners Association.

Street trees are specified on the city approved plans and will be planted by the developer prior to occupancy of individual homes. These street trees will be maintained and replaced if needed by the developer for a period of three years. Individual homeowners will maintain the street trees after this period.



TIMBERHILL Corp.

NATURAL RESOURCE INVENTORY Remaining undeveloped property

Timberhill Corporation has been required by "Conditions of approval" for the Modifications of the Timberhill Planned Development Conceptual Plan, (see Appeal of Planning commission Decision, Order 2000-101, Notice of Disposition, Sept. 26, 2000) to provide certain Natural Resource Inventory Submittals. The requirement is noted as condition 19. In the Conditions of Approval.

The following is a general inventory and conceptual preservation plan for the entire site area of the undeveloped portions of the Timberhill Planned Development. This is required for all detailed development plans outside of Phase I that may be submitted prior to 24 months from the date of the approval of the P.D. modification (Sept. 26, 2002). It will be used in conjunction with individual detailed site inventory and preservation plans submitted for review prior to that date.

The requirement of an "all season resource inventory" for development proposals submitted after the 24 months period suggests that work begin at least 12 months prior to that date in order to cover field observations through the four seasons. Work has begun on the seasonal field work to satisfy this requirement. A schedule for the field observations and data collection is included, as it is a continuation and expansion of the first requirement.

In that no community resource inventory exists as a model, Timberhill corp. has hired several consultants to help structure the inventories both to meet the intent of the condition of approval, and to best fit the specific character of this property. We believe that this inventory work exceeds the requirements of the condition. The vegetation mapping includes cells such as those identified in the Oregon Natural Heritage Plan, as suggested in the condition, but defines many more specific cell types as are found on this site. The individual vegetation cells are being used in the animal habitat studies as well.

A major portion of the Timberhill property has been identified as vegetation and drainage corridors as part of the existing Conceptual Plan and these areas have been previously set aside and classified on the Corvallis Comprehensive Plan and the corresponding District Map. Of the remaining 400 acres of undeveloped land within the property, over 100 acres is classified as Open Space on the Comprehensive Plan. A 47 acre portion is to be transferred to the city for additions to the public open space park system and adjacent Chip Ross nature park.

pattern will be designed to minimize crossings of these forested and riparian corridors. While this pattern of connected wooded corridors will function to allow movement of deer and other wildlife through the project, it has been noted by the consultants that it is not wise to encourage wild life to the edge of the more highly developed portions of the city. In this case, Walnut Blvd. becomes a negative influence, and deer should be discouraged from moving to it.

The forty- seven acre park addition will become an interconnecting area between the development and the natural areas to the north. This area is connected to several drainage corridors that will also be preserved. Portions of the lower drainages are being used for wetland enhancement and some upland not now in the Open Space designation are to be left undeveloped for this purpose. (see areas utilized for wetland mitigation east of the Town Homes project.

Some steep portions of the project, primarily the west facing slope to the east of the location of the future Kings Blvd. extension and at the end of the future extension of 29th Street (road #1) will not be developed. This and the lower end of the existing Consumers Power lines above Walnut Blvd. will remain as amenity areas for trails and wildlife observation.

The history of this property is recorded in diaries and photos back to its settlement in the 1860's and through continuous farming activities up to the 1970's. Photos indicated that the whole site was in cultivation or pasture up to very recent times. There was very little forest cover on the site. The photos show only the large oak trees and practically no vegetation along the drainage ways. The oak trees are remnants of the long pre-settlement pattern of open grass savannas. The development patterns proposed for current development and for the future will attempt to preserve these large oaks where possible. Where they are standing alone or in single species groves, they will be favored above other values. Many of the oaks have been over topped by young, rapid growing Douglas Fir. In these places, the oaks have declined and are not expected to survive under these conditions. An area at the top of the hill and just west of the Consumers Power lines, was thinned of the fir some 7-8 years ago. The oaks in this area have declined but are surviving as a result of this release cutting. Most other areas where development will occur, the oaks are in such poor condition that clearing for streets and homes will expose oaks that are a problem for limbs falling and eventual tree lose.

The other significant woodland that occurs on the property is located to the east of the power lines and to the north of Rolling Green and Garryana Streets. This area falls within the Timberhill Ridge area as described in the Development Code (see Hillside Development and Density Transfer Chapter 2.15 and Open Space Hillside Report 1983) This area is covered by a fast growing young stand of Douglas Fir trees. Approximately 70% of the volume was removed from this site 7 to 8 years ago. This thinning project was planned to strengthen the remaining trees for eventual development for this area. The consulting urban forester's plan called for further thinning every 5 years. This has not been done, and the remaining trees are now reaching 90- 100 feet in height.

Development in this area will require very low density with homes generously spaced to expect preservation of the existing tree canopy. A potential hazard exists when building under this type of growth. The density transfer option exists in the Development Code but the spacing of the buildings to preserve the trees will require very low densities of one home to the acre or less. The remaining density to be transferred must go somewhere and the remaining lands to the west of the grove is now Medium Density or Medium High Density Residential. Some Professional Office (PAO) land exists along Walnut Blvd. Some shift of density could be accommodated in these areas. No development plans are currently proposed for this area.

A preferred plan for preservation of this tree cover would be inclusion in future public open space purchases. This option will remain open for the near future and until other portions of the site are developed.

A development plan which retains a fringe buffer is not preferred in that Douglas Fir trees that have grown rapidly in closes spacing do not survive well when exposed edges of unsupported trees are left to the wind. This option would require a very wide band of trees and an undeveloped strip at least as tall as the remaining trees on the lee side.

An interim plan may be to continue the regular thinning of the stand in anticipation of adjustments to the development code that will allow very low density development in the future. A tree replacement plan can follow the thinning plan to fill in behind development and to re-enforce the canopy effect with sturdier tree species over time. The plan in force for the near future is to work with the city to identify potential policies which might allow the lowest impact or future purchase.

GENERAL VEGETATION INVENTORY MAP.

A map has been prepared from field survey that outlines "cells" containing distinct vegetation patterns. These have been identified by the major tree and shrub types for the forested areas, and grasses and shrubs for the open portions. The under-story and low shrubs and grasses have been identified and listed to include the predominant species. Minor species and scattered specimens exist within these cells but may not be listed for each locale. The inventory field work was used to examine potential sites for threatened or endangered species or rare environments. No threatened or endangered plant species were found, but known listed plants have particular flowering periods or other key times during the year when identification is possible. The site is being examined on a periodic basis designed to coincide with these particular events as part of the required seasonal study. (Note; one small area has been identified outside the Timberhill P.D. that contains native grasses and forbes representative of the Willamette Valley prior to cultivation. This area is shown on the map inventory as it will be protected and is near the development area)

A general wetland inventory has been previously undertaken for the entire site. Wetland delineation survey boundaries and permit applications have been submitted to the Division of State Lands for those areas now under detailed development planning review.

The general vegetation and wetland studies are the basis of the wildlife habitat inventories and future studies. The site is broken into two general habitat types for the bird and animal inventories, open grassy areas and forested zones and several sub-habitats. Additional small areas where water may exist through the dry seasons is also considered for amphibian habitat. The seasonal studies will use numerous fixed observation points which include both general habitat. (A photo map of the observation points and distribution pattern is attached. Also see listings of wildlife species by Fauna and Flora Forest Wildlife Consulting)

The existing pattern of developable lands and open space corridors that form the basis of the Timberhill Conceptual Plan have been set in the Comprehensive Plan. The open space corridors run generally north and south along drainage ways through the site. They are delineated to include areas much greater than the minimum drainage channel protection width as prescribed in the development code. These corridors include riparian vegetation and additional upland forest cover. They run through the property from the developed southern portions and up to the northern city limits, connecting to Chip Ross Park and the 7,000 acre OSU Research forests. The previously developed portions of the project, both in the western and eastern portions, contain preserved vegetated corridors that are habitat for many birds and animals.

The basic planning for the continuation of this pattern has been incorporated from the conceptual plan for Timberhill into the Comprehensive Plan. Future detailed development of the site will preserve and continue this pattern. This pattern will leave intact the continuous corridors and connections to the natural areas to the north of Timberhill. Where development occurs and to provide the required access, a street



THIS DRAWING IS INTENDED FOR PLANNING USE AND DISCUSSION PURPOSES ONLY. THIS PLAN REPRESENTS A CONCEPTUAL LAYOUT FOR ROAD AND TRAIL NETWORKS AND IS NOT A FINAL DESIGN FOR PERMITTING OR CONSTRUCTION. EXISTING ROADS AND TRAILS ARE FROM CITY OF CORVALLIS DATABASES AND HAVE NOT BEEN FIELD VERIFIED.

Vegetation patterns located within the undeveloped areas of the Timberhill P.D.
(See attached maps for cell locations)

CELL NUMBER/ DISCRIPTION

(1) Grass savana with douglas fir, oregon oak, and madrone.

Grasses; Medusa head (*Taeniatherum caput-medusae*)
Queen Ann's Lace (*Daucus carota*)
Hedgehog dogtail (*Cynosurus echinatus*)
Orchard grass (*Dactylis glomerata*)
Tall fesque (*Festuca arundinacea*)
Velvet grass (*Holcus lanatus*)
California oatgrass (*Danthonia californica*)

Shrubs; Single Seed Hawthorn (*Crataegus monogyna*)
Sweetbriar Rose (*Rosa Englanteria*)
Scotch broom (*Cytisus scoparius*)

Trees; Oregon oak (*Quercus garryana*) to 8" dbh
Douglas fir (*Pseudotsuga menziesi*) to 6" dbh
Madrone (*Arbutus menziesi*)

(1a) with bracken fern and strawberry

Bracken fern (*Pteridium aquilinum*)
Strawberry (*Fragaria virginiana*)

(2) Doug. fir and oak over-story with shrub/grass under-story

Grasses; False brome (*Brachypodium sylvaticum*)

Ferns; Sword fern (*Polystichum munitum*)

Shrubs; Snowberry (*Symphoricarpos alba*)

Trees; Oregon Oak (*Quercus garryana*)
Douglas fir (*Pseudotsuga menziesi*)
2' or less dead/dying
Douglas fir (*Pseudotsuga menziesi*)
To 20" dbh
Hazel (*Corylus cornuta*)
English holly (*Ilex aquifolium*)

(2a) Doug. fir, oak, snowberry

Trees; Oregon white oak (*Quercus garryana*)
Douglas fir (*Pseudotsuga memziesi*)

Shrubs: Snowberry (*Symphoricarpos alba*)

(3) Ash/oak/doug. fir over-story riparian area
with deciduous small trees and blackberry understory

Trees; Oregon oak (*Quercus garryana*)
Douglas fir (*Pseudotsuga menziesi*)
Hawthorn (*Crataegus douglasi*)
Hazel (*Corylus cornuta*)
Plum (*Prunus domestica*)

Grasses; False brome (*Brachypodium sylvaticum*)

Shrubs; Blackberry (*Rubus discolor*)

(3a) with red alder and willow

Trees; Red alder (*Alnus rubra*)
Willow (*Salix scouleriana*)

(3b) with maple

Trees; Maple (*Acer macrophyllum*)

4) Ash/maple/oak overstory with Oregon grape, swordfern,
hazelnut, oso berry, dew berry understory

Trees; Oregon oak (*Quercus garryana*)
Maple (*Acer macrophyllum*)
Ash (*Fraxinus latifolia*)
Hazel nut (*Corylus cornuta*)
Oso berry (*Oemleria cerasiformis*)

Shrubs; Oregon grape (*Mahonia nervosa*)
Sword fern (*Polystichum munitum*)
Dew berry (*Rubus ursinus*)

(5) Open, grassy with oak

Trees; Oregon white oak (*Quercus garryana*)
Pear (*Pyrus communis*)
Hawthorn (*Crataegus monogyna*)

Grasses; Tall fescue (*Festuca arundinacea*)

Shrubs; Himalayin blackberry (*Rubus discolor*)

(6) Oak/maple/doug. fir/pear

Trees; Oregon white oak (*Quercus garryana*)
16 to 30" dbh
Douglas fir (*Pseudotsuga menziesi*)
4" and under dead or dying
6" to 24" dbh
Maple (*Acer macrophyllum*) 24" dbh

Grasses; False brome (*Brachypodium sylvaticum*)

(7) Wet Prairie

Grasses; Meadow foxtail (*Alopecurus pratensis*)
Tufted hair-grass (*Deschampsia caespitosa*)
Reed-canary grass (*Phalaris arundinacea*)
Sedges (*Carix* sp.)
Rushes (*Juncus* sp.)
Common camas (*Camassia quamash*)

Shrubs; Rose (*Rosa* sp.)

(8) Former oak savanna, mostly grass with a few specimen oak

Trees; Oak (*Quercus garryana*)
few scattered, to 8 ft. ht.
Hawthorn (*Crataegus douglasi*)
few scattered, to 6 ft. ht.

Shrubs; Scotch broom (*Cytisus scoparius*)
Himalayan blackberry (*Rubus discolor*)

Grasses and forbs:

Ox-eyed daisy (*Chrysanthemum leucanthemum*)
Tall fescue (*Festuca arundinacea*)
Queen Ann's Lace (*Daucus carota*)
Medusa-head (*Taeniatherum caput-medusae*)
Strawberry (*Fragaria virginiana*)
Hedge-hog dogtail (*Cynosurus echinatus*)
Sewlf-heal (*Prunella vulgaris*)
Small quaking-grass (*Briza minor*)

(9) Ash/hawthorn thicket

Trees; Ash (*Fraxinus latifolia*) 1 to 4" dbh
Hawthorn (*Crataegus douglasi*)
Pear (*Pyrus communis*)

Shrubs; Dewberry (*Rubus ursinus*)
False brome (*Brachipodium sylvaticum*)

(9a) Ash/Blackberry thicket

Trees; Ash (*Fraxinus latifolia*)

Shrubs; Himalayan blackberry (*Rubus discolor*)

(10) Ash/cascara thicket

Trees; Ash (*Fraxinus latifolia*)
Cascara (*Rhamnus purshiana*)
Hawthorn (*Crataegus monogyna*)
Apple (*Pyrus malus*)

Grasses; False brome (*Brachypodium sylvaticum*)
Velvet grass (*Holcus lanatus*)
Tall fesque (*festuca arundinacea*)
Orchard grass (*Dactylis glomerata*)

(11) Cascara thicket

Trees; Cascara (*Rhamnus pershiana*)
Hawthorn (*Crataegus douglasi*)
Apple (*Pyrus malus*)
Bitter cherry (*Prunus emarginata*)

Shrubs; Blackberry (*Rubus discolor*)
Sword fern (*Polystichum munitum*)

Grasses; False brome (*Brachypodium sylvaticum*)

(12) Apple thicket

Trees; Apple (*Pyrus malus*)

Shrubs; Blackberry (*Rubus discolor*)

(13) Successional grass - formerly farmed

Grasses and forbs;

Tall fescue (*Festuca arundinacea*)
Velvet grass (*Hokus lanatus*)
Canada thistle (*Cirisium arvense*)
Colonial bent-grass (*Agrostis tenuis*)
Queen Ann's Lace (*Daucus carota*)
Hedge-hog dog-tail (*Cynosurus echinatus*)
Medusa-head (*Taeniatherum caput-medusae*)

(13a) Blackberry thicket in grass-land

Shrubs; Himilayan blackberry (*Rubus discolor*)

(14) Douglas fir and scotch broom

Trees; Douglas fir (*Pseudotsuga menziesi*)

Shrubs; Scotch Broom (*Cytisus scoparius*)

(15) Douglas fir/Madrone/Oak over-story

Trees; Douglas fir (*Pseudotsuga menziesi*)

Madrone (*Arbutus menziesi*)

Oak (*Quercus garryana*)

(16) Douglas fir forest overstory with scattered deciduous trees (thinned 1994-5)

Trees; Douglas fir (*Pseudotsuga menziesi*)
10 to 24" dbh
Maple (*Acer macrophyllum*)
scattered
Cherry (*Prunus emarginata*)
scattered

Shrubs; Himalyan blackberry (*Rubus discolor*)
Snowberry (*Symphoricarpos alba*)

Grasses; False brome (*Brachipodium sylvatum*)

(16a) Douglas fir dense thicket

Trees; Douglas fir (*Pseudotsuga menziesi*)
6 to 10" dbh

(17) Savanna oak - single isolated or grove

Trees; Oregon white oak (*Quercus garryana*)

(17a) Remnant oak/poison oak-succession overtopped by Douglas fir (fir partially removed 1994-5)

Trees; Douglas fir (*Pseudotsuga menziesi*)
Oregon white oak (*Quercus garryana*)
Maple (*Acer macrophyllum*)
Hazelnut (*Corylus cornuta*)

Shrubs; Rose (*Rosa*)
Himalyan blackberry (*Rubus discolor*)
Poison oak (*Rhus diversiloba*)

(18) Poplar - single or in groves

Trees; Black cottonwood (*Populus tricarpa*)

(19) Maple - single or in groves

Trees; Maple (*Acer macrophyllum*)



fauna and flora
FOREST WILDLIFE CONSULTING

30584 Oakview Drive
Corvallis, OR 97333
(541) 929-6396

TO: John Stewart, Timberhill Realty
FROM: Barry Schreiber, Fauna and Flora
RE: Proposed wildlife surveys

Dear John,

The following are proposed wildlife surveys and the probable associated times required.

Birds - Forty-eight fixed survey points have been established. They are based on a grid pattern covering the entire site, with survey points approximately 200 meters apart. Stations are adjusted in order to utilize existing trails and concentrate on more diverse habitat conditions.

Six breeding surveys (May-June), at 7-10 day intervals and 20 non-breeding surveys (remainder of year) at 15 day intervals are suggested. A complete breeding survey would be conducted on 3 consecutive days (3-4 hours/survey). A complete non-breeding survey would be conducted on 2 consecutive days (5-6 hours/survey). Four additional surveys, specific for owls and nighthawk are also proposed.

If cost reduction is necessary, conducting only 4 breeding (10-15 day interval) and 15 non-breeding surveys (20 day intervals) are recommended.

These surveys should provide a complete list of species utilizing the site, an idea of population densities, and bird use associated with specific habitat conditions. Future surveys from established points may allow determination of the development impact on the bird community.

Herpetofauna - A combination of habitat searches and artificial covers are suggested. Time constraint habitat searches would involve intensive observations (looking under logs and rocks) in selected locations (areas of probable herpetile activity). These surveys should provide an indication of salamander and reptile presence. Ten to twenty hours of searches are proposed.

Artificial covers (ply board 1X1/2 meter) would be placed at selected stations in various habitats and periodically surveyed. These surveys are very effective in determination of reptile activity. A minimum of 30 boards (more if possible) are recommended.

Mammals - Small mammal surveys can employ kill traps, live traps and pitfall arrays, however, I question employing any of these methodologies. Snap traps would involve

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FOREST WILDLIFE CONSULTING

30584 Oakview Drive
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(541) 929-6396

TO: John Stewart, Timberhill Realty

FROM: Barry Schreiber, Fauna and Flora

RE: Avian species list and proposed survey methodology

Dear John,

I have enclosed a listing of bird species (114 total), associated with forest and grassland habitat in the Corvallis vicinity. The list is divided into the 2 major habitat types present and suggests the likelihood of encountering the species on the site. I have also noted ODFW species of concern (a few of which may be present). Species presence includes nesting, foraging and migration. I have also included a list of bird species observed (casual observations), during my 4-hour site visit on Sunday.

Habitat condition

The 2 major habitat types (grasslands/forest), include a number of sub-habitats which will affect the potential for species presence. The forest habitats include; pure conifer, conifer/oak, oak dominant, ash swale, and small hardwood patches. The grassland habitats include; pure grasslands (both wet and dry), grassland/shrubs, grassland/trees, and riparian-shrub corridors.

The diversity of habitats present may result in a very large number of species utilizing the area. Cavity-nesting habitat (an essential habitat component) is especially abundant, with potential nest-sites available for the dozens of dependent bird and mammal species. The few areas of rock outcrops (though not important for birds), may be significant for reptiles and amphibian species.

Proposed Avian Surveys

Avian census would include breeding, non-breeding and special surveys conducted throughout the year. Surveys would be from fixed points in addition to interpoint transects. Survey points (minimum 150 meters apart), would be distributed throughout the site and would include all habitat conditions.

Habitat and management discussion

Grassland habitat - The relatively small size of the grassland area limits the potential use of the site by some grassland associated wildlife species. This is highlighted by the absence of the usually common and abundant savanna sparrow. Small patches of snowberry, clumps of camas lily and columbine were evident in the perimeter of the area where grass cover was not as abundant indicating that the thick, rank, non-native grass cover is reducing herbaceous diversity and may be lowering the value of the area to wildlife. Management enhancement efforts should involve mowing the site and removing built up biomass if possible. This may result in a more diverse herbaceous layer. Maintaining mowed and unmowed areas will provide forage and cover, and also encourage access by ground foraging species. The planting of oak trees in the grassland area has been suggested by Allen. I think this is a very good idea. This would add spacial diversity to the grassland area within a few years and eventually lead to an expanded oak/grassland habitat. I would suggest planting in clumps, avoiding a grid pattern, and planting more trees than eventually will be needed, with planned thinnings over time. Recent research has shown rapid oak seedling development is possible by eliminating grass competition and protecting the seedlings from animal browse. The establishment of bird boxes may allow nesting by tree and violet-green swallows, house wren and possibly the western bluebird. Though sufficient natural cavity habitat appears to be present in the area, bird boxes are very conducive to public viewing.

Oak habitat - The oak woodland combines closed forest, straight growing oaks with surrounding older, large, open-grown oaks, resulting in a mix of conditions favorable to a diversity of wildlife. Cavity-nesting habitat is abundant and a large array of cavity dependent species were observed.

Management enhancement efforts can be geared to improving the scrub layer, by continuing control efforts on the Himalayan blackberry and encouraging existing native vegetation (snowberry). Planting additional native species should also be considered, including crawling honeysuckle and cascara which are shade tolerant species. The development of a native hedgerow along the perimeter of the grassland and oak grove may also be beneficial. A number of species including the existing snowberry, serviceberry, chokecherry, Indian plum, ocean spray, hawthorn, mock orange and ceanothus can all be considered.

Survey times/duration

Six breeding bird surveys (7-10 days apart, early May - late June)
Breeding surveys would start at sunrise and last up to four hours
Twenty non-breeding surveys (2 times/month, remainder of the year)
Non-breeding surveys would start early morning extending into the afternoon
Four special surveys: 2 for owl species (February-March, - evening)
2 for nighthawk (late June-July, - dusk)

Please let me know if I can provide additional information or clarification.
It was a pleasure meeting you and I very much look forward to working with you on this
project. Thank you.

Barry Schreiber
November 19, 2000

Bird species which may utilize the Timberhill woodland/grassland parcel

	<u>Grass</u>	<u>Forest</u>	<u>Season</u>	<u>Likely</u>	<u>Possible</u>	<u>Unlikely</u>
Mallard	X		Winter	X		
Turkey vulture	X	X	Spr/sum	X		
Great-blue heron	X		All year	X		
Green Heron		X	All year		X	
White-tailed kite	X		All year			X
Northern harrier	X		All year	X		
Bald eagle*	X		Winter			X
Sharp-shinned hawk		X	All year		X	
Cooper hawk	X	X	All year	X		
Red-tailed hawk	X	X	All year	X		
Rough-legged hawk	X		Winter	X		
American kestrel	X		All year	X		
Merlin	X		All year			X
Pheasant	X		All year	X		
Wild turkey	X	X	All year	X		
Ruffed grouse		X	All year		X	
Killdeer	X		All year	X		
Common snipe	X		All year	X		
California quail	X	X	All year	X		
Mountain quail	X	X	Winter		X	
Mourning dove	X	X	All year	X		
Band-tailed pigeon	X	X	All year	X		
Rock dove	X		All year	X		
Barn owl	X		All year	X		
Short-eared owl	X		All year			X
Great-horned owl	X	X	All year	X		
Western screech owl		X	All year	X		
Northern pygmy owl		X	Winter			X
Rufous hummingbird	X	X	Spr/sum	X		
Anna hummingbird	X	X	Spr/sum	X		
Acorn woodpecker		X	All year	X		
Northern flicker	X	X	All year	X		
Red-bellied sapsucker		X	All year	X		
Downy woodpecker		X	All year	X		
Hairy woodpecker		X	All year	X		
Pileated woodpecker		X	All year	X		
Olive-sided flycatcher*		X	Spr/sum			X
Western wood peewee		X	Spr/sum	X		
Willow flycatcher		X	Spr/sum			X
Pacific-slope flycatcher		X	Spr/sum	X		
Yellow-breasted chat*		X	Spr/sum			X

	<u>Grass</u>	<u>Forest</u>	<u>Season</u>	<u>Likely</u>	<u>Possible</u>	<u>Unlikely</u>
Northern shrike	X		All year			X
Solitary vireo		X	Spr/sum		X	
Hutton's vireo		X	All year	X		
Warbling vireo		X	Spr/sum		X	
Scrub jay	X	X	All year	X		
Stellers jay		X	All year	X		
American crow	X	X	All year	X		
Horned lark*	X		All year			X
Violet-green swallow	X	X	Spr/sum	X		
Cliff swallow	X		Spr/sum	X		
Tree swallow	X	X	Spr/sum	X		
Barn swallow	X		Spr/sum	X		
Vaux's swift	X	X	Spr/sum	X		
Black-capped chickadee		X	All year	X		
Chestnut-backed chickadee		X	Winter	X		
Common bushtit	X	X	All year	X		
Brown creeper		X	All year	X		
White-breasted nuthatch		X	All year	X		
Red-breasted nuthatch		X	All year	X		
House wren	X		Summer	X		
Winter wren		X	All year	X		
Bewick's wren	X	X	All year	X		
Marsh wren	X		All year			X
Western bluebird*	X	X	All year	X		
Swainson's thrush	X	X	Spr/sum	X		
Hermit thrush		X	All year	X		
Varied thrush		X	All year	X		
American pipet	X		Winter			X
Robin	X	X	All year	X		
Cedar waxwing		X	All year	X		
Orange-crowned warbler	X	X	Spr/sum	X		
Yellow-rumped warbler		X	All year	X		
Black-throated gray warbler		X	Spr/sum	X		
Townsend's warbler		X	All year	X		
Hermit warbler		X	Spr/sum	X		
Yellow warbler		X	Spr/sum		X	
MacGillivray's warbler	X		Spr/sum	X		
Wilson's warbler	X		Spr/sum	X		
Common yellowthroat	X		Spr/sum	X		
Western tanager		X	All year	X		
Spotted towhee	X	X	All year	X		
Chipping sparrow	X	X	Spr/sum	X		
Grasshopper sparrow*	X		Spr/sum			X

	<u>Grass</u>	<u>Forest</u>	<u>Season</u>	<u>Likely</u>	<u>Possible</u>	<u>Unlikely</u>
Fox sparrow	X		Winter	X		
Savannah sparrow	X		All year	X		
Lincoln's sparrow	X		Spr/sum		X	
Song sparrow	X		All year	X		
Vesper sparrow	X		Spr/sum			X
White-crowned sparrow	X		All year	X		
White-throated sparrow	X		Spr/sum	X		
Golden-crowned sparrow	X	X	Winter	X		
Dark-eyed junco	X	X	All year	X		
Lazuli bunting	X	X	Spr/sum	X		
Western meadowlark*	X		All year			X
Red-winged blackbird	X		All year	X		
Brewers blackbird	X		All year	X		
Brown-headed cowbird	X		All year	X		
Bullock's oriole		X	Spr/sum		X	
Black-headed grosbeak		X	Spr/sum	X		
Evening grosbeak		X	Spr/sum	X		
House finch	X	X	All year	X		
Purple finch		X	All year		X	
Pine siskin	X		All year	X		
American goldfinch	X		All year	X		
Lesser goldfinch	X		Spr/fall	X		
Red crossbill		X	Winter		X	
Ruby-crowned kinglet	X	X	Winter	X		
Golden-crowned kinglet		X	All year	X		
Common nighthawk*	X		Spr/sum			X
Raven	X	X	All year	X		
Starling	X		All year	X		
House sparrow	X		All year	X		

Bird species observed on the Timberhill parcel November 19, 2000.

Great-blue heron (overflight)
Red-tailed hawk
Pileated woodpecker
Northern flicker
Hairy woodpecker
Red-breasted sapsucker
Hutton's vireo
Scrub jay
Steller's jay
American crow
Black-capped chickadee
Common bushtit
Brown creeper
White-breasted nuthatch
Red-breasted nuthatch
Bewick's wren
Western bluebird
Varied thrush
American robin
Cedar waxwing
Spotted towhee
Song sparrow
Dark-eyed junco
House finch
Ruby-crowned kinglet
Golden-crowned kinglet

Mammalian species which may utilize the Timberhill woodland/grassland parcel

	<u>Grass</u>	<u>Forest</u>
Trowbridge shrew		X
Pacific shrew	X	X
Vagrant shrew	X	X
Shrew-mole	X	X
Coast mole		X
Townsend's mole	X	X
Long-eared myotis*		X
Long-legged myotis*		X
Little-brown myotis		X
California myotis	X	X
Hoary bat		X
Big-brown bat	X	X
Brush rabbit	X	
Mountain beaver		X
Flying squirrel		X
Townsend's chipmunk		X
Douglas squirrel		X
Western gray squirrel		X
Beechey ground squirrel	X	
Dusty-footed woodrat		X
Bushy-tailed woodrat		
Camus pocket gopher	X	
Mazama pocket gopher	X	
Deer mouse	X	X
Gray-tailed vole	X	
Townsend's vole	X	
Creeping vole	X	X
Red-backed vole		X
Long-tailed vole		X
Pacific jumping mouse	X	
Porcupine		X
Coyote	X	X
Raccoon		X
Stripped skunk	X	X
Spotted skunk	X	X
Short-tailed weasel		X
Long-tailed weasel	X	X
Bobcat	X	X
Black-tailed deer	X	X

Mammalian species which may utilize the Timberhill woodland/grassland parcel (Non-native)

	<u>Grass</u>	<u>Forest</u>
Eastern cottontail	X	
Opposum	X	X
House mouse	X	
Black-rat	X	
Norway rat	X	

Amphibian and Reptile species which may utilize the Timberhill woodland/grassland parcel

Amphibian

Grass Forest

Western red-backed salamander		X
Clouded salamander		X
Rough skinned newt	X	X
Ensentina		X
Pacific tree frog	X	X

Reptile

Grass Forest (Open forest or clearings)

Northern alligator lizard		X
Southern alligator lizard	X	X
Western fence lizard	X	X
Western skink	X	X
Rubber boa	X	X
Western racer	X	
Sharp-tailed snake*	X	X
Ring-necked snake	X	X
Gopher snake	X	X
Western terrestrial garter snake	X	X
Northwestern garter snake	X	X
Common garter snake	X	X