BGE Environmental, LLC.
Wetland Consulting and Land Use Planning

BGE13_02500
August 15, 2013

TECHNICAL MEMORANDUM

To: Bernie Johnston, PE
Team 4 Engineering
5819 NE Minder Road
Poulsbo, WA 98370

From: Robbyn Myers, PWS
BGE Environmental, LLC.
2102 Brashem Ave
Bremerton, WA 98310

RE: Plat of Blue Heron, Response to Critical Area Conditions and Assessments

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At the request of Team 4 Engineering, representative on record for the Plat of Blue Heron, BGE [LLC] staff conducted a field review of the critical areas on-site and within the vicinity of the proposed plat. Specifically the issues addressed in this review include questions posed by staff of the City of Poulsbo on the *Wetland and Stream Report* by B&A, Inc. dated July 11, 2008. As we understand it, the issues needing further documentation and clarification are:

1) Confirmation on the presence or absence of a Type 5 stream in the northeast corner of the plat;
2) Clarification and discussion on the interrupted buffer conditions to regulated water bodies, off-site and east of the project area; and
3) Discussion of wetland areas outside of and within 150 feet of the project site. Specifically identified is the water body referenced locally as Heron Pond in the southeast vicinity of the project.

BGE[LLC] staff visited the Blue Heron project site on July 8, 2013. The field review was completed under sunny skies and an ambient temperature of 68 degrees F. Precipitation had previously subsided in June and no rainfall had been recorded for over three weeks. The field investigation was lead by Robbyn Myers, a Professional Wetland Scientist. Findings and conclusions of the investigation follow.

1) <u>Type 5 Stream</u>. An immediate approach to the area in question revealed no observed stream channel or swale. The surrounding landform is gently rolling from the north to the southeast over a managed landscape vegetated with grasses and forbs. The topography blends towards the eastern property boundary line defined by a perimeter fence and an immediate shift in vegetation to mixed forest, shrubs and grasses beyond the fence line. B&A reports finding a "*Type 5 stream during the winter rainy season, in which surface flow was observed and this running water formed a defined*

channel." They further state that *"this channel clearly had no fish use or possibility of fish use and was dry during the summer months, justifying the Type 5 waters.*" Photographs, channel descriptions and/or quantification, which includes continuation of the Type 5 waters on-site and off-site was absent within the reporting document.

No channel or demarcation of seasonal surface water flow was observed in the area at the time of the field investigation; area shown in Photograph A. Topography does however suggest a linear path where the typed stream was documented as observed. This area does reflect a slight indication of topographical relief with an apparent emphasis, as the vegetation is slightly darker in hue. Species composition is consistent in the landscape, although the area had recently been mowed.

Photograph A

BGE[LLC] staff walked the northern perimeter of the fence line, up gradient of the area in question, peering under the dense cover of salmonberry for any signs of originating hydrology, to include, depressional areas absent of vegetation, rubble piles, scoured soils and/or hummocked vegetation. No hydrologic indicators were found. Staff then provided the same reconnaissance to the eastern property boundary, down gradient of the area in question, consistent with the general landform, to investigate any outlet to surface water formation. One area right at the fence line in the lowest point, revealed a slight indication of ponding; difficult to capture visually yet shown in Photograph B. The area was small, less than one square foot and did not appear to continue easterly, off-site.

Photograph B

Further review off-site, through the vegetation at this point, we did observe a deep scour and an immediate drop in elevation approximately a foot and a half perpendicular to the fence line. This area was heavily covered with vegetation from overhang as opposed to rooted individuals. Litter and debris was present along with a slight show of intermittent rubble. Water was absent and soils were dry at the surface. Following the course down gradient a channel begins to form and meander through existing mature vegetation towards Lemolo Creek. Four feet from the confluence to Lemolo Creek, surface waters appear as

flowing. The channel does not meet the physical classification criteria of having a two foot or wider bank full width from its origin just inside the fence line to the confluence with Lemolo Creek. The approximated show of surface water is 60-70 feet from the fenceline to Lemolo Creek.

With the presence of the scour and channel formation down gradient of the B&A documented Type 5 stream, we cannot confirm with confidence that surface waters were not present at the time of the 2007/2008 B&A assessment and wetland delineation. Further review for facts in the B&A report, specifically the hydrologic monitoring completed in spring of 2008, provides no definitive conclusions either, as the analysis lacks normalization to precipitation records. No precipitation data is provided within the report. Research records on-line were not readily available due to the lapsed time. However, known facts include a severe 100-year storm event in early December 2007 and another severe storm event in February 2008. The B&A report is not clear on the date and/or conditions in which the surface water was observed and we cannot confirm or deny flowing water at that time.

Classification for defining a stream as set forth in WAC 222-16-031 of the DNR Water Typing System, requires that a defined channel be present. The project site does not contain a channel and therefore, does not contain a Type 5 stream. Investigations up gradient, confirmed no channel present and that observed down gradient appeared to originate at a lower elevation, as groundwater, as opposed to a surface water conveyance.

Professional judgment and our experience with similar situations, allows us to piece together reason and conclusion for the conflicting conditions. First the landform to the north is up gradient of the project and is a large, well documented wetland area (US Fish and Wildlife Service National Wetland Inventory (NWI) and local delineation records). See attached NWI map. The project area is cut, and severes the wetlands continuity to Lemolo Creek. This type of severance is typical in farming practices where property lines essentially altered wetlands through the application of agricultural practices. Alterations included clearing, grading, draining and diverting the natural flow and distribution of water. Wetlands were converted to farmland. As this large wetland is north and upgradient of the project, it is likely that the natural hydrologic path is through the northeast corner of the project area. This hydrologic conveyance is now likely more prevalent through subsurface distributions along a seamed hardpan or through the parent sediment materials defined as gravelly loam. B&A indicates shallow wells on the property, providing evidence of a shallow ground water presence, although there is no evidence that hydrology from the north consistently moves along this path, at least within the upper two feet as wetland conditions are not supported. A more probable scenario is seasonal variations or severe storm events promote sheet flow when oversaturated conditions exist. In absence of higher frequency with this temporal pattern and the ongoing agricultural use, no defined channel is formed or sustained. No Type 5 stream is present in the north east corner of the project area.

2) <u>Interrupted Buffer</u>. NE Heron Pond Lane, Lemolo Creek, associated wetlands and Heron Pond are located to the east of the project area. Buffers to Lemolo Creek, associated wetland and the pond are applied generally to the available mapping as surveyed in preparation of the proposed land use application. As required in Title 16 of the Poulsbo Municipal Code (PMC), critical area review and assessment is interpolated and applied 150 feet from the project boundaries and includes the aforementioned water bodies. The buffers from the off-site water bodies enter into the project area, crossing lot lines on proposed plat parcels.

Within the standard buffer, between the proposed Blue Heron Plat and Lemolo Creek, is the road easement for NE Heron Pond Lane. This road is graveled and meanders through a mature forest with dense shrubs and ground cover. Road width is approximately 23 feet wide, lacks shoulders, and was

constructed into a benched setting adjacent the riparian corridor of Lemolo Creek. A road segment is shown in Photograph C with Lemolo Creek to the right.


Photograph C

A general exemption is respectfully requested under the conditions herein provided by definition as an "Interrupted Wetland and Fish and Wildlife Habitat Conservation Area Buffers" (Title 16.20.120 PMC). The request and application of the exemption is based on the presence of the road within the buffer and the minimization of disturbance proposed with the Blue Heron Plat. The proposed platted property is currently under agricultural land use. Defined as open horse pasture the parcel area is used in its entirety. The projects perimeter, or parcel boundary, is currently fenced and rotated for feed and horse pasture. Beyond the fence line, the landscape is native, mature mixed forest with various strata towards the road easement. Beyond the road easement to the east, the buffer conditions are driven by stream morphology. Pursuant to Title 16.20.120 PCC '*where a legally established, pre-existing use of the buffer exists (such as a road or structure that extends into the regulated wetland buffer), those proposed activities that are within the wetland or stream buffer, but are separated from the critical area by an existing permanent substantial improvement, which serves to eliminate or greatly reduce the impact of the proposed activity upon the critical area, are exempt; provided, that the detrimental impact to the critical area does not increase.'*

The requested general exemption for an interrupted buffer for the Blue Heron Plat provides no change in the existing forested buffer integrity from the road to the stream corridor. The buffer width shown to extend into the proposed plat is pasture, area that is already altered in character and function. Existing conditions are open pasture and the proposed change is a stormwater facility. No structural component (ie. housing, roads, impervious surface) is proposed in the paper buffer. Therefore, no detrimental impacts to the Lemolo Creek and its buffers is anticipated. The existing corridor of Lemolo Creek will not be altered or severed from large land tracts, maintaining current conditions for habitat potential and opportunity. Hydrology is strictly managed for quality and quantity (stormwater within the plat), mimicking preconstruction conditions and maintaining temporal volumes to Lemolo Creek and the watershed. The buffer of Lemolo Creek is interrupted with the presence of NE Heron Pond Lane. This interruption, coupled with the existing and proposed use within the extent of "paper" buffer on-site, introduces no change in buffer function or integrity.

3) <u>Heron Pond</u>. This surface water is located off-site of the southeastern corner of the Blue Heron Plat. A windshield review was conducted to confirm an open water system with littoral zone complexity along its perimeter. Professional judgment of BGE^{LLC} staff, confirms with a high probability that the pond is a jurisdictional wetland based on observed wetland parameters. This does not remove evidence of

anthropogenic alterations and/or origin of the pond. Mapping provided by the engineer (Team 4) show this pond to be approximately 135-140 feet from the projects boundary. NE Heron Pond Lane severs the project area from the pond, interrupting the applied buffer, adequately separating the project from likely effecting functional attributes of the pond and its buffer. The remaining buffer along the pond is mixed, mature forest with a decadent shrub density. The PMC does not require delineation of off-site wetlands, therefore, the surface water was not addressed in the B&A report. It is our opinion that the pond would be regulated and buffers applied. However, request and documentation of an interrupted buffer eliminates the need to quantify the boundary, rating and assessment to further the land use review process.

The City of Poulsbo staff raise the question of discharging stormwater into wetlands, or the pond, and requests assurance that the discharge does not increase or decrease the rate of flow, alter the hydroperiod or decrease water quality (PMC 16.20.235.E). This pond has a regulated outfall through a culvert at a road crossing. Given strict compliance with design of water quality and quantity in accordance with pre-existing conditions, stormwater discharges to the pond are anticipated to maintain the hydrologic balance for the receiving water bodies and within the watershed. No direct discharge to the pond is proposed and no change in hydrologic function is anticipated with compliance of stormwater provisions for the plat development under the PMC.

Summary

After BGE^{LLC} staffs review of the record, assessment of field conditions and cross reference of conditions and proposal for compliance with the Poulsbo Municipal Code for the Preliminary Plat of Blue Heron, we provide the following findings and conclusions.

1) A Type 5 stream is not present in the northeast corner of the plat as reported by B&A in the *Wetland and Stream Report* dated July 11, 2008. A drainage is present off-site, or beyond the fence line and retains a limited conveyance of approximately 65 feet prior to its confluence with Lemolo Creek. Buffers are not required for drainages and as the formation of this surface water collects off-site, its occurrence is within the standard buffer to Lemolo Creek.

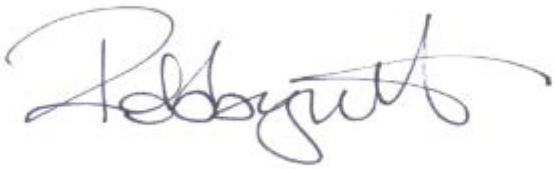
2) Off-site water bodies include Lemolo Creek and its associated wetlands, which includes a water body locally referenced as Heron Pond. As these critical areas are off-site, boundary determinations are not required. However, assessment of the water bodies was completed as a these resources are readily accessible via NE Heron Pond Lane. Lemolo Creek is defined within the valley floor and maintains complex strata for both stream and riparian function. Heron Pond intercepts Lemolo Creek for an unknown area and then outfalls via a culvert under an access road. From there, Lemolo Creek reestablishes within a high quality valley floor setting. The Poulsbo Municipal Code requires a 150 foot buffer to Lemolo Creek and by default (off-site) Heron Pond. This buffer enters onto the Blue Heron Plat, weaving along the eastern boundary at various widths.

With the presence of NE Heron Pond Lane, the buffer is interrupted, defined as being a structural break from east to west to the continuity of habitat and functional attributes. Native strata are present from the road to the plat boundaries. As the road is a structural impact, existing and ongoing, and the proposed development is set even further away from the road

and creek, additional impacts to the Lemolo Creek corridor are not anticipated and the probability of detrimental effects is absent provided implementation of current design methods for land development (ie; stormwater facilities and protection of significant trees, copses and native vegetation as applicable).

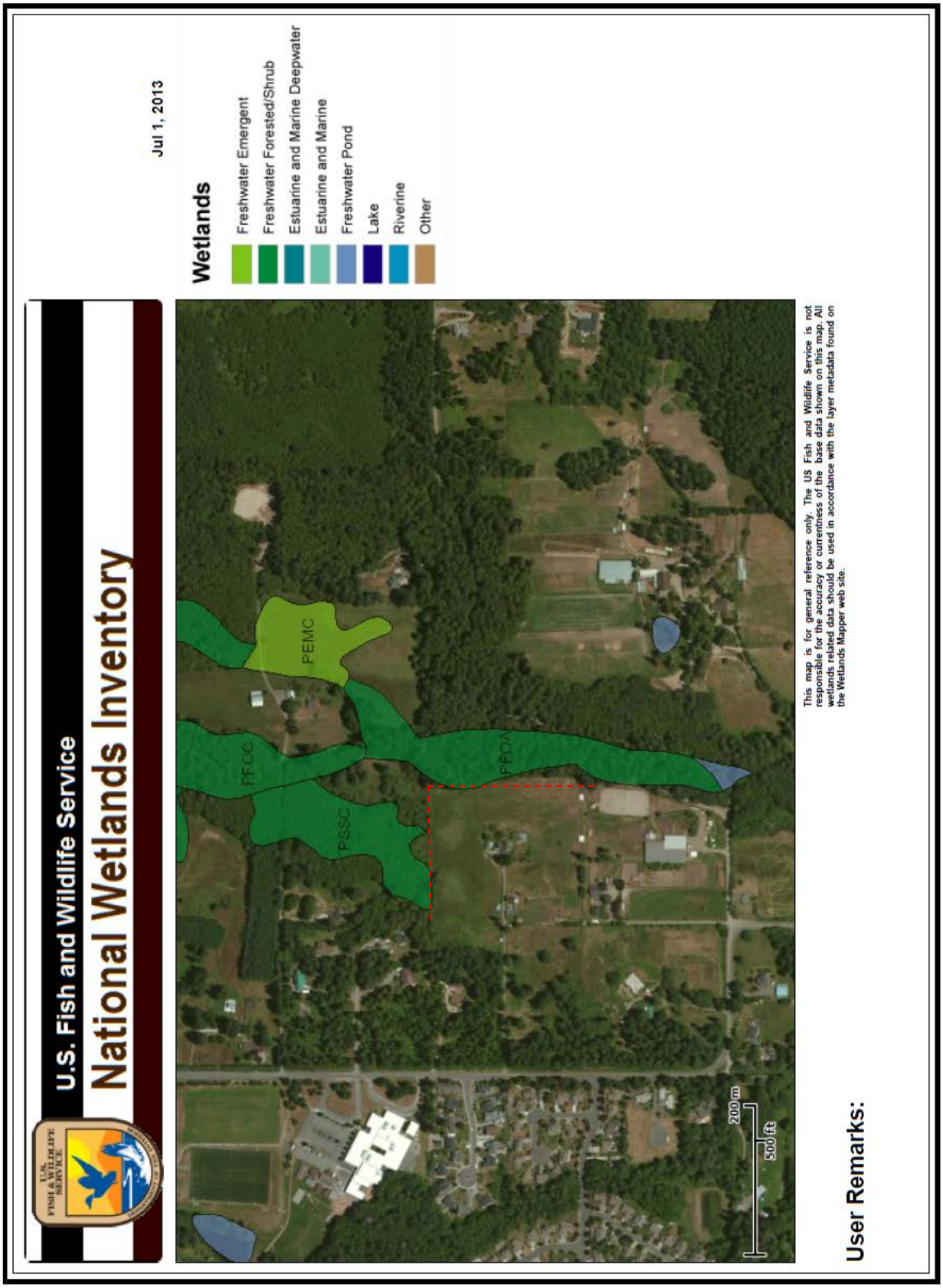
3) Professional judgment of the conditions of Heron Pond provides a determination that it is likely a jurisdictional wetland. Quantification of rating for buffer establishment was not completed in this task based solely on the request and application of interrupted buffer conditions discussed in this memorandum (Title 16.20.120 PMC). Concurrence of the applicability of this exemption to the buffer of Heron Pond removes the need to provide detailed assessment and quantification of functional attributes for rating purposes. The presence of NE Heron Pond Lane severs the continuity of buffer function if strictly applied. Stormwater design for the proposed Blue Heron Plat is designed to support a control and quality equivalent to existing conditions. No change in hydrologic function to the surrounding water bodies and within the watershed is anticipated.

Sincerely,



ROBBYN MYERS, PWS

Wetland Biologist / Environmental Specialist


U.S. Fish and Wildlife Service
National Wetlands Inventory
Jul 1, 2013
Wetlands
Freshwater Emergent
Freshwater Forested/Shrub
Estuarine and Marine Deepwater
Estuarine and Marine
Freshwater Pond
Lake
Riverine
Other
PFOC
PEMC
PSSC
PFOA
200 m
500 ft
This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.
User Remarks: