



Soundview Consultants
Environmental Assessment • Planning • Land Use Solutions

2907 Harborview Drive, Suite D
Gig Harbor, WA 98335

Technical Memorandum

To: Les Gerstmann, Puyallup School District

File Number: 1415.0004

From: Matt DeCaro, Soundview Consultants LLC
Jeremy Downs, Soundview Consultants LLC

Date: May 15, 2017

Re: Fish and Wildlife Habitat Assessment
7911 144th Street East, Puyallup, Washington 98373

Dear Mr. Gerstmann,

Soundview Consultants LLC (SVC) conducted a fish and wildlife habitat assessment of an approximately 16.84-acre property located in unincorporated Pierce County at 7911 144th Street East in Puyallup, Washington. The property consists of one parcel located in the Southwest $\frac{1}{4}$ of the Southeast $\frac{1}{4}$ of Section 17, Township 19 North, Range 04 East, W.M. (Pierce County Tax Parcel Number 0419174028). This assessment was conducted to support the proposed development of an elementary school and associated infrastructure on the subject property. SVC investigated the site to evaluate if any potentially-regulated fish and wildlife habitat is located on or adjacent to the subject property, with specific attention given to assessing the potential presence of pileated woodpecker (*Dryocopus pileatus*). This Technical Memorandum has been prepared to document the results of this assessment.

Figure 1. Subject Property Location.



Background Data

Prior to the site investigation, SVC staff conducted background research using Pierce County Public GIS maps, the Washington Department of Fish and Wildlife (WDFW) Priority Habitat and Species (PHS) database and SalmonScape mapping tool (Attachment A), and various orthophotographic resources. Pierce County GIS data (Attachments A1 and A2) do not identify any streams or other potentially-regulated fish and wildlife habitat within 315 feet of the subject property. No priority species or habitats are documented by the WDFW PHS (Attachment A3) or SalmonScape (Attachment A4) maps and data. The subject property is located within a mapped approximately 250-acre Open Space Corridor that generally extends to the north and east of the site (Attachment A2).

According to WDFW, the pileated woodpecker requires large snags and live, decaying trees for nesting and foraging (WDFW, 2005). The breeding and nesting periods of the pileated woodpecker extends from late March to early July (Larsen et al., 2004). Pileated woodpeckers excavate characteristic rectangular or oval holes in dead or dying trees for foraging, and nest sites are typically located in cavities in a dead tree or in dead branch of a live tree, usually 15 to 80 feet above ground surface (National Audubon Society, 2017). Pileated woodpeckers typically make a new nesting cavity each year, with both sexes helping to excavate. During the breeding season, the birds may start multiple cavity excavations, but only complete one nest cavity. Pileated woodpeckers roost in hollow trees or vacated nest cavities at night and during inclement weather; individuals may use up to 11 roosts over a 10-month period (Larsen et al., 2004). West of the Cascade Mountains, pileated woodpecker home ranges average 1,480 acres (WDFW, 2005), and breeding pairs tend to exhibit a high degree of territoriality.

Methods

A site visit was performed by Richard Peel and Kyla Caddey of SVC on April 12, 2017. The experienced biologists made visual observations using stationary and walking survey methods for both aquatic and upland habitats noting any special habitat features or signs of fish and wildlife activity throughout the subject property. Specific attention was given to assessing the potential presence of pileated woodpecker.

Results

The 16.84-acre subject property is currently undeveloped and forested. Vegetation on the subject property is dominated by a semi-mature overstory of Douglas fir, Western red cedar, big-leaf maple, Western hemlock, red alder, and black cottonwood with an understory of vine maple, salmonberry, osoberry, western swordfern, bracken fern, stinging nettle, snowberry, and Himalayan blackberry. Topography on the site slopes gently downward to the west with elevations ranging between approximately 490 feet and 470 feet above mean sea level. The site is bounded by 144th Street East to the south and single-family residences to the west, north, and east. Photographs of the subject property are included in Attachment B.

Wildlife species observed onsite during the site visit included the following mammals: black-tailed deer, Eastern cottontail, Eastern gray squirrel, and racoon; and the following birds: American bushtit, American crow, American robin, bald eagle (observed flying overhead only), barred owl, Bewick's wren, black-capped chickadee, brown creeper, dark-eyed Junco, downy woodpecker, Northern flicker, Pacific wren, pileated woodpecker, red-breasted nuthatch, red-breasted sapsucker, rufous hummingbird, and spotted towhee. Recent mountain beaver activity was also observed.

Standing snags with a diameter at breast height (DBH) between 12 and 16 inches were observed throughout the site, and foraging cavities consistent with pileated woodpecker foraging activity were observed in many of these standing snags (Attachment B). The results of this site visit confirm that pileated woodpeckers are active and likely utilize many of the standing snags onsite for foraging purposes. While the standing snags and other decaying live trees on the subject property also provide potential nesting habitat for the pileated woodpecker, active pileated woodpecker nesting activity was not confirmed. No other potentially-regulated fish and wildlife habitat was observed on the subject property.

Regulatory Considerations

The results of this site visit confirm that pileated woodpeckers are active onsite and utilizing standing snags for foraging purposes. The pileated woodpecker is a Washington State listed Candidate species, but is not protected under the Endangered Species Act (ESA) or other State or Federal regulations. Due to its listing as a Candidate species at the state level, the subject property is potentially considered a regulated Fish and Wildlife Habitat Conservation Area under Pierce County Code (PCC) 18E.40.020.B.

State management recommendations for the pileated woodpecker are based on the spatial extent of habitat availability for the focal population. Given that the subject property is located in an urban setting with fragmented patches of forested areas scattered within a mosaic of residential developments, WDFW's management recommendations (WDFW, 2005) are challenging to apply to this site. WDFW's management recommendations require preservation of large areas of land better suited to public open spaces such as parks, green belts, et cetera. These recommendations must be balanced with community needs such as the necessary school infrastructure that is proposed. As such, the proposed project will preserve suitable forest habitat areas with specific best management practices (BMPs) as outlined below.

The proposed project includes construction of an elementary school with associated infrastructure including parking areas, playfields, stormwater detention ponds, and other utilities. Through careful planning, potential impacts to the onsite pileated woodpecker habitat have been minimized to the greatest extent feasible. The project has been designed to comply with all applicable tree conservation standards outlined under PCC 18J.15.030 (Tree Conservation), including the proposed retention of 31.5 percent of the existing "significant trees" identified onsite which exceeds Pierce County's minimum tree density requirements. Within these tree retention areas, existing standing snags and downed woody debris will also be retained to the greatest extent practicable in order to preserve the onsite pileated woodpecker habitat. Snags that pose potential safety hazards may be removed as needed to ensure safe conditions. A preliminary Tree Preservation and Clearing Plan is provided in Attachment C of this report.

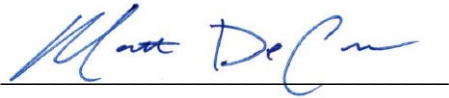
In addition to the significant tree conservation measures, the following BMPs are recommended to minimize potential impacts to pileated woodpecker habitat as a result of the proposed project:

- Direct any exterior lighting away from the tree conservation areas to the extent practicable;
- Locate any equipment expected to make excessive noise (generators, HVAC units, etc.) on the side of buildings facing away from the habitat area, or install lower-noise units; and
- Install appropriate signage along any trails within the tree conservation areas to indicate the sensitive nature of the habitat area and to discourage use of the trail(s) by pets.

The listed actions and protections are sufficient to ensure adequate protection of pileated woodpeckers and their associated habitat. Through careful implementation of these actions, no negative effects to pileated woodpecker populations are expected. The proposed development will permanently remove a small area of pileated woodpecker foraging habitat and may displace individual pileated woodpeckers, but the project will not reduce the likelihood that the species will survive and reproduce over the long-term.

If you have any questions regarding the proposed project, please contact us at your earliest convenience.

Sincerely,




Matt DeCaro
Environmental Scientist/Project Manager

May 15, 2017

Date

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Jeremy Downs
Principal Scientist/Environmental Planner

May 15, 2017

Date

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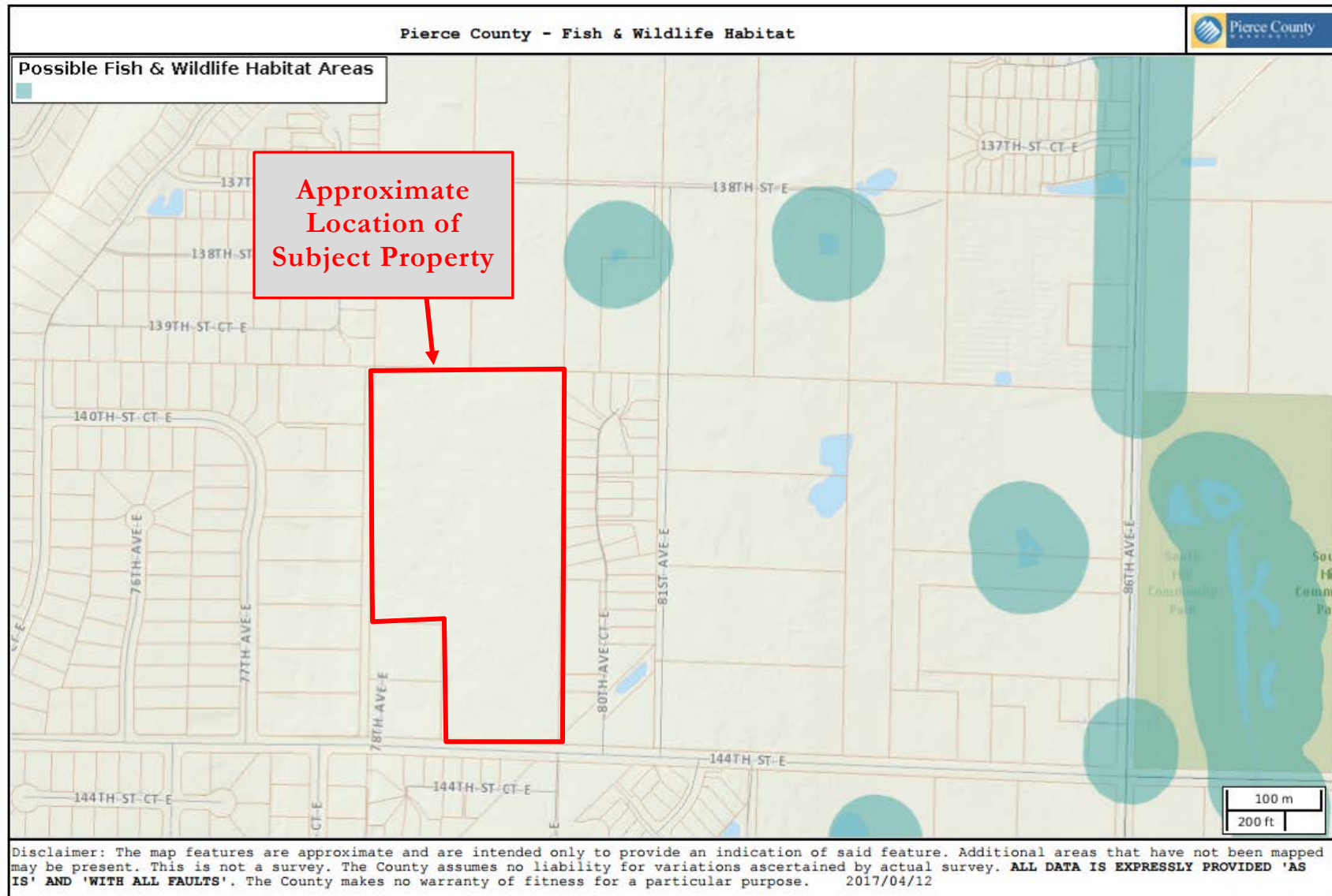
References

- Hitchcock, C.L. and A. Cronquist, 1973. *Flora of the Pacific Northwest*. University of Washington Press. Seattle, Washington.
- Larsen, E., J. M. Azerrad, and N. Nordstrom, 2004. *Management Recommendations for Washington's Priority Species, Volume IV: Birds*. Washington Department of Fish and Wildlife, Olympia, Washington.
- Pierce County Code, 2016. Title 18.E, Development Regulations—Critical Areas. Passed December 13, 2016.
- National Audubon Society, 2017. *Guide to North American Birds. Pileated Woodpecker (Dryocopus pileatus)*. Website: <http://www.audubon.org/field-guide/bird/pileated-woodpecker>. Accessed April 24, 2017.
- Washington Department of Fish and Wildlife, 2005. *Management Recommendations for Pileated Woodpecker (Dryocopus pileatus)*. [January 2005]

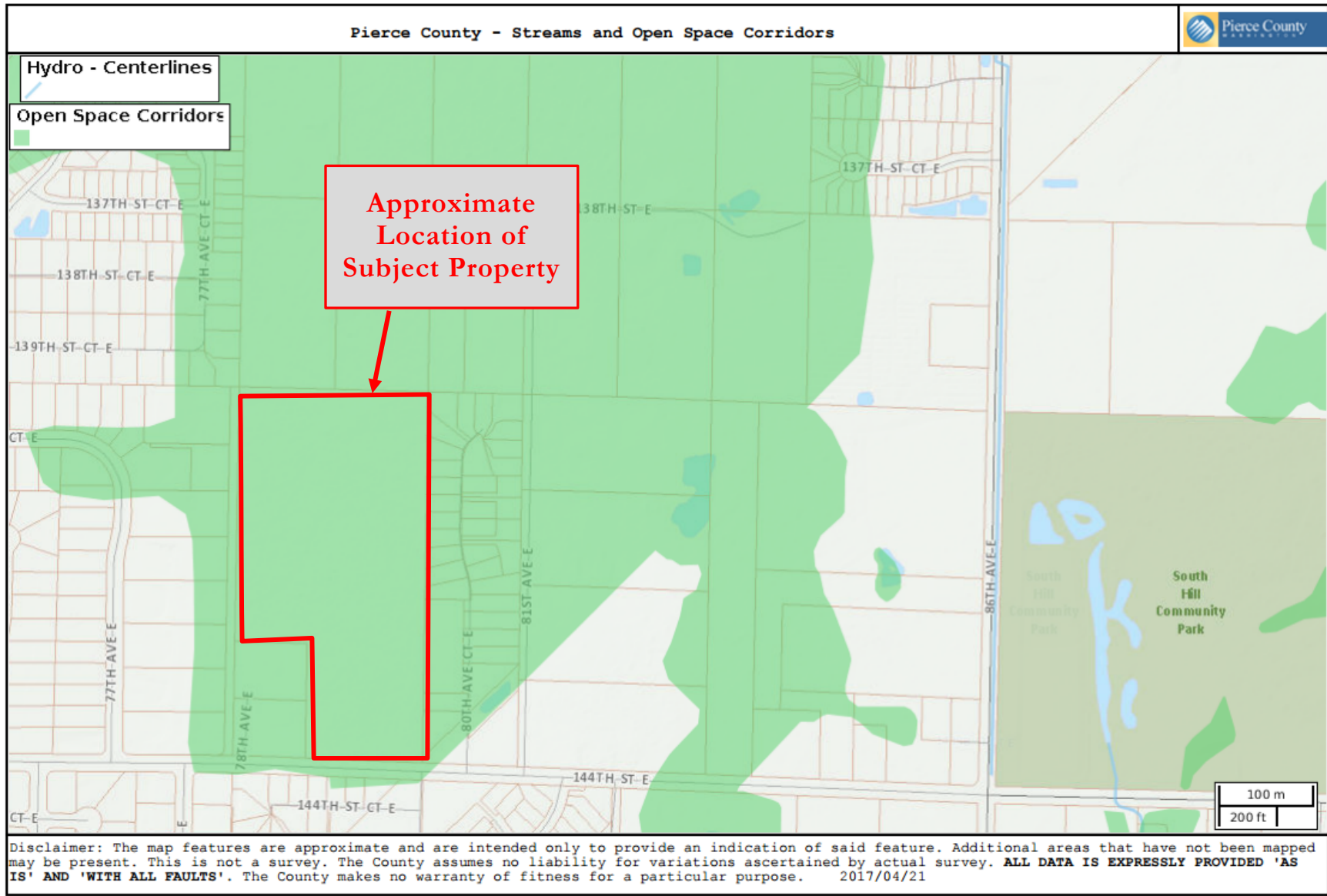
Attachment A – Background Information

This attachment includes a Pierce County Fish and Wildlife Habitat Map (A1); Pierce County Streams and Open Space Corridors Map (A2); WDFW Priority Habitat and Species Map (A3); and WDFW SalmonScape Map (A4).

Attachment A1 – Pierce County Fish and Wildlife Habitat Map



Attachment A2 – Pierce County Streams and Open Space Corridors Map



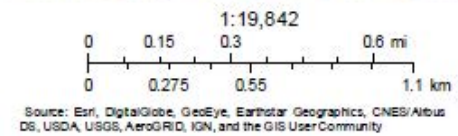
Attachment A3 – WDFW Priority Habitat and Species Map

WDFW Test Map



April 21, 2017

- | | | |
|--|---|--|
|  PHS Report Clip Area |  POLY |  QTR-TWP |
|  PT |  AS MAPPED |  TOWNSHIP |
|  LN |  SECTION | |





WASHINGTON DEPARTMENT OF FISH AND WILDLIFE
PRIORITY HABITATS AND SPECIES REPORT

SOURCE DATASET: PHSPublic
REPORT DATE: 04/21/2017 3.18

Query ID: P170421151759

Common Name	Site Name	Priority Area	Accuracy	Federal Status	Sensitive Data	Source Entity
Scientific Name	Source Dataset	Occurrence Type		State Status	Resolution	Geometry Type
Notes	Source Record	More Information (URL)		PHS Listing Status		
	Source Date	Mgmt Recommendations				

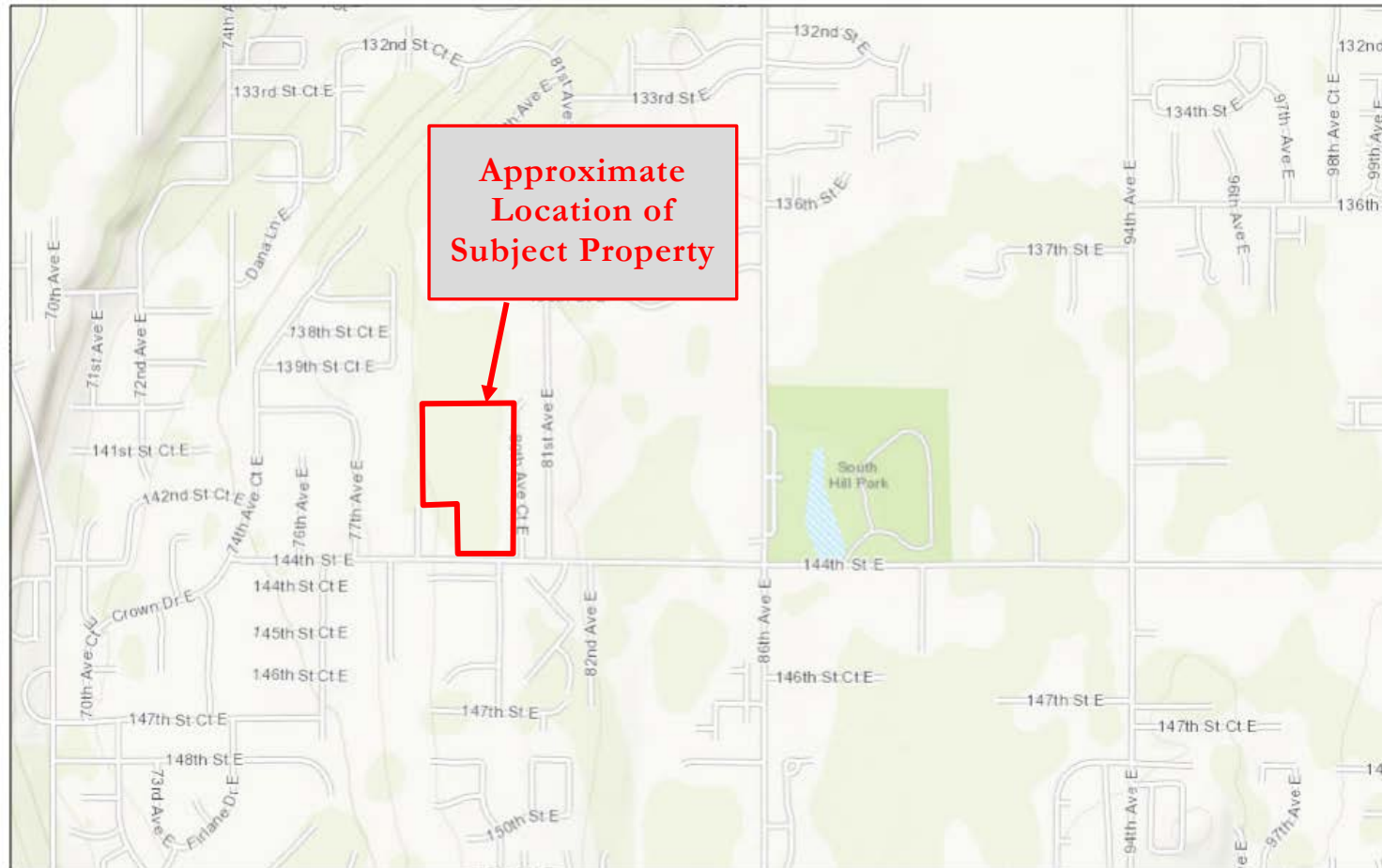
DISCLAIMER. This report includes information that the Washington Department of Fish and Wildlife (WDFW) maintains in a central computer database. It is not an attempt to provide you with an official agency response as to the impacts of your project on fish and wildlife. This information only documents the location of fish and wildlife resources to the best of our knowledge. It is not a complete inventory and it is important to note that fish and wildlife resources may occur in areas not currently known to WDFW biologists, or in areas for which comprehensive surveys have not been conducted. Site specific surveys are frequently necessary to rule out the presence of priority resources. Locations of fish and wildlife resources are subject to variation caused by disturbance, changes in season and weather, and other factors. WDFW does not recommend using reports more than six months old.

04/21/2017 3.18

1

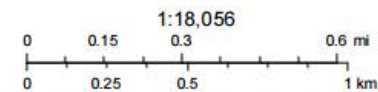
Attachment A4 – WDFW SalmonScape Map

SalmonScape



April 12, 2017

— All SalmonScape Species



Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,

Attachment B – Site Photographs

Typical Snag with Cavities on the Subject Property



Typical Snag with Cavities on the Subject Property



Typical Snag with Cavities on the Subject Property



Typical Snag with Cavities on the Subject Property



Typical Snags on the Subject Property



Log with Pileated Woodpecker Excavations



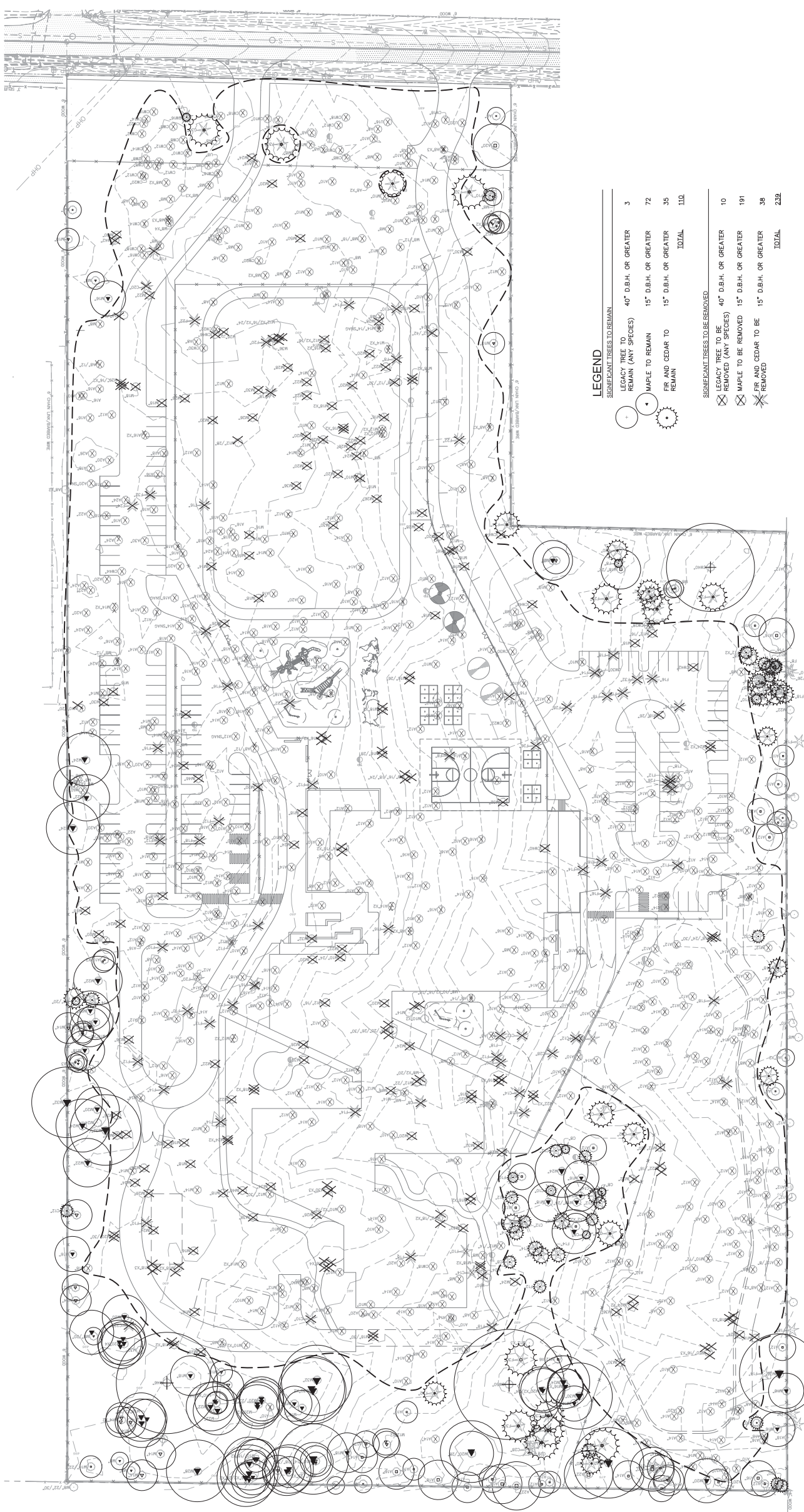
Raccoon Family



Eastern Gray Squirrel in Cavity



Attachment C – Preliminary Tree Preservation Plan



LEGEND

SIGNIFICANT TREES TO REMAIN	
● (circle with star)	LEGACY TREE TO REMAIN (ANY SPECIES) 40" D.B.H. OR GREATER 3
● (circle with cross)	MAPLE TO REMAIN 15" D.B.H. OR GREATER 72
● (circle with X)	FIR AND CEDAR TO REMAIN 15" D.B.H. OR GREATER 35
	TOTAL 110
SIGNIFICANT TREES TO BE REMOVED	
● (circle with star and X)	LEGACY TREE TO BE REMOVED (ANY SPECIES) 40" D.B.H. OR GREATER 10
● (circle with cross and X)	MAPLE TO BE REMOVED (ANY SPECIES) 15" D.B.H. OR GREATER 191
● (circle with X and X)	FIR AND CEDAR TO BE REMOVED 15" D.B.H. OR GREATER 38
	TOTAL 239

AS PER PIERCE COUNTY TREE CONSERVATION CODE REQUIREMENT (18.15.030) 30% OF SIGNIFICANT TREES ON SITE SHALL BE RETAINED.
 TOTAL OF SIGNIFICANT TREES TO REMAIN: 110
 TOTAL OF SIGNIFICANT TREES TO BE REMOVED: 239
 PERCENTAGE OF SIGNIFICANT TREES TO REMAIN: 31.8%

OTHER TREES TO REMAIN

● (circle)	COTTON WOOD AND ALDER TO REMAIN 39" D.B.H. OR SMALLER
● (circle with dot)	MAPLE TO REMAIN 14" D.B.H. OR SMALLER
● (circle with X)	FIR AND CEDAR TO REMAIN 14" D.B.H. OR SMALLER

OTHER TREES TO BE REMOVED

● (circle with star)	COTTON WOOD AND ALDER TO BE REMOVED 39" D.B.H. OR SMALLER
● (circle with cross)	MAPLE TO BE REMOVED 14" D.B.H. OR SMALLER
● (circle with X)	FIR AND CEDAR TO BE REMOVED 14" D.B.H. OR SMALLER

--- CLEARING BOUNDARY



PUYALLUP NEW ELEMENTARY SCHOOL
 PRELIMINARY TREE PRESERVATION AND CLEARING PLAN
 17-03-08

Attachment D – Biologist Qualifications

All field inspections, habitat assessments, and supporting documentation, including this **Fish and Wildlife Habitat Assessment Technical Memorandum** prepared for the **Puyallup School District**, were prepared by, or under the direction of, Jeremy Downs and Matt DeCaro of Soundview Consultants LLC. In addition, report preparation was performed by Matt DeCaro and Kyla Caddey, and site inspections were performed by Richard Peel and Kyla Caddey.

Jeremy Downs

Principal Scientist/Environmental Planner

Professional Experience: 25 years

Jeremy Downs is a Principal Scientist and Environmental Planner with professional training and extensive experience in land use, site planning and design, project coordination, permitting and management, marine and wetland ecology, habitat restoration, wetland, stream, and eelgrass delineations and assessments, biological assessments, benthic surveys, stream assessments, underwater and terrestrial monitoring programs, and mitigation planning.

Jeremy earned a Bachelor of Science degree in Biology with an emphasis in Marine Biology from the University of California, Davis. He also holds graduate-level professional certifications in various advanced wetland science and management programs from both Portland State University and San Francisco State University, and he has received professional training in Salmonid Biology from the University of California Extension. In addition, he studied under the Environmental Risk and Recovery program at the Australian Institute of Marine Science, and he has extensive training and field experience in aquatic related disciplines such as diving, boat operations, and navigation.

Jeremy is a certified wetlands delineator under US Army Corps of Engineers guidelines. He has been formally trained in the use of the Washington State Wetland Rating System, Determination of Ordinary High Water Mark, Designing Compensatory Mitigation and Restoration Projects, and Reviewing Wetland Mitigation and Monitoring Plans from the US Army Corps of Engineers and Washington State Department of Ecology, and in conducting Biological Assessments from the Washington Department of Transportation. He is also a Pierce County Qualified Wetland Specialist and Fisheries Biologist, and he holds similar qualifications from other jurisdictions.

Matt DeCaro

Environmental Scientist/Project Manager

Professional Experience: 8 years

Matt DeCaro is an Environmental Scientist and Project Manager with a diverse background in environmental compliance, project management, wetland science, water quality, environmental due diligence, and site remediation. Matt currently provides permitting and regulatory compliance assistance for land use projects from their planning stages through review, approval, and construction for Soundview Consultants LLC. Matt conducts code and regulation analysis; conducts wetland, stream, and shoreline delineations and fish & wildlife habitat assessments; provides land use planning assistance for residential, commercial, and industrial projects; prepares reports and permit applications for local, State, and Federal review; and provides restoration and mitigation design.

Matt earned a Bachelor of Science degree with a focus in Environmental Science from the Evergreen State College in Olympia, Washington, with additional graduate-level coursework and research in

aquatic restoration and salmonid ecology. Matt has been formally trained in the use of the Washington State Wetland Rating System and Determination of Ordinary High Water Mark by the Washington State Department of Ecology, and he has attended USFWS survey workshops for multiple threatened and endangered species. Matt holds 40-hour HAZWOPER training and has managed Phase I Environmental Site Assessments, subsurface investigations, and contaminant remediation projects throughout the Pacific Northwest. His diverse experience also includes NEPA compliance for federal projects; noxious weed abatement; spotted owl surveys on federal and private lands; and salmonid spawning and migration surveys.

Richard Peel

Wetland Scientist

Professional Experience: 5 years

Richard Peel is a Wetland Scientist with diverse professional experience in wetland ecology, monitoring, and delineation throughout Washington and Oregon. Richard is Washington State trained in conducting wetland delineations, assessing wetland systems, mitigation planning and design, implementation of monitoring programs, and mitigation monitoring and reporting. He also has extensive experience in an analytical laboratory using state-of-the-art equipment in bacteriological and chemical analysis of soil and water samples.

Richard is a graduate of The Evergreen State College, with dual degrees in Ecology and Economics. He has focused his academic career on ecology, disturbance ecology, chemistry, and the economic impacts of current environmental management. Richard has extensive training and field experience in wetland related disciplines, and has experience in wetlands both east and west of The Cascades. He has been trained by The Washington State Department of Transportation's (WSDOT) Wetland Ecology and Monitoring team in the use of the wetland delineation, mitigation, monitoring, and restoration techniques. In addition, he was directed by WSDOT's Wetland Protection and Preservation Policy to ensure wetlands are preserved and protected whenever possible. This direction ensures no net loss in the quantity or quality of wetlands in the future and minimization of impacts to wetlands in the present. He is also a Pierce County Qualified Wetland Specialist.

Kyla Caddey

Staff Scientist

Professional Experience: 2 years

Kyla Caddey is a Staff Scientist with 2 years of professional experience in riparian habitat restoration projects and environmental outreach and education throughout western Washington while working for both a state agency and a small non-profit. Kyla has a background in habitat restoration design, implementation, and maintenance, wildlife studies, grant writing, project management, report writing, water quality monitoring, benthic macroinvertebrate assessments, vegetation surveys and monitoring, forest surveying, data entry and statistical analysis, research writing and presentations, fish/salmonid monitoring, rain garden design and implementation, native plant nursery maintenance, and customer service.

Kyla earned a Bachelor of Science degree in Environmental Science and Resource Management from the University of Washington, Seattle with a focus in Wildlife Conservation and a minor in Quantitative Science. She has received formal training through the Coastal Training Program in Using the Credit-Debit Method in Estimating Mitigation Needs, How to Administer Development Permits in Washington Shorelines, and Forage Fish Survey Techniques, as well as training through UW Botanic Gardens in Restoring Natural Areas in the Built Environment. Her education and experience has

provided her with the knowledge base and tools necessary to assist in scientific field work and report preparation for the development, management, and implementation of Soundview Consultant's environmental planning and land use services.