

## **Kettle Creek North – Land Suitability Analysis**

### **INTRODUCTION**

A land suitability analysis is a process employed to determine the most appropriate use of land. In the analysis, a site's physical characteristics and man-made features are inventoried and then analyzed in combination to determine appropriate land uses. Site investigations include topography and slope of the land, vegetation, soils and geology as well as on and off site man – made features. These features could include land use, potential access or lack of access, zoning and Master Planned Land Use. The inventoried information is compiled, analyzed, and mapped as a Composite Analysis Map which presents opportunities and constraints to development of the site.

### **SLOPE ANALYSIS**

The Slope Analysis for the site demonstrates the development potential for the site as well as areas of the site constrained by steep slopes. Areas of the site constrained by slope are generally too steep to develop and are generally in excess of 25%. Portions of the site that are unconstrained may not be available for development due to other factors such as floodplain, endangered species or accessibility. In some instances, slopes can be mitigated by grading.

### **VEGETATION**

An aerial survey was used to identify forested areas of this site. Site inspection indicates that the majority of the on-site trees are Ponderosa Pine interspersed with Gambel's Oak. Some willows and cottonwood trees are associated with the Kettle Creek drainage. Short grass prairie covers substantial portions of the site.

### **ENVIRONMENTAL CONSTRAINTS**

The site was surveyed for wetlands and for Preble's Meadow Jumping Mouse, an endangered species. The survey was prepared by CORE Consultants of Denver and submitted by them to the US Fish & Wildlife Service for review and approval, which was given. The Preble's Meadow Jumping Mouse critical habitat line was used in this Analysis as a constraint indicating preservation – no development proposed.

The Kettle Creek drainage flows through the property from east to west. The drainage has, over time, carved a steep canyon with near vertical slopes of over 50 feet in elevation in some locations. The floodplain for Kettle Creek through this site is entirely within the Preble's Meadow Jumping Mouse habitat which forms the more restrictive constraint to development. The Kettle Creek floodplain area should be preserved.

## SOILS AND GEOLOGY

CTL Thompson was commissioned to provide an analysis of soils and geology of the site. The CTL Thompson report indicated that there are areas of slope instability on site and recommended that a setback from these areas be employed. The Colorado Geologic Survey (CGS) reviewed this report and concurred with its findings. CGS recommended that additional analysis be provided for proposed lots approaching the recommended setback lines. The CTL Thompson setback line has been provided as a constraint to development.

## MAN-MADE FEATURES

Land use on the Kettle Creek North property is regulated by the Briargate Master Plan. This Master Plan shows a variety of land uses including preservation areas, residential areas of varying densities, as well as non-residential land use. Site access has been provided by adjacent City of Colorado Springs development to the south and by Highway 83 for the northwestern portions of the holdings. Howells Road, a gravel County road borders the site on the east and is not available for access.

Rural residential land use borders the eastern portion of the site. A land use transition to urban densities should be provided where rural residential abuts the site.

## COMPOSITE ANALYSIS

The Composite Analysis Map combines the findings of the inventoried features of the site and divides the site into three categories of potential land use. Category A represents areas of the site that should be preserved and not developed. The Kettle Creek drainage and associated areas impacted by the Preble's Meadow Jumping Mouse critical habitat as well as areas constrained by slope stability have been designated in this category. In addition, some areas where steep slopes combined with dense vegetation exist have also been designated in this category.

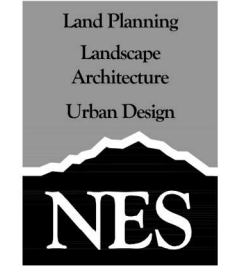
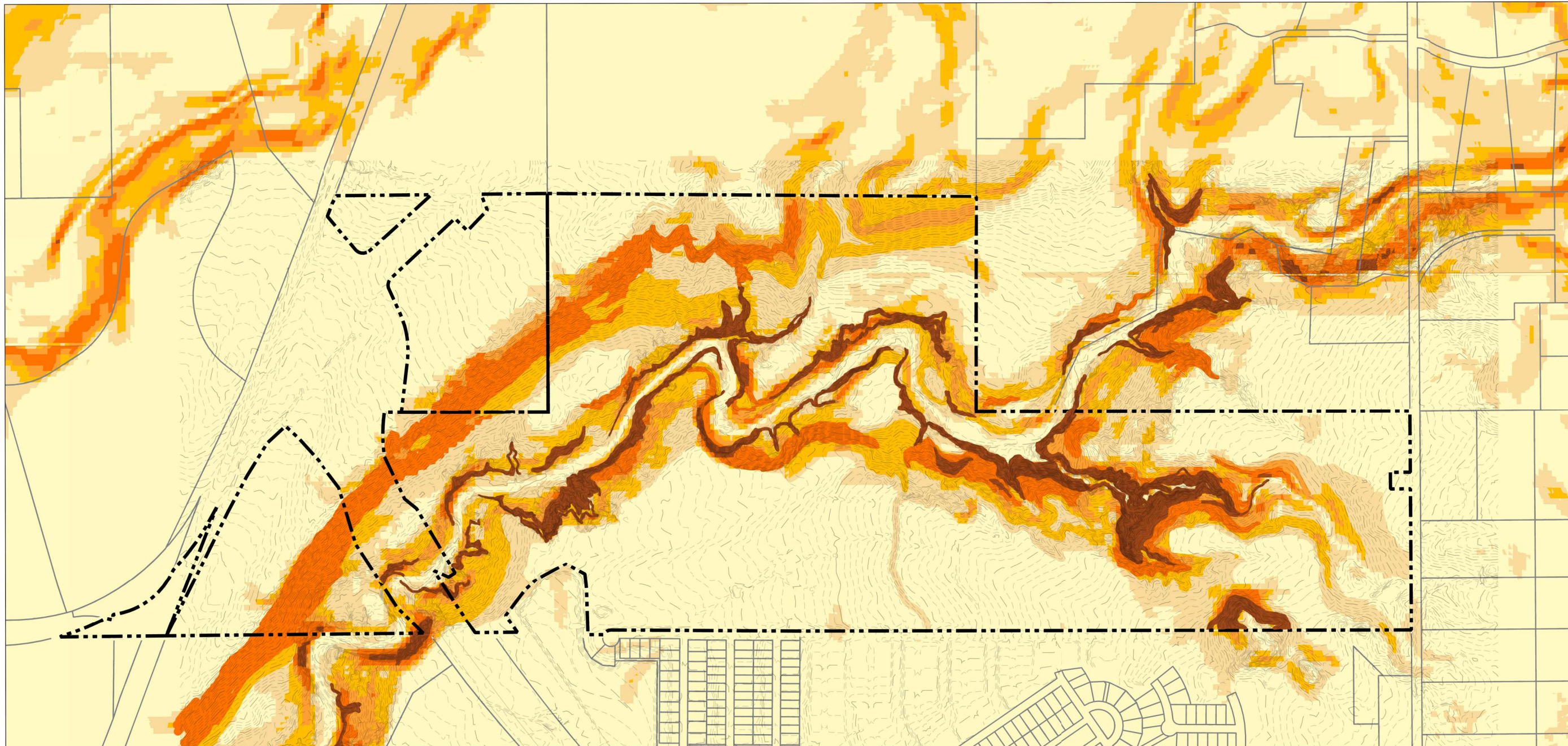
Category B has been designated on land that has some development constraints, but is generally available for some development with mitigation of constraints. These areas may require additional study and analysis at the site development stage.

Category C is designated on areas of the site where there are no significant development constraints and no impacts to natural systems.

The Composite Analysis Map also indicates where detailed land use evaluations, and in some cases opportunities, are present on site.

A significant amount of land in Category A land is in the process of being acquired by the City of Colorado Springs TOPS program. The initial closing of approximately one half of the land under consideration for acquisition is anticipated in late 2019. Land outside of Category A is also being acquired by TOPS. Some portions of the site identified for preservation will be owned and managed by future owners associations or dedicated to the City based on detailed development plans.

# SLOPE ANALYSIS LEGEND



N.E.S. Inc.  
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Fax 719.471.0267

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## KETTLE CREEK NORTH

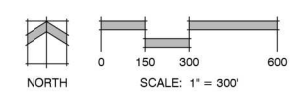
### LAND SUITABILITY ANALYSIS

COLORADO SPRINGS, CO




DATE: 10/4/19  
PROJECT MGR: J. MAYNARD  
PREPARED BY: B. SWENSON

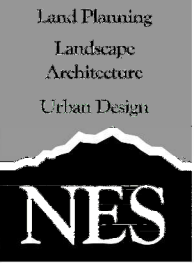
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SLOPE ANALYSIS

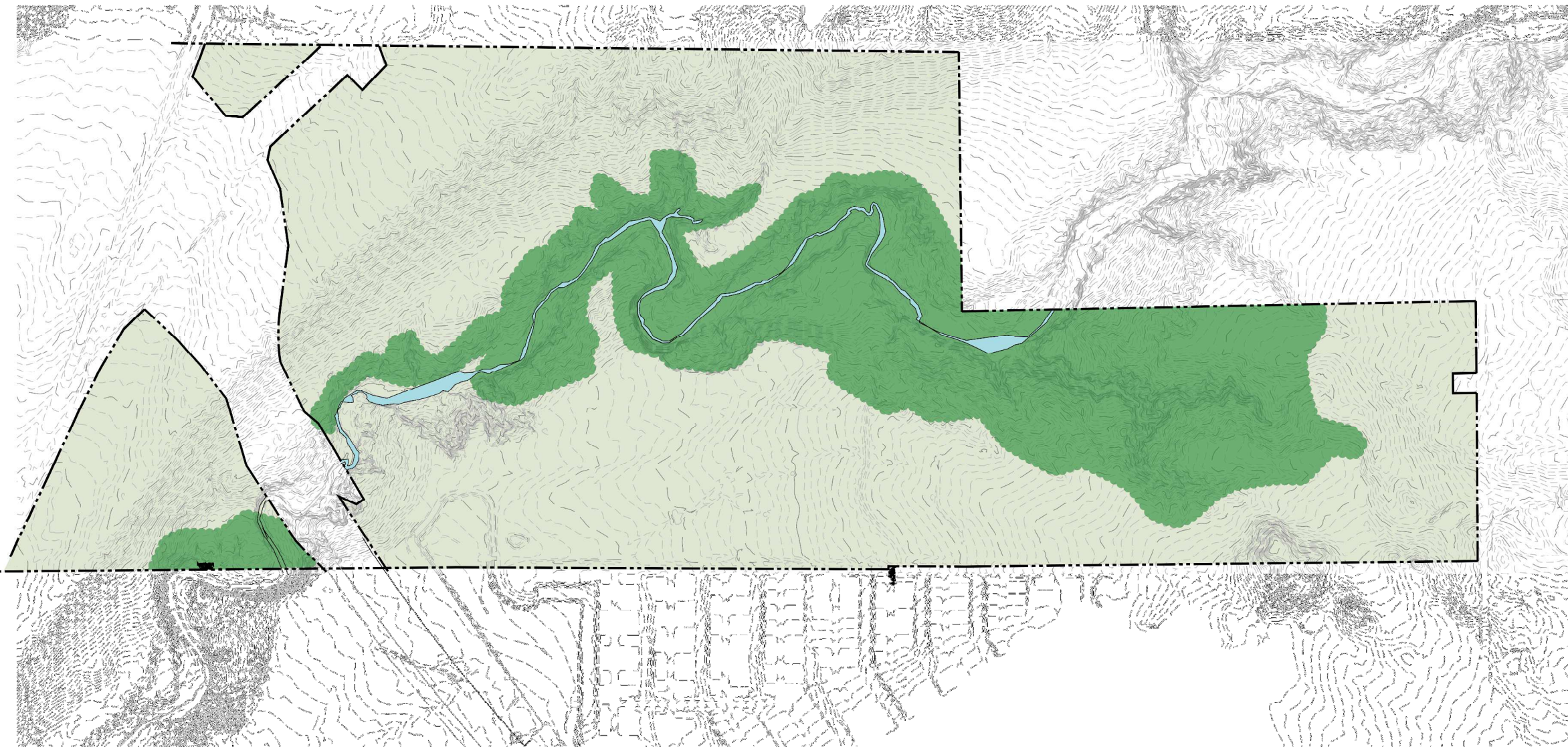


**LEGEND**

-  FORESTED AREA
-  SHORTGRASS PRAIRIE
-  WETLAND



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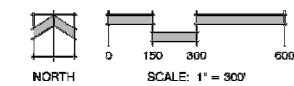
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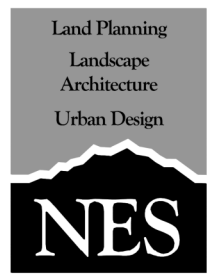
**VEGETATION ANALYSIS**

**1**  
 1 OF 6

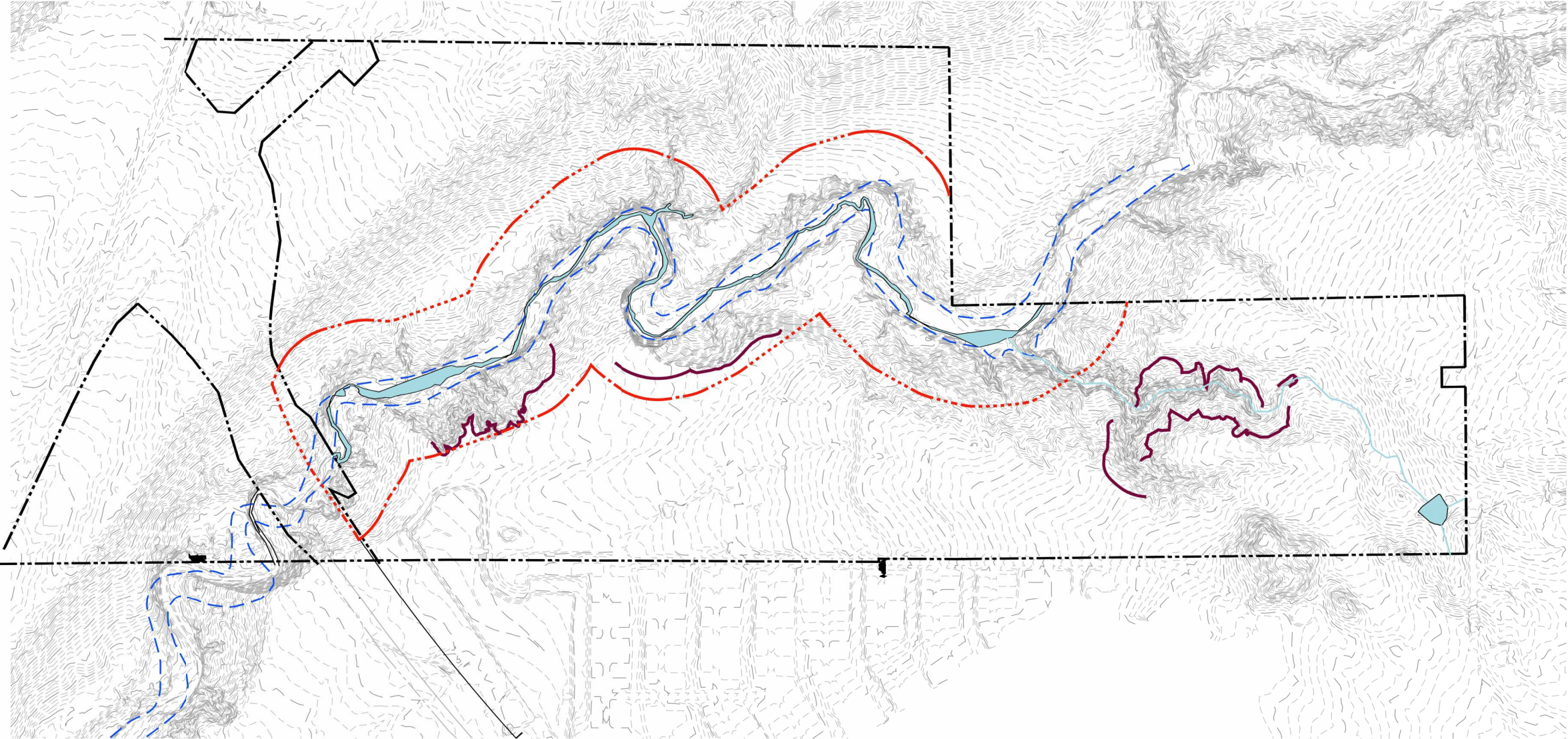


# LEGEND

- - - PREBELS MEADOW JUMPING MOUSE CRITICAL HABITAT LINE
- - - 100 YEAR FLOODPLAIN
- WETLAND
- - - GEOLOGIC SETBACK LINE



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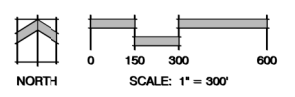
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ENVIRONMENTAL CONSTRAINTS




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LEGEND:

TH-1  
● APPROXIMATE LOCATION OF EXPLORATORY BORING.

GEOLOGIC UNITS AND (MODIFIERS)

-  SURFICIAL GEOLOGIC CONTACTS
- Qal** ALLUVIUM IN STREAM CHANNELS: SAND
- Qsw** SLOPEWASH COLLUVIUM: SAND AND CLAY
- Qes** EOLIAN SILTY SAND
- Qls** PRE-HOLOCENE LANDSLIDE. CURRENTLY DORMANT AND INACTIVE WITH WELL-DEVELOPED DRAINAGE PATTERN

**TKda<sub>3</sub>** DAWSON FORMATION. FACIES UNIT 3; DOMINANTLY SANDSTONE WITH SOME CLAYSTONE

**Pus** POTENTIALLY UNSTABLE AND UNSTABLE SLOPES ARE TYPICALLY DEEPLY ERODED STREAM BANKS AND PROXIMATE AREAS

NOTES:

1. BASE DRAWING WAS PROVIDED BY VINTAGE COMMUNITIES IN AN EMAIL DATED APRIL 5, 2018.
2. ALL BOUNDARIES SHOWN SHOULD BE CONSIDERED APPROXIMATE. THEY ARE BASED UPON A SUBJECTIVE INTERPRETATION OF PUBLISHED MAPS, AERIAL PHOTOGRAPHS AND AN INITIAL FIELD RECONNAISSANCE. CHANGES IN THE MAPPED BOUNDARIES SHOWN ARE POSSIBLE AND SHOULD BE EXPECTED WITH MORE DETAILED WORK AND FURTHER INFORMATION. ALL INTERPRETATIONS AND CONDITIONS SHOWN ARE PRELIMINARY AND FOR LAND-USE PLANNING ONLY.

Land Planning  
Landscape  
Architecture  
Urban Design

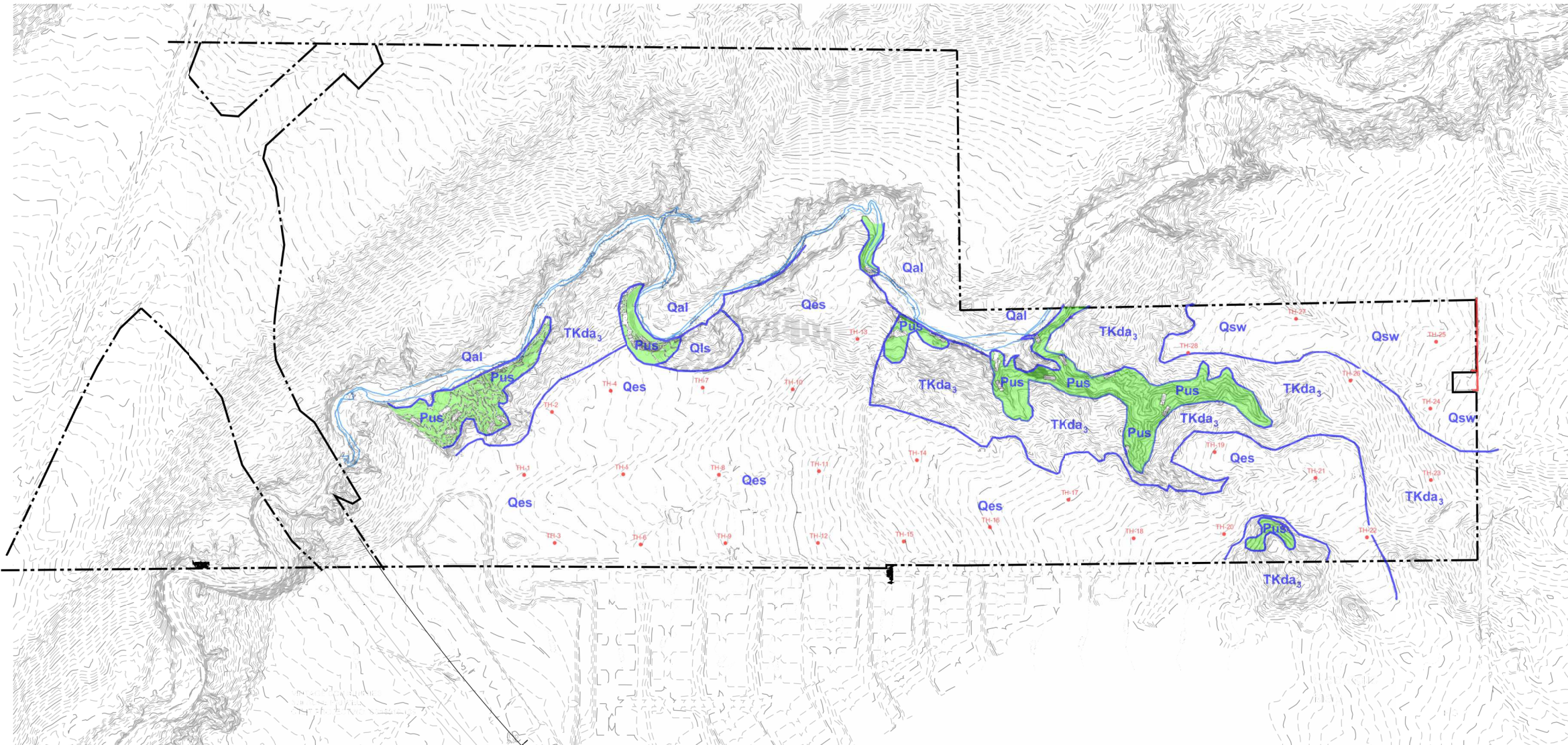


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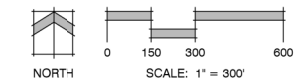
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SOILS AND GEOLOGY  
ANALYSIS












**LEGEND**

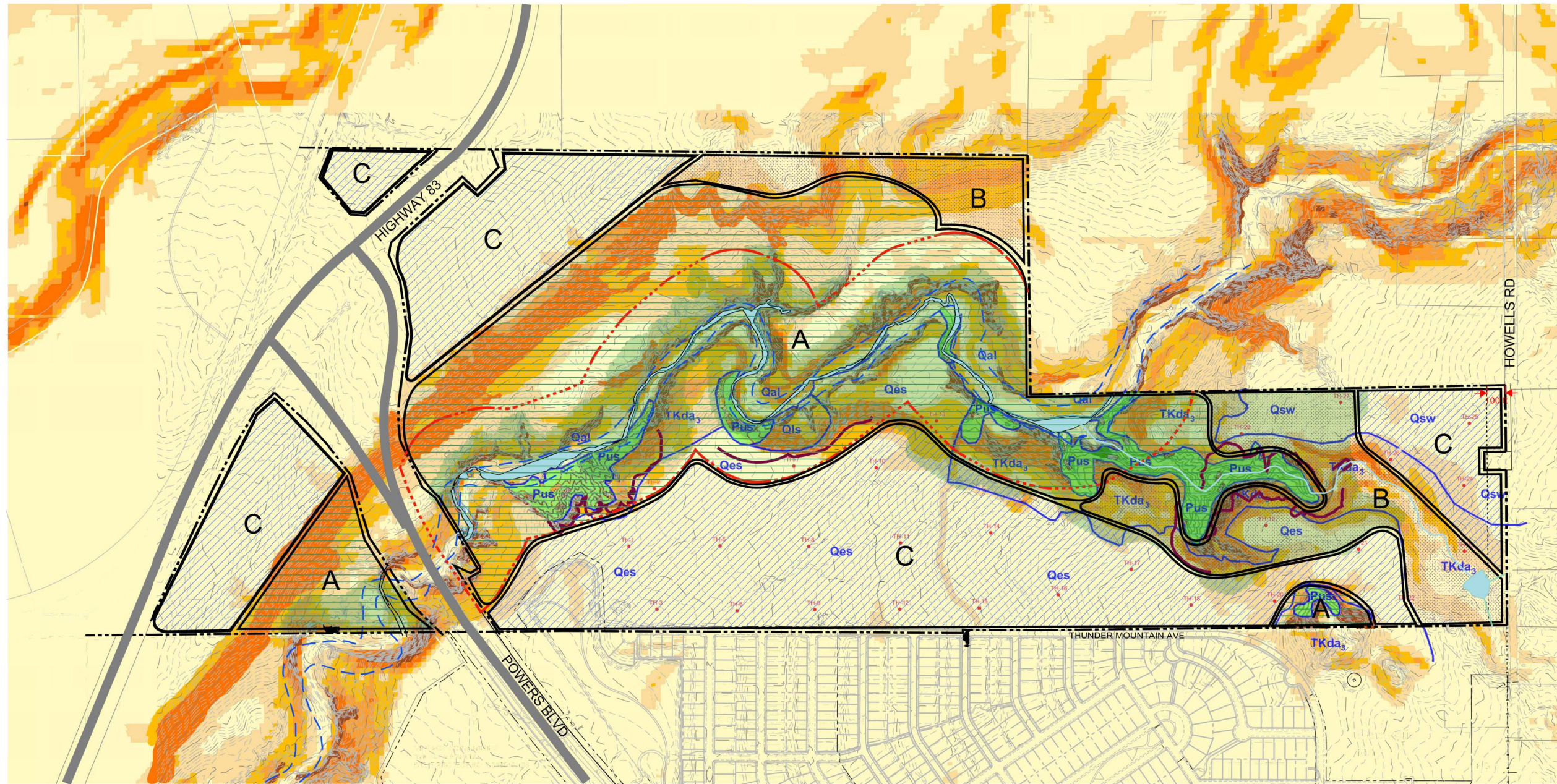
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-  WETLAND

-  PREBELS MEADOW JUMPING MOUSE CRITICAL HABITAT LINE
-  100 YEAR FLOODPLAIN

**SLOPE ANALYSIS LEGEND**

- |   |           |   |            |
|---|-----------|---|------------|
|  | 0% TO 5%  |  | 12% TO 15% |
|  | 5% TO 8%  |  | 15% TO 25% |
|  | 8% TO 12% |  | 25% AND UP |

-  CONSTAINED / PRESERVED
-  SOME CONSTRAINTS
-  NO CONSTRAINTS



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**COMPOSITE ANALYSIS**

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