

3.5 Wildlife and Habitat

This section summarizes the observation of wildlife and wildlife habitat conditions on the City Heights site as reported in the *City Heights, City of Cle Elum, Wetlands and Wildlife Habitat Report* (Sewall Wetland Consulting, Inc., October 26, 2009), and review of database listings of local, State and Federally-listed animal species in the vicinity. There were no observations or reports of listed species on the site. The most significant potential impact noted is for the resident human population that will be introduced on the site to come in contact with large mammals (elk, deer, cougar and black bear) that presently use the site and may still enter the property through the riparian corridors that would remain in the developed condition of the project.

3.5.1 Habitat Conditions on the Site

AFFECTED ENVIRONMENT

The Washington Department of Natural Resources (WDNR) Natural Heritage Program (NHP) records known observations and known locations of rare plants and high-quality ecosystems. A total of 46 plant species are listed by WDNR as “rare” in Kittitas County. Of these 46 species, 14 were determined to have the potential to occur on the City Heights site,¹ though the NHP database search revealed no known or recorded rare plants or high-quality ecosystems on this property. A field review was conducted of the habitats on the City Heights site in which Kittitas County rare plant species would typically be found, as well as a search for any individuals of these species. Although some appropriate habitat does exist for some of these species, no evidence of any of the occurrence of these species was found on the site (Sewall Wetland Consulting, Inc., October 26, 2009).

The site does not contain habitats of local importance as defined in the Cle Elum Municipal Code (CEMC 18.01.210). At the present time, the four ponds located on the north side of the Yakima River, south of Interstate 90 (locally known as the Hanson Ponds) are the only designated habitats of local importance. Kittitas County Code (applicable to City Heights conceptual land use Alternatives 3A or 3B) makes provisions for the identification of habitats for species of local importance, but does not list any specific locations where such habitats are presently designated (KCC 17A.07.025).

Existing habitat on the City Heights property consists of thinned and logged forest land as well as open, maintained meadow areas and clearings below and adjacent to the power line easements. The property has historically been subject to substantial disturbance from coal mining, logging, road development, power line construction and maintenance of the power line easement. Two paved roads and several dirt roads and trails pass through the site.

The habitat of the City Heights property is a transition zone from mixed Ponderosa pine/Douglas fir forest on the west, to Ponderosa pine forest with a mosaic of shrub steppe plant communities proceeding east across the site. The largest number and diversity of shrub steppe species occur on the eastern end of the property, including a predominance of antelope bitterbrush (*Purshia tridentata*). Former logging operations and a forest fire that occurred in this area several years ago have perpetuated this shrub-dominated plant community. Tree re-establishment is very slow in a dry climate and on thin dry soils such as those found on the City Heights site.

¹ The 14 species of Kittitas County rare plants determined to have the potential to exist on the City Heights site are listed in Section 4.3.2 of the *City Heights, City of Cle Elum, Wetlands and Wildlife Habitat Report* (Sewall Wetland Consulting, Inc., October 26, 2009).

The majority of the site south of the power line easements is forested and dominated by a thinned overstory of Ponderosa pine (*Pinus ponderosa*) and scattered Douglas fir (*Pseudotsuga menziesii*). Trees range from 6 to 40 inches diameter at breast height (dbh) with the majority in the 12 to 24-inch dbh size range. Canopy coverage in this area ranges from 35 to 80 percent.

The understory within the forested area is variable, from scattered shrubs with pine needle litter forest floor to more open areas with a dense cover of shrubs, grasses and forbs. Species found in the shrub strata of the forested portion of the site include serviceberry (*Amalanchier alnifolia*), snowberry (*Symphocarpus albus*), oceanspray (*Holodiscus discolor*), rose (*Rosa* spp.), chokecherry (*Prunus virginiana*), hazelnut (*Corylus cornuta*), balsamroot (*Balsamorhiza sagittata*), and some scattered antelope bitterbrush.

Shrub cover in the more open areas of the site is patchy and contains cheatgrass (*Bromus tectorum*), planted small Ponderosa pines, snowbush (*Ceanothus velutinous*), kinnikinnik (*Arctostaphylos patula*) Oregon grape (*Berberis nervosa*), bulbous bluegrass (*Poa bulbosa*), quackgrass (*Agropyron* spp.), serviceberry, knapweed (*Centaurea* spp.), balsamroot, oceanspray, California hellebore (*Veratrum californicum*), lupine (*Lupinus laxiflorus*), peavine (*Lathyrus* spp.), bracken fern (*Pteridium aquilinum*), blue elderberry (*Sambucus cerrulea*), scattered small Douglas fir seedlings, and nettle (*Lamium maculatum*).

POTENTIAL IMPACTS DURING CONSTRUCTION

The construction phasing proposal includes clearing and grading approximately 25 to 125 acres of the site for development at any one time, which would result in a transitional loss of habitat from the site over the 6- to 12-year projected development period.

Under the No Action Alternative, the site would not be cleared at this time; therefore, existing characteristics of wildlife habitat would remain.

POTENTIAL DEVELOPED-CONDITION IMPACTS

A total of approximately 108 to 205 acres of the site (depending on the conceptual land use alternative selected for implementation) would be cleared and developed. While the landscaping proposal is not available at this conceptual stage of site planning, it can reasonably be assumed that plantings to be introduced in developed areas of the site would re-establish vegetative cover to a limited extent around homes, commercial areas and parks, and along roadways.

If the No Action Alternative were selected, wildlife habitat on the site would improve over time if formerly logged and burned forest areas were allowed to reestablish through natural progression.

MITIGATION MEASURES

Mitigation Measures Included in the Development Proposal. Landscaping to be introduced on the site and restoration plantings would be specified to include native vegetation to the extent practicable. This would partially compensate for the loss of existing wildlife habitat with implementation of any conceptual land use alternative. Target species should include plants particularly beneficial as food sources for wildlife such as chokecherry, serviceberry, and native roses (*Rosa pisocarpa*; *R. nutka*; and *R. gymnocarpa*). Potentially invasive, exotic vegetation would not be allowed in site landscaping (to be enforced through the Covenants, Conditions, and Restrictions of the development), including but not limited to English ivy (*Hedera helix*), Scott's broom (*Cytisus scoparius*), Japanese knotweed (*Polygonum cuspidatum*), baby's breath (*Gypsophila paniculata*), or any other species on the Kittitas County Noxious Weed List.

Applicable Regulations. The Cle Elum Municipal Code (applicable to City Heights Alternative 1 or 2) requires that riparian buffers adjacent to streams through the site shall be retained in their natural condition or may be improved to enhance buffer functions and values (CEMC 18.01.190). Where buffer disturbance occurs during construction, revegetation is required, subject to compliance with the Kittitas County Noxious Weed Control Ordinance (Kittitas County Ordinance No. 1039).

Kittitas County Code (applicable to City Heights Alternative 3A or 3B) identifies riparian habitat critical areas correlated to the County's stream typing system to be protected under KCC Title 17A. These are discussed in Draft EIS Section 3.4.2. The applicant would be required to submit a critical area checklist before commencement of land use activities on the site if Alternative 3A or 3B were selected for implementation. Kittitas County imposes critical areas mitigation separate from SEPA conditions imposed as part of a Threshold Determination (KCC 17A.03.045).

The Kittitas County Weed Control Board may require a weed control plan for site as it undergoes development.

Other Recommended Mitigation Measures. The landscaping proposal could be used to augment vegetation in open space areas to be retained, and in stream and wetland buffers in order to improve habitat that would be preserved on the site in these areas. Proposed, required, and other possible mitigation measures for noise and water quality described in Draft EIS Sections 3.9 and 3.18.3 would also be of benefit to fish and wildlife habitat conditions on the site.

SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

A total of approximately 108 to 205 acres of the site would be cleared and developed, with a corresponding loss of this much habitat and disturbance in remaining habitat due to the presence of a resident human population on the site.

3.5.2 Wildlife Species Use of the Site

AFFECTED ENVIRONMENT

Database Search and Field Review

State and Federal databases and mapping resources were reviewed to identify presence on the site or use of the property by any State- and/or Federally-listed animal species.² General field review was also conducted during multiple site visits by Sewall Wetland Consulting staff in June and July 2009 to determine use and presence of any species noted on the property by these data bases and mapping resources. Transects through the site were walked during different times of the day, and appropriate habitats were searched for any signs of listed species. None were found. This was not a species-specific study, but a general review of habitat as well as a review for any noted local, State- or Federally-listed species.

Washington Department of Fish and Wildlife (WDFW) Priority Habitats and Species (PHS) database results (received dated June 2, 2009) identify only streams on the City Heights site as priority habitats.

² The Cle Elum Municipal Code (CEMC 18.01.270) and Kittitas County Code (KCC 17A.02.240) adopt by reference the State list of priority animal species. Provisions are made in the Kittitas County Code for designating species of local importance, but no such species are presently identified in the Code (KCC 17A.07.030).

Specifically, Stream D (described in Draft EIS Section 3.4.2) is identified as Stream LLID by WDFW (unique stream identifier #1209555472010), with an indication that it contains priority fish presence. The PHS database indicates that rainbow trout were observed in Stream D on July 24, 2001.

Off-site species and habitats identified in the PHS database included the south edge of an established Spotted Owl territory approximately 1 mile north of the western end of the City Heights site; and Crystal Creek (adjacent to the south boundary of the west end of the City Heights site) as containing priority fish presence. Crystal Creek is also identified by WDFW as Stream LLID #1209487471921, indicating use by both rainbow trout (surveyed July 24, 2001) and spring Chinook salmon (surveyed May 17, 2003).

Although elk commonly use the area of the City Heights site, this property is not listed in the PHS database as an area of regular concentrations, overwintering habitat, or any other special designation as a high-value elk habitat according to the PHS database. Typically, identified and well-defined winter range areas or areas of elk and mule deer accumulations are noted as a unique and numbered as such.

Kittitas County Code (applicable to City Heights conceptual land use Alternatives 3A or 3B) designates big game winter range, defined as follows: “. . . *all Federal land and all land owned or leased by the Washington State Department of Fish and Wildlife. The existing range conservation and management program of the State Department of Fish and Wildlife is long established and relies upon voluntary agreements with landowners together with State purchase of appropriate lands*” (KCC 17A.07.015). Based on this definition, the County also does not designate big game winter range on the City Heights site. Cle Elum Municipal Code (applicable to City Heights conceptual land use Alternatives 1 or 2) does not address the designation of big game winter range.

Cover and Forage

The City Heights site contains several habitat types including riparian corridors, wetlands, thinned Ponderosa pine forest, as well as shrub and herbaceous-dominated areas in the PSE and BPA electrical power line easements (see Figures 3.5-1 and 3.5-2). In general, the area south of the BPA transmission line easement consists of heavily-thinned and moderately-thinned Ponderosa pine-dominated forest. These areas have a mix of Ponderosa pine and Douglas fir as well as a fairly open shrub strata with lots of downed wood, a mix of skid-roads and disturbed soils. Grasses and forbs are well distributed in this area. In general, the understory is open; therefore, cover for wildlife is not ideal as visibility is quite good in the area south of the power lines.

Under the power lines, a mix of grass and forb-dominated areas are present west of Summit View Road. This area is open and fairly disturbed from off-road vehicle use. The western end of the site and the “redrock” area east of Summit View Road (above proposed Development Area D2) consist of dirt road areas and disturbed coal mine tailing piles with little habitat value.

The remainder of the site is comprised of a mix of shrub and meadow habitat. These conditions exist and persist as a result of past logging activities, clearing to maintain the power line easements, and a forest fire that burned the east end of the site. The mix of shrub species in these areas of the site provide good nutritional needs to many wildlife species.

Disturbance Characteristics

Two paved roads bisect the site in a north-south direction (Summit View Road and Montgomery Road), and two high-voltage electrical transmission lines pass through the entire length of the property in an east-west direction. These features affect wildlife movement through the property, and the general desirability of habitat on the site.

Insert Figure 3.5-1. City Heights Property Habitat Cover Map: East End.

(11 x 17-inch color)

Insert Figure 3.5-2. City Heights Property Habitat Cover Map: West End.

(11 x 17-inch color)

During all site visits conducted by Sewall Wetland Consulting in June and July 2009, off-road vehicles (4x4 vehicles, ATVs, motorcycles) were encountered on a regular basis throughout the day. Evidence of target shooting was also found. These factors are sources of disturbance to wildlife. The site borders immense areas (more than 1,000,000 acres) of forest to the north; as a result, wildlife use by species able to tolerate intermittent human disturbance on the site is generally high, because they have a large undisturbed area into which they can retreat.

Wildlife Observations on the Site

Numerous wildlife species were noted throughout the property in June and July 2009, from visual observations, sounds, tracks, scat or other signs such as scrapes, dusting and bedding areas. Species we noted include: red-tailed hawk (*Buteo jamaicensis*), kestrel (*Falco sparverius*), ring-necked pheasant (*Phasianus colchicus*), ruffed grouse (*Bonasa umbellus*), common crow (*Corvus brachyrhynchos*), raven (*Corvus corax*), fence lizards (*Sceloporus occidentalis*), turkey vulture (*Carthartes aura*), red-headed sapsucker (*Sphyrapicus varius*), tree swallow (*Iridoprocne bicolor*), dipper (*Cinclus mexicanus*), black capped chickadee (*Parus atricapillus*), towhee (*Pipiloerythroph thalmus*), winter wren (*Troglodytes troglodytes*), turkey (*Meleagris gallopavo*), black bear (*Ursus americanus*), mule deer (*Odocoileus hemionus*), elk (*Cervus elaphus nelsonii*), coyote (*Canis latrans*), bobcat (*Felis rufus*), mountain lion (*Puma concolor*), Douglas squirrel (*Tamiasciurus douglasii*), raccoon (*Procyon lotor*), California quail (*Lophortyx californicus*), magpie (*Pica pica*), European starling (*Sturnus vulgaris*), various species of ground squirrels, and skunk (*Mephitis mephitis*). Several deer and mountain lion tracks were observed that indicated a mountain lion stalking a mule deer in the vicinity of Stream C as well as along the ridgeline between the “redrock” area (proposed Development Area D) and Montgomery Road. Clearly, mountain lions regularly use this area from the signs that were observed, and regularly make incursions close to existing homes south of the site. The predominant corridors of wildlife movement in relation to the City Heights site are east-west along the north boundary and powerline easement, and north-south along riparian (stream) corridors through the property.

No sign of State- or Federally-listed species was observed on or near the City Heights property.

Large Mammals

Species of large mammals found in the area of the site include elk, mule deer, black bear, and cougar. These large mammals, although only protected as game species, often result in conflicts when in close proximity to humans or development. Therefore, a discussion of use of the site by these specific species is of particular interest.

The City Heights site represents the lower elevations and edge of a vast forested area to the north, east and west. This is a mix of private and managed forests, as well as public forest lands. Many large mammal species with large territories and home ranges in the undeveloped forest area to the north venture along the edge of the habitat that includes the City Heights site. Species such as Rocky Mountain elk and mule deer attract cougars to the area. Black bears are also found throughout the region and will often enter into communities such as the Cle Elum area in search of food.

Elk. The City Heights site is located on the southern edge of a portion of the area utilized by the Colockum elk herd. Information reported here is from the Washington Department of Fish and Wildlife *Colockum Elk Herd Plan* (WDFW 2004).

The Colockum elk herd originated from 45 Rocky Mountain elk released in 1915 near Boylston (east of the I-90/I-82 interchange) and driven towards Vantage. The herd has grown in size and is currently

estimated to have a population of range between 3,596 to 4,378 elk. By the late 1800s, elk had been eliminated from the region. Re-introduction in 1915 returned elk to the area.

The Colockum herd ranges over a vast area (approximately 1,600 square miles or 1,024,000 acres) bordered by the Columbia River to the east, Interstate 90 to the south, State Route 2 to the north, and the Cascade crest to the west. The herd displays seasonal migration moving northwest to higher elevations in the summer. Conversely, winter snow and cold weather move the elk to the southeast to more arid areas at lower elevations. Approximately 90 percent of these elk spend time between Colockum Creek and the Columbia River. Small sub-herds winter near Cle Elum, primarily along the Cle Elum River but also in areas such as the City Heights site.

Elk are protected as a game species by the Washington Department of Fish & Wildlife (WDFW). Population numbers are maintained through hunting. WDFW has a population objective for the Colockum herd of approximately 4,700 animals.

Rocky Mountain elk have home ranges between 2,500 and 10,000 acres and utilize a mix of forest, shrub and meadow habitats. Generally, elk utilize a variety of habitats depending on the time of year, to include a mix of meadow/grasslands particularly browsing on grasses and forbs in the Spring and Summer. In the fall, browsing of shrubs and tree species begins and continues through Winter, including bark chewing of species such as aspen and cottonwood. Elk prefer an area with good cover, ideally large blocks of tree cover at least 40 feet tall and least 600 feet wide for hiding, and in inclement weather blocks of land at least 12 acres in size with forest cover for thermal protection and a mix of open habitats and forest for forage. Ideally, elk habitat areas have less than 2 miles of road per square mile and reduced activity for calving and winter range.

The City Heights site provides foraging and hiding opportunities for elk and appears to be regularly used in this manner. The vegetation species on the property include preferred forage species for elk. These are present in a mixed patchwork of forest, shrub and grassland habitat types. There are also perennial water sources (such as Deer Creek), and ephemeral (seasonal) water sources (the remainder of the streams and wetlands on the site) that provide not only water but mud wallow areas.

Although good forage opportunities are present on the City Heights property, the amount of human disturbance, off-road vehicle use (dirt bikes, ATVs, 4x4 vehicles, snowmobiles) as well as availability of larger, less disturbed areas to the north appear to limit use of the property by elk other than for foraging and hiding.

Mule Deer. Mule deer have many similar requirements to those described for elk, and as such, the City Heights site provides similar habitat requirements for deer. Mule deer are also protected as a game species in Washington. Mule deer have some incompatibilities with developed areas, in that they graze and trample landscaping, lawns and gardens, although with less impact than the larger elk.

Cougar. Cougar are common in the area of the site due to the presence of elk and mule deer that are preferred prey species of cougar. Cougar have home ranges of 25 to 75 square miles for females and nearly double that for males. Cougar tracks were observed on the City Heights site. These animals undoubtedly pass through the property on a regular basis following and hunting deer, elk, raccoons, coyotes, rabbits and other small game. These animals pass mostly unnoticed due to their dusk-to-dawn period of activity. Cougar are protected as a game species in the State of Washington with a designated hunting season.

Black Bear. Black bears are another common large mammal found in and around the site and in the surrounding large forested areas. This omnivorous species is commonly found in forested areas and also

riparian areas like those that pass through the City Heights property. Black bears are also protected as a game species in Washington and have a designated hunting season.

POTENTIAL IMPACTS DURING CONSTRUCTION

All areas to be developed under any of the conceptual land use alternatives (approximately 108 to 205 acres of the 358-acre site) would be cleared of existing vegetation prior to construction work. The clearing of vegetation would remove forage, browse, and cover sources for numerous species of wildlife that utilize the property.

Site development under any of the conceptual land use alternatives would require a significant amount of grading following vegetation removal to achieve construction elevations for roads and home sites. Because grading would occur only after all woody vegetation had been removed from areas undergoing development, little, if any wildlife would still be present in these areas of the site during grading. Once grading is completed, there would be essentially no wildlife habitat left in these areas of the site; existing wildlife would have either relocated elsewhere, or would have perished.

Nocturnal construction (if any) involving artificial lighting could temporarily disrupt wildlife use of adjacent, undeveloped property, particularly large mammals. Artificial lighting changes nocturnal habitat by reducing, if not eliminating darkness. Noise associated with construction is less likely to impact wildlife within the adjacent undeveloped environment to the north, as they would either move away from the noise, or become accustomed to it. Common, primarily forest species that occur within the undeveloped landscape generally habituate to the sounds of constant, daily construction activity in a relatively short period of time (Fletcher and Busnel 1978).

Under Alternative 1, direct loss of approximately 205 acres of existing shrub and open forest habitat would occur over a period of 6 to 12 years as a result of clearing and grading operations. Under Alternative 2 or 3A, this habitat loss would be approximately 195 acres. Alternative 3B could potentially result in the most significant habitat loss due to a less coordinated approach to site planning and development that could result in more vegetation removal. Development of the City Heights property would displace wildlife that utilize the site to forested areas to the north. Most of the habitat to be removed is thinned pine forest that was cleared (by others) and impacted by recent logging activities.

If the No Action Alternative were selected, the site would not be cleared or developed at this time. Therefore, existing characteristics of wildlife use of the property would continue.

POTENTIAL DEVELOPED-CONDITION IMPACTS

Introduction of a resident human population on the site can be expected to disturb wildlife, particularly the less common and/or less abundant species listed above. Common species likely to move into the completed condition of the project would habituate to a persistent, non-threatening human presence. Noise impacts associated with off-road vehicle use of the property would likely cease with urban development of the site.

Impacts to wildlife would occur under any conceptual land use alternative selected for implementation. Approximately 43 to 45 percent of the site would be retained in open space under Alternative 1, 2, or 3A, including the east-west power line corridors, north-south riparian corridors, and a 20 to 80-foot wide existing natural buffer along the south boundary. Wildlife habitat that will remain in these areas would include forested riparian areas adjacent to streams, and open pine forest in transitional areas between City Heights, existing developed areas to the south, and the large contiguous forest to the north. The riparian corridors, in particular, are of high importance for wildlife as many critical habitat requirements are found

in these areas, including dense tree and shrub cover to provide hiding places and thermal protection, a water source, and a diversity of preferable forage species. The north-south and east-west corridors would allow wildlife to continue to move through the site. Development under Alternative 3B would be most likely to result in habitat fragmentation and least likely to preserve wildlife corridors due to the lack of a fixed development plan and parcel-by-parcel development by separate owners.

Other significant open space to be preserved on the property includes the shrub and grassed areas under existing electrical transmission lines. The east/west power line easements connect the north/south riparian corridors through the site. However, the easements are also the most impacted areas of the property with the least amount of habitat and native vegetative cover, and therefore of low habitat value at the present time as well as in the developed condition of the site.

Increased noise, light and habitat fragmentation as a result of the introduction of a resident human population on the site would reduce the value of the remaining habitat for wildlife.

It is likely that human-animal encounters would increase with the introduction of residential development into areas presently used by wildlife as habitat. Although most wildlife would relocate, some species that are attracted to features of developed areas would remain nearby, and may make intrusions into and through the developed area. Examples include bears and raccoons foraging in garbage cans, dumpsters, vegetable gardens, fruit trees, mulch piles, bird feeders that use suet, barbeque grills and pet food; deer and elk grazing and trampling grassed areas, gardens, and landscaping; and predation on domestic pets by large predators like cougar and bobcat. These predators, particularly those currently using the fringes of the City at this time, will likely continue to do so.

In general, urban development of the site would be a significant deterrent to terrestrial wildlife movements into and across the property. Because the northern boundary of City Heights would represent a new boundary between the City and the expansive forested area to the north, it may be desirable to prevent (or discourage) access into and through the site by large terrestrial mammals and predators. Interactions between humans in a residential neighborhood with animals like deer, elk, bear and cougar could have an undesirable and potentially dangerous outcome. If wildlife corridors were intentionally provided through the project, these species could be encouraged to wander further into the City with nowhere to go except toward urban populations and heavily-traveled State highways.

No impacts to any State- or Federally-listed species are anticipated, as none were noted to occur on or near the site.

If there were no development on the site in the near-term, there would be no alteration of existing habitats or wildlife use of the property. Therefore, birds and wildlife species that presently inhabit, breed and nest, and/or forage on the site would likely continue to use the property in this manner. However, with the likely persistence of off-road vehicle use and target shooting under the No Action Alternative, there would continue to be periodic human disturbance to wildlife on the site under this alternative.

MITIGATION MEASURES

Mitigation Measures Included in the Development Proposal. It will not be possible to fully mitigate wildlife impacts under any build alternative. Species that use the site will either use the remaining linked habitat areas (wetlands, streams, buffers, and open space corridors), or they will relocate to the north into the large forested area that includes more than 1,000,000 acres of commercial forest and wilderness area. The proposal to retain open space corridors on the site and connection through the development to off-site habitat areas would partially off-set habitat fragmentation that would result from site development. This

would retain shelter and sources of food for small mammals and birds, but could have the undesirable effect of also maintaining corridors for large mammals and predators to move through the site.

Covenants, Conditions and Restrictions (CC&Rs) to be enforced by the Homeowner's Association with Alternative 1, 2 or 3A would be used to inform residents of wildlife in the area and how to minimize sources of conflict. For example, garbage storage areas can be required to include animal-exclusion features, and a pet leash law could help minimize predation by domestic pets on small mammals and birds on the property, as well as to control these pets to minimize their availability as prey for large native predators. Certain types of landscaping could be discouraged to prevent conflicts with wildlife, such as grassed lawns, fruit trees, and berry bushes.

Applicable Regulations. To the extent that construction activities are limited to daytime hours between 7:00 AM and 10:00 PM in accordance with the Washington State Environmental Noise Limits (WAC 173-60), this would limit nighttime disturbance to wildlife in the form of noise, light, and human activity.

The statement of purpose and objectives for the City of Cle Elum Planned Mixed Use (PMU) District (CEMC Chapter 17.45) sought by the applicant for development of the City Heights project under Alternative 1 or 2 includes a purpose to protect and preserve the natural environment to the maximum extent possible, including but not limited to protecting wetlands and sensitive areas. Sensitive areas are not defined; however, it is presumed that these include the types of areas regulated under the City's Critical Areas Code (CEMC Title 18, Chapter 18.01).

The Cle Elum Municipal Code, applicable to City Heights Alternative 1 or 2, states the following with regard to fish and wildlife habitat conservation areas (CEMC 18.01.150):

Preservation of fish and wildlife habitat is crucial to the protection of suitable environments for animal species and in providing a natural beauty and healthy quality of life for Cle Elum and its citizens. The conservation of habitat means active land management for maintaining species within their preferred habitats and accustomed geographic distribution. In this way, isolated subpopulations are not created which are most susceptible to predation, dislocation, and inadequate food supplies. Habitat protection does not require that all individuals of all species are protected, but does demand that land use planning be sensitive to the priority of saving and protecting animal-rich environments.

Habitat conservation areas are defined in the City's Critical Areas Code as riparian corridors, habitats of local importance, and habitats associated with protected species (CEMC 18.01.030). Of these, only riparian corridors occur on the City Heights property, and the proposal includes retaining these areas in the Alternative 1 or Alternative 2 conceptual land use plans. More specific discussion of riparian corridor preservation requirements is provided in Draft EIS Section 3.4.2.

Similar to the Cle Elum Municipal Code, Kittitas County Code (applicable to City Heights Alternative 3A or 3B) identifies riparian habitat critical areas for preservation (KCC 17A.07.010). These are discussed in Draft EIS Section 3.4.2.

Other Recommended Mitigation Measures. Normal construction activities should be limited to daytime hours to prevent possible disturbance of wildlife within adjacent, undeveloped landscapes. If special circumstances would require nocturnal work with bright, artificial lighting, shields should be provided to prevent fixed lighting from shining into non-construction areas.

To partially compensate for the loss of wildlife habitat due to clearing and grading activities, a variety of habitat features including such things as nest boxes could be placed within undeveloped open space areas to be preserved. Targeted species would include most cavity-nesting birds (such as swallows, chickadees, wrens, bluebirds, and woodpeckers), and bats.

The applicant and City decision makers should consider a fence along the north City Heights boundary sufficient to deter the movement of deer, elk, bear and cougar from the expansive forested area to the north through the City Heights development and potentially into the existing residential neighborhood and downtown area below (see Figure 3.5-3). Constructing the fence with a 45-degree angle at the east and west ends, and at locations where the fence is intercepted by roadways and powerline corridors would help keep wildlife movements directed away from entering the development.

Effective fences to deter elk, deer and cougar generally exceed 10 feet in height, and therefore may not be desirable in a residential development. Educating residents about large predators would be the most effective way to minimize the potential for conflicts. Small children and pets should not be left unattended in open areas, particularly at dusk. Shrubs and landscaping should be pruned several feet off the ground to eliminate hiding spaces, residents should be educated about not feeding cats and dogs outside and not to leave these pets outside from dusk to dawn. Garbage cans with tight-fitting lids should be used to prevent small animals such as skunks, raccoons, and coyotes (prey for cougars) from being attracted to the area. The Washington Department of Fish and Wildlife (WDFW) discourages creating situations that would result in conflicts between wildlife and resident human populations that would require commitment of resources and/or enforcement actions by WDFW personnel (WDFW July 15, 2009).

Consideration could also be given to installing fences along riparian corridors to help limit conflicts with wildlife in these areas of the site. These barriers could be designed to allow small wildlife to still pass through the fences.

Measures to avoid conflicts with bears include using garbage cans with tight-fitting lids (or specially-designed bear-proof garbage cans), and setting out the cans only on the morning when the solid waste collection service is scheduled to occur. Bird feeders that allow residue to build up on the ground between March and November should be removed. Orchard fruit should be harvested regularly from any fruit trees, and no fruit should be left to rot on the ground. Pets should be fed inside; barbecue grills should be cleaned after each use; and outdoor refrigerators or freezers should be kept inside garages or not at all. Consideration should be given to installing bear-proof fencing around fruit trees and garbage storage areas.

SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

Approximately 195 to 205 acres of wildlife habitat would be permanently removed from the site, with resulting displacement of species and individuals. Habitat that would remain on the site would be more disturbed by the presence and activity associated with a resident human population. Conflicts may occur from time to time between wildlife and residents on the site.

Insert Figure 3.5-3. Possible Fence to Direct Large Mammals East-West Past the Site

(11 x 17-inch color).

