



KRIPPNER

Consulting, LLC

September 18, 2018

Mark Conwell
Conwell Investments LLC
2415 Carpenter Road SE
Lacey, WA 98503

RE: Mazama Pocket Gopher Mound Survey Results for Parcel 11825240000 in the Lacey Urban Growth Area of Thurston County, Washington

Dear Mr. Conwell,

Krippner Consulting, LLC has prepared this letter report to present the findings of Mazama pocket gopher mound surveys conducted on your property on June 21, July 31, and September 5, 2018. Your property is located at 3146 Marvin Road SE, in the Lacey Urban Growth Area (UGA) of Thurston County, Washington (Figures 1 and 2). The property (Parcel 11825240000) is approximately 20 acres in size.

This site is located within the range of the Yelm subspecies of Mazama pocket gopher. The Yelm pocket gopher is listed as a state and federal threatened species. Therefore, Thurston County requires that surveys be conducted for this species in suitable habitat areas to comply with Thurston County Code (TCC) 25.24. Yelm pocket gophers are also protected in accordance with the federal Endangered Species Act (ESA).

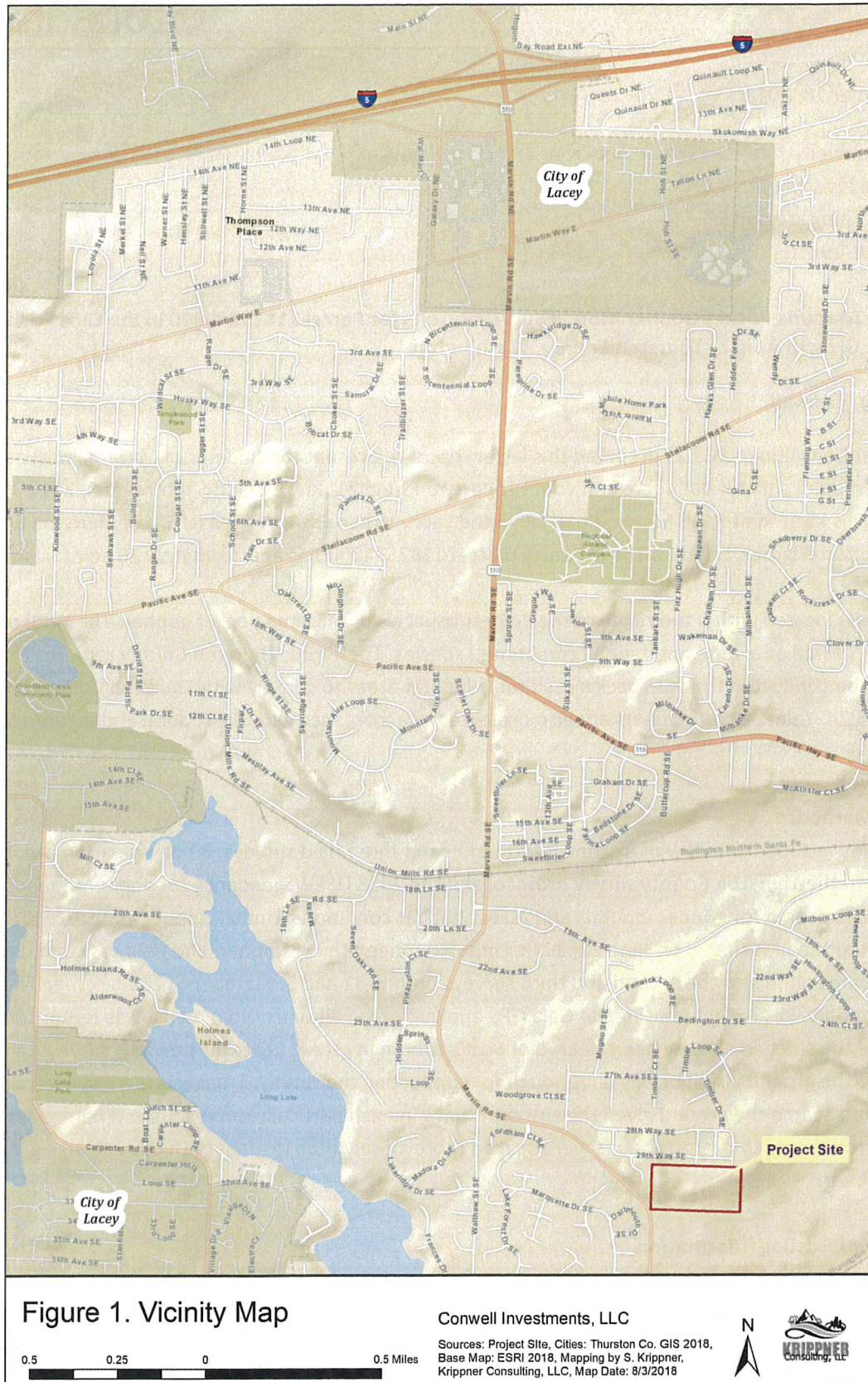
Study Methods

This study included a review of existing information and three field surveys, 30 days apart in accordance with both the Thurston County survey protocol and the 2018 USFWS guidance for gopher mound surveys, to search for gopher mounds and assess habitat conditions. Linda Krippner and Steve Krippner conducted the first survey on June 21, 2018. Linda Krippner, Steve Krippner, and field assistant, Leilani Tuinukuafe conducted the second and third surveys on July 31 and September 5, 2018, respectively. Transect data was collected using the Gaia GPS application on iPhones. No mowing was requested because the site had already been cleared of Scot's broom in recent years for previous surveys, and because the ground visibility was fair enough for conducting the survey. Transects were spaced close enough to search the ground given the site conditions in each particular survey area. Where grass or shrub growth was thicker, transects were spaced more closely than in areas with more sparse grass or shrub cover.

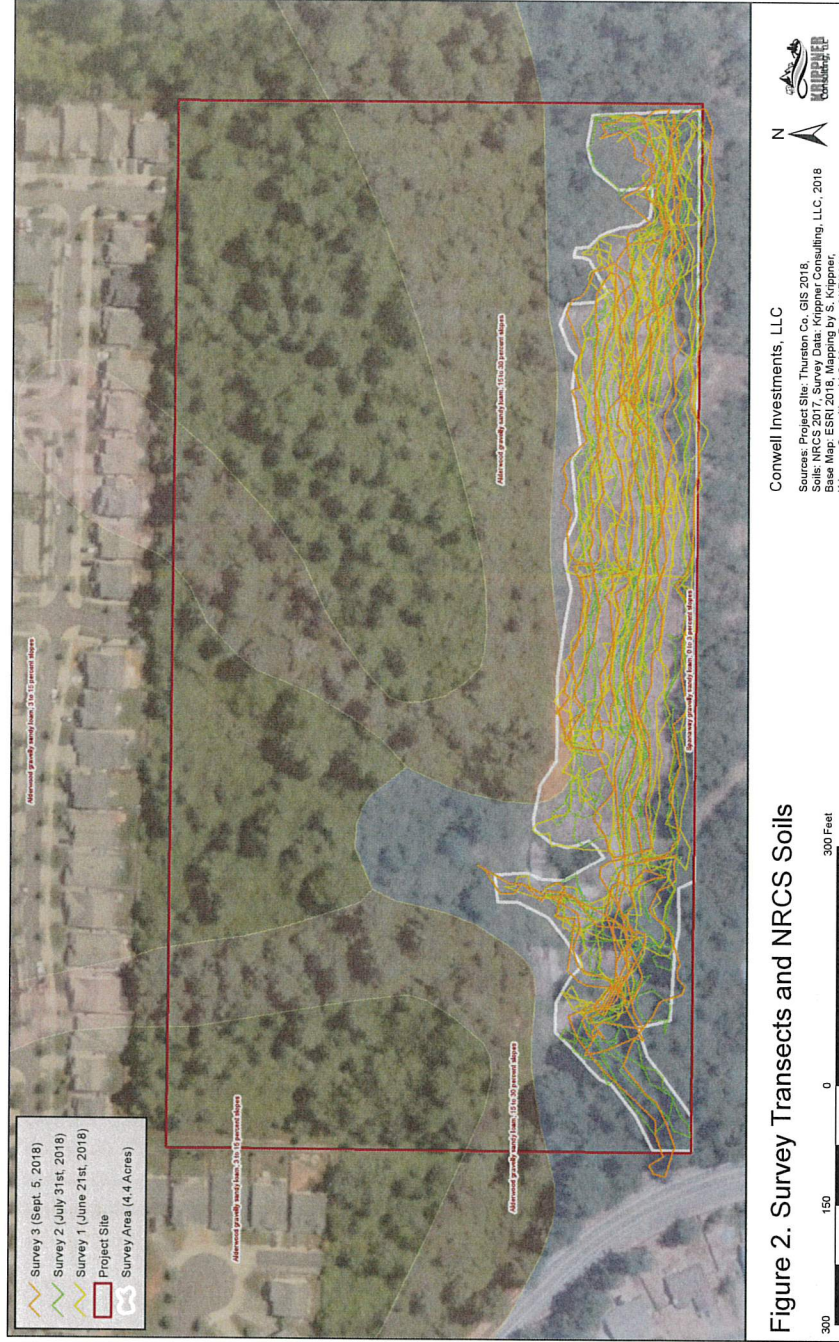
Review of Existing Information

The site is mostly forested and is situated in a residential area. Soils are mapped as Spanaway gravelly sandy loam, 0 to 3 percent slopes; Alderwood gravelly sandy loam, 3 to 15 percent slopes and 15 to 30 percent slopes (NRCS 2017). Soils in the survey area are mostly Spanaway gravelly sandy loam (Figure 2).

Parcel 11825240000 – Mazama Pocket Gopher Mound Survey Results



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Thurston County staff conducted surveys for Mazama pocket gopher mounds on the site in 2014 and 2016 and found no evidence of gopher mounds during any of their surveys. Scot's broom was cleared prior to their surveys. The closest known record of Mazama pocket gophers is approximately 1.5 miles north of the site (WDFW 2018).

Survey Results

The grass-dominated survey area, approximately 4.4 acres in size, is surrounded by forest and the site is bounded by dense residential development to the north and west. All areas dominated by grasses and forbs were surveyed for the presence of Mazama pocket gopher mounds. Forest areas were not surveyed because gophers are not known to be present in dense forest areas (Stinson 2013; Federal Register 2014). In addition, Thurston County and USFWS do not require surveys to be conducted in forest areas.

Survey areas are dominated by a variety of grasses (Photos 1 and 2) including brome, orchard grass, bent grass, velvet grass, red fescue, perennial ryegrass, and tall oat grass. Forb cover, consisting mainly of hairy cat's ear and oxeye daisy, was less than 10 percent in most areas. Scot's broom was mowed a few years ago and is still present along with patches of Oregon grape and thickets of Himalayan blackberry.

No signs indicative of Mazama pocket gopher mounds were observed during the surveys. Fresh and aging mole mounds were observed in only a few spots. Other species observed included black-tailed deer, Eastern cottontail rabbit, Pacific slope flycatcher, Swainson's thrush, red-breasted nuthatch, and white-crowned sparrow.



Photo 1. Grass-dominated survey area (June 21, 2018).



Photo 2. Grass-dominated habitat surveyed adjacent to vacant buildings (June 21, 2018).

Conclusions

No signs indicative of Mazama pocket gopher mounds were observed on the site during the June 21, July 31, or September 5, 2018 surveys conducted by Krippner Consulting. No gophers are known to exist in the site vicinity (WDFW 2018); none were observed by Thurston County on the site in 2014 and 2016; and the forest and high-density residential landscape surrounding the site are not conducive to gophers.

Thank you for the opportunity to conduct this study and prepare this letter report for your property. Please call me if you have any questions regarding this study.

Sincerely,

A handwritten signature in cursive script that reads "Linda Krippner".

Linda Krippner
Krippner Consulting, LLC

Parcel 11825240000 – Mazama Pocket Gopher Mound Survey Results

References

Federal Register. 2014. *Endangered and Threatened Wildlife and Plants; Threatened Species Status for the Olympia Pocket Gopher, Roy Prairie Pocket Gopher, Tenino Pocket Gopher, and Yelm Pocket Gopher, With Special Rule*. U.S. Department of the Interior, Fish and Wildlife Service. April 9, 2014. Volume 79, Number 68. 19760-19796.

Natural Resources Conservation Service (NRCS), United States Department of Agriculture. 2017. Web Soil Survey. Available online at <http://websoilsurvey.nrcs.usda.gov/>.

Stinson, D.W. 2013. *Draft Mazama Pocket Gopher Status Update and Washington State Recovery Plan*. Washington Department of Fish and Wildlife, Olympia. 91+ vi pp.

Washington Department of Fish and Wildlife (WDFW). 2018. Priority Habitats and Species database. Accessed in June and July 2018.