

IDX FALL 2015

MICRONIZED WOOD PRODUCT PLANT AT HERMANN BROTHERS

INTRODUCTION TO SCHEMATIC DESIGN



DANE CAMENZIND



TYLER KERSCHNER



VICTOR SCHLONGA



BRENT SIEGFRIED



TYLER THORNTON



INTRODUCTION

PRODUCT



NARA

Northwest Advanced Renewables Alliance

NARA is led by Washington State University and supported by the Agriculture and Food Research Initiative Competitive Grant no. 2011-68005-30416 from the USDA National Institute of Food and Agriculture.



INTRODUCTION

SITE LOCATION



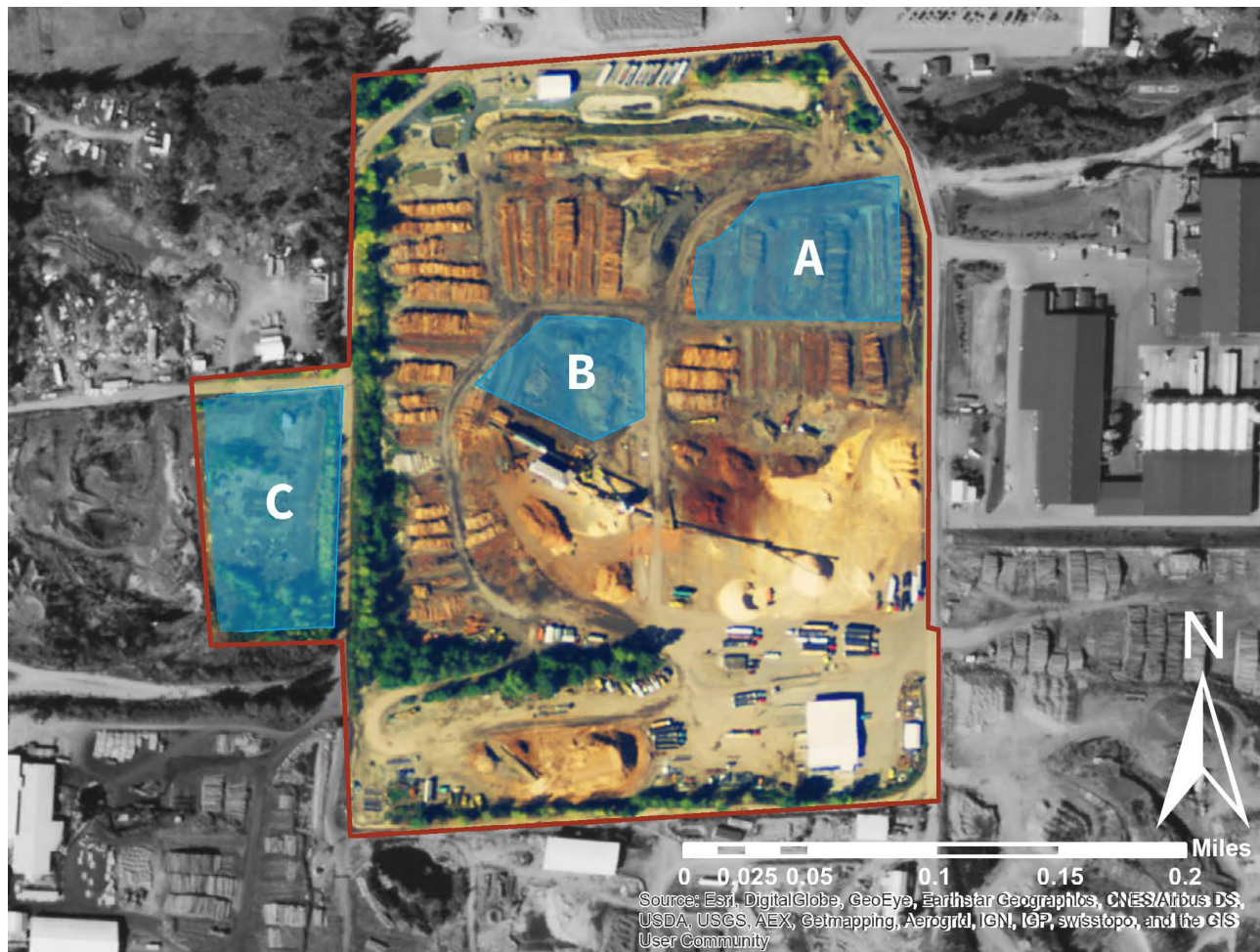
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INTRODUCTION

ON-SITE ANALYSIS



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MICRONIZED WOOD PROCESS

TRUCK DUMP



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MICRONIZED WOOD PROCESS

FEEDSTOCK



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MICRONIZED WOOD PROCESS

HAMMERMILL



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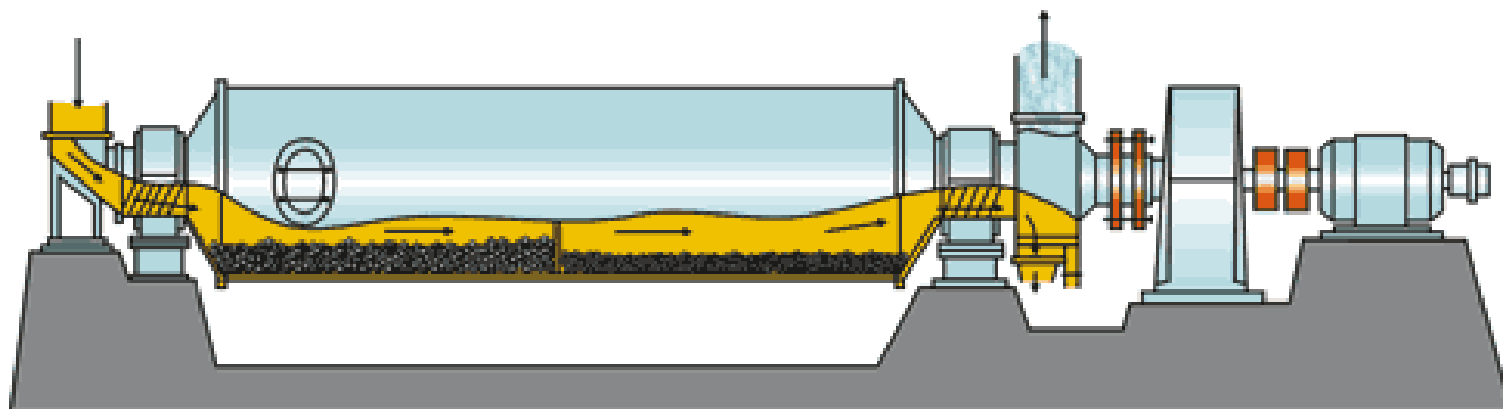
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MICRONIZED WOOD PROCESS

ROTARY DRYER



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MICRONIZED WOOD PROCESS

HAMMERMILL



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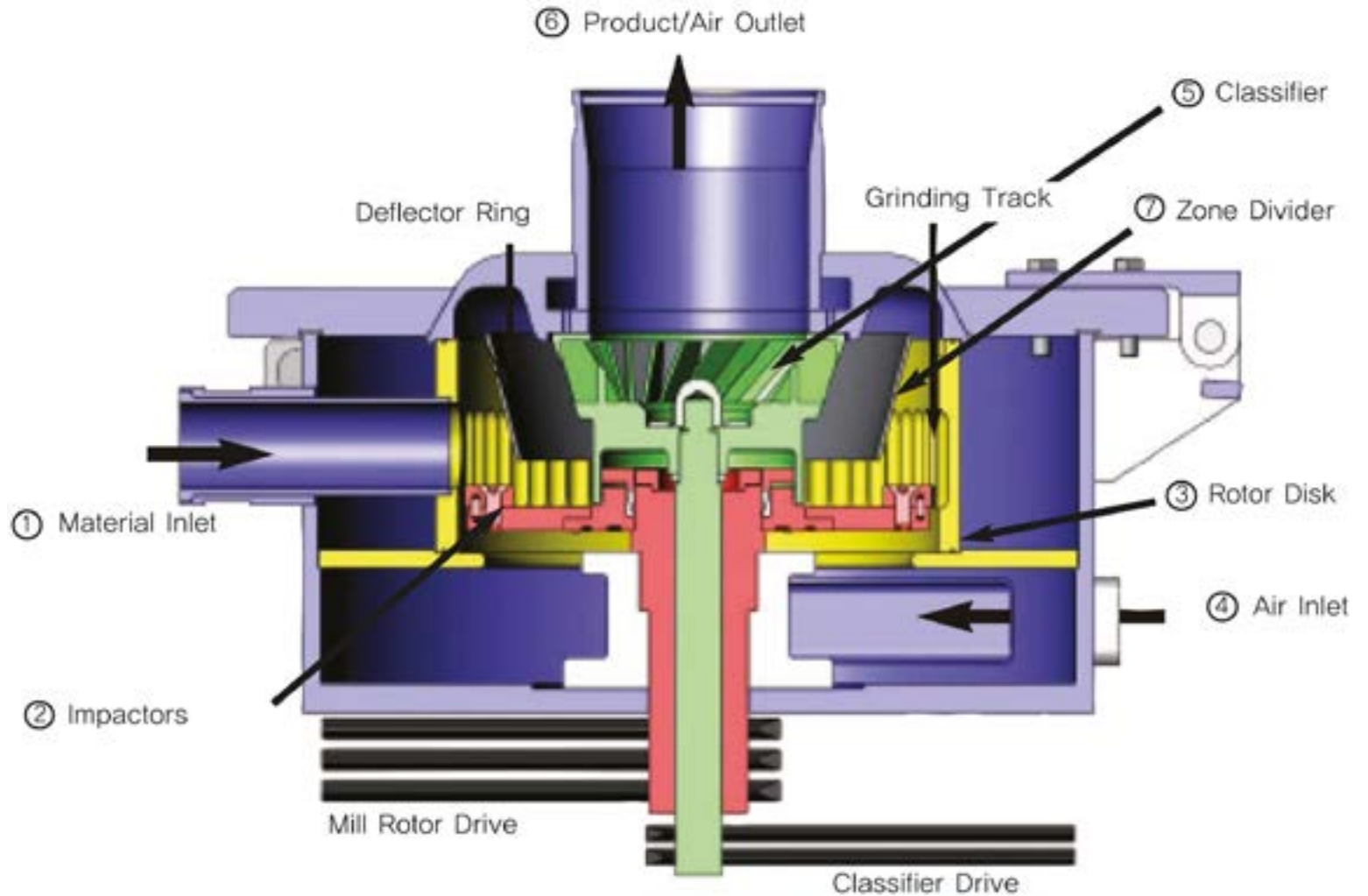
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MICRONIZED WOOD PROCESS

AIR CLASSIFIER



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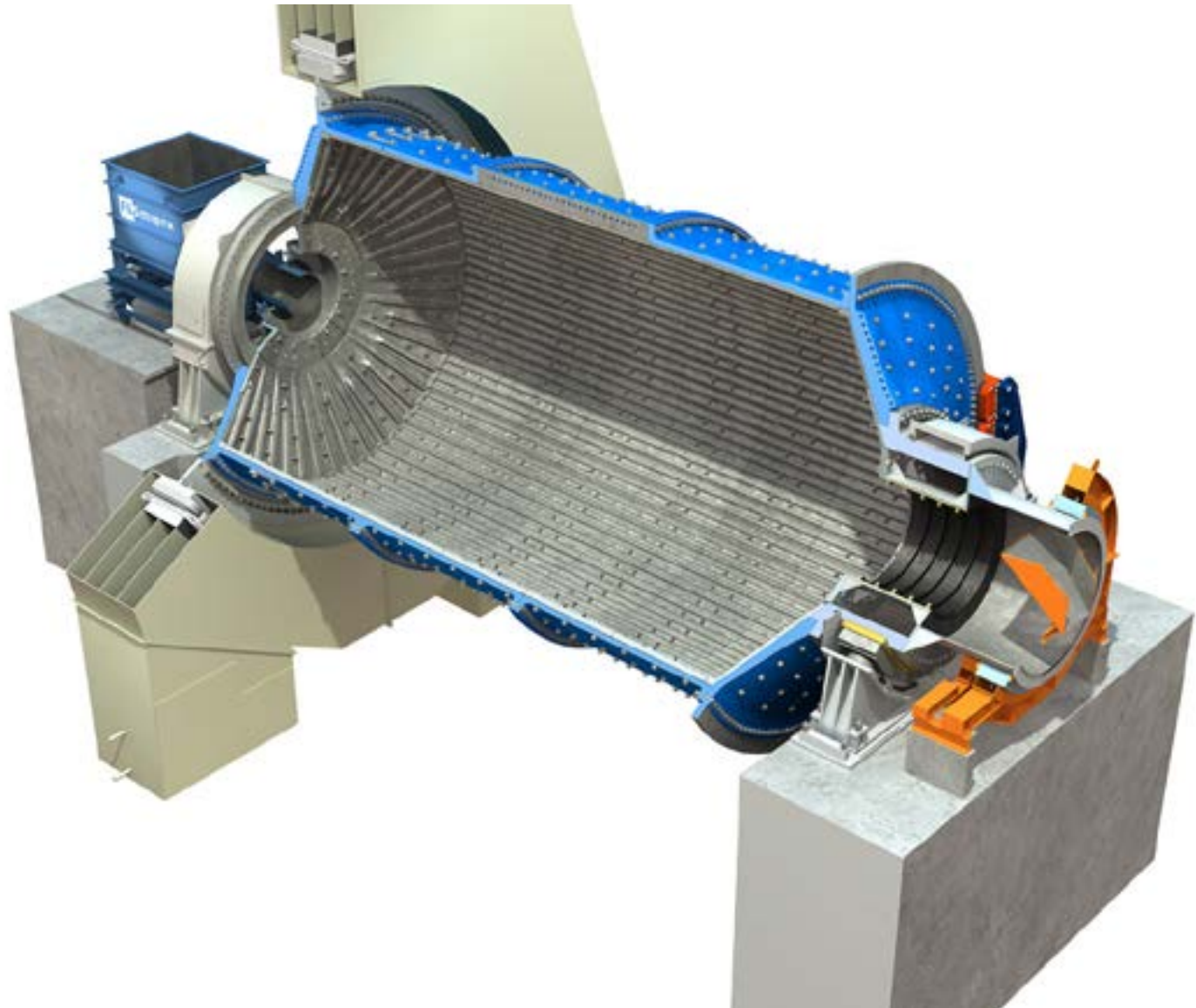
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MICRONIZED WOOD PROCESS

BALL MILL



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MICRONIZED WOOD PROCESS

DRY STOARGE



NARA

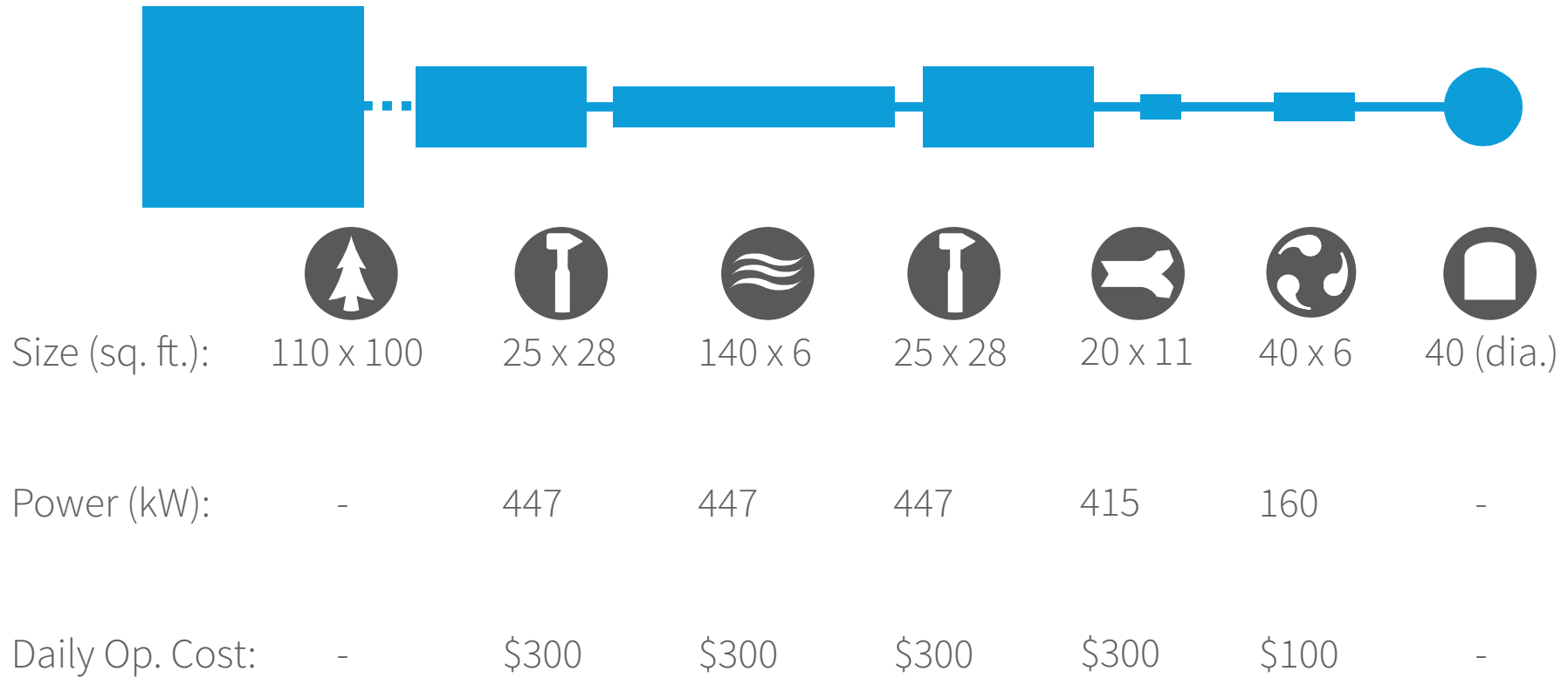
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MICRONIZED WOOD PROCESS

EQUIPMENT INFORMATION



1 Truck/Hour

INPUT

100,000 Green Tons/Year



15 BDT/Hour

OUTPUT

50,000 BDT/Year



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SITING COMPARISON CRITERIA

REASONING, TOPOGRAPHY, UTILITIES, & FLOW

R EASONING
INTRODUCTION & CURRENT USAGE

T OPOGRAPHY
CONSTRUCTABILITY & SITE WORK

U TILITIES
EASE OF INSTALLATION & PROXIMITY

F LOW
ACCESSIBILITY & CONFLICT DETECTION



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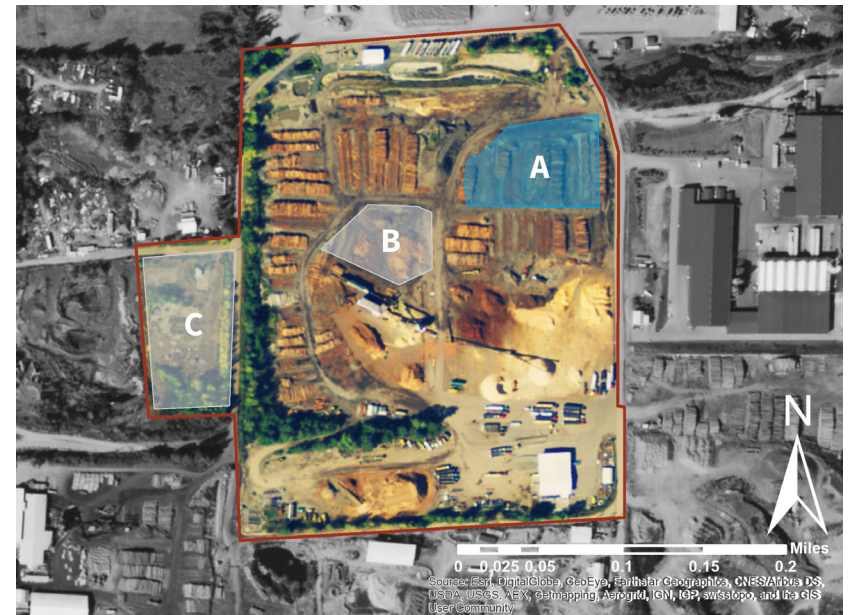
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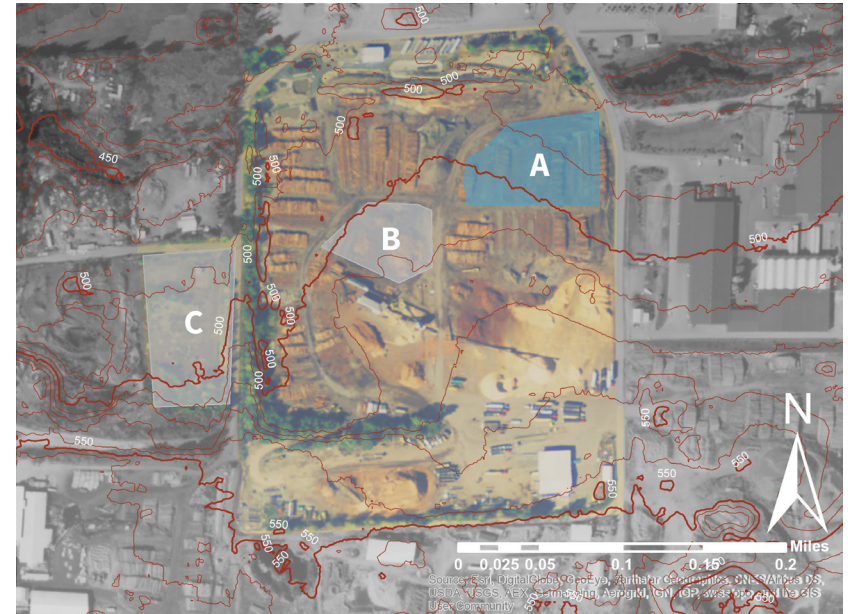
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ACCESSIBILITY & CONFLICT DETECTION



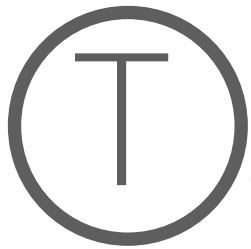
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REASONING

INTRODUCTION & CURRENT USAGE



TOPOGRAPHY

CONSTRUCTABILITY & SITE WORK



UTILITIES

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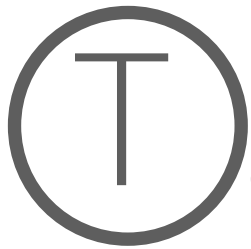
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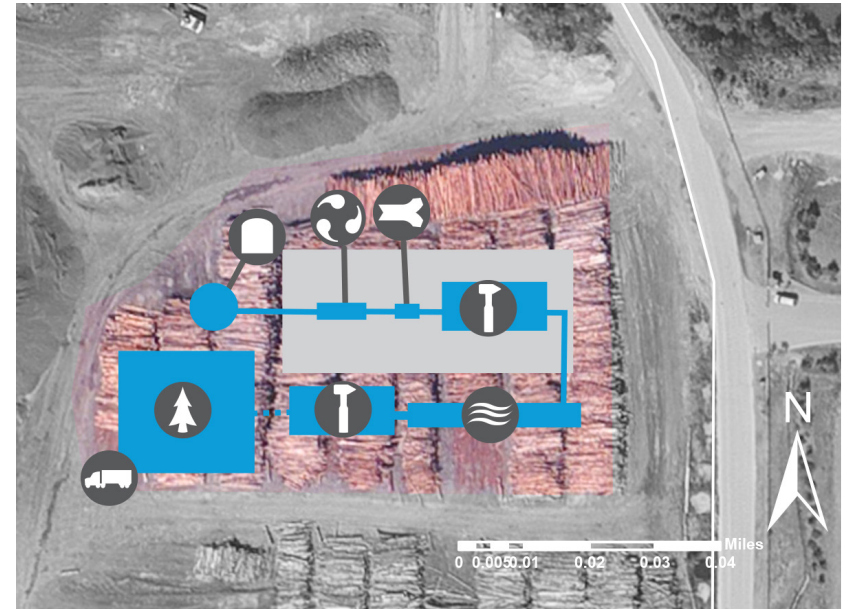
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SITE A

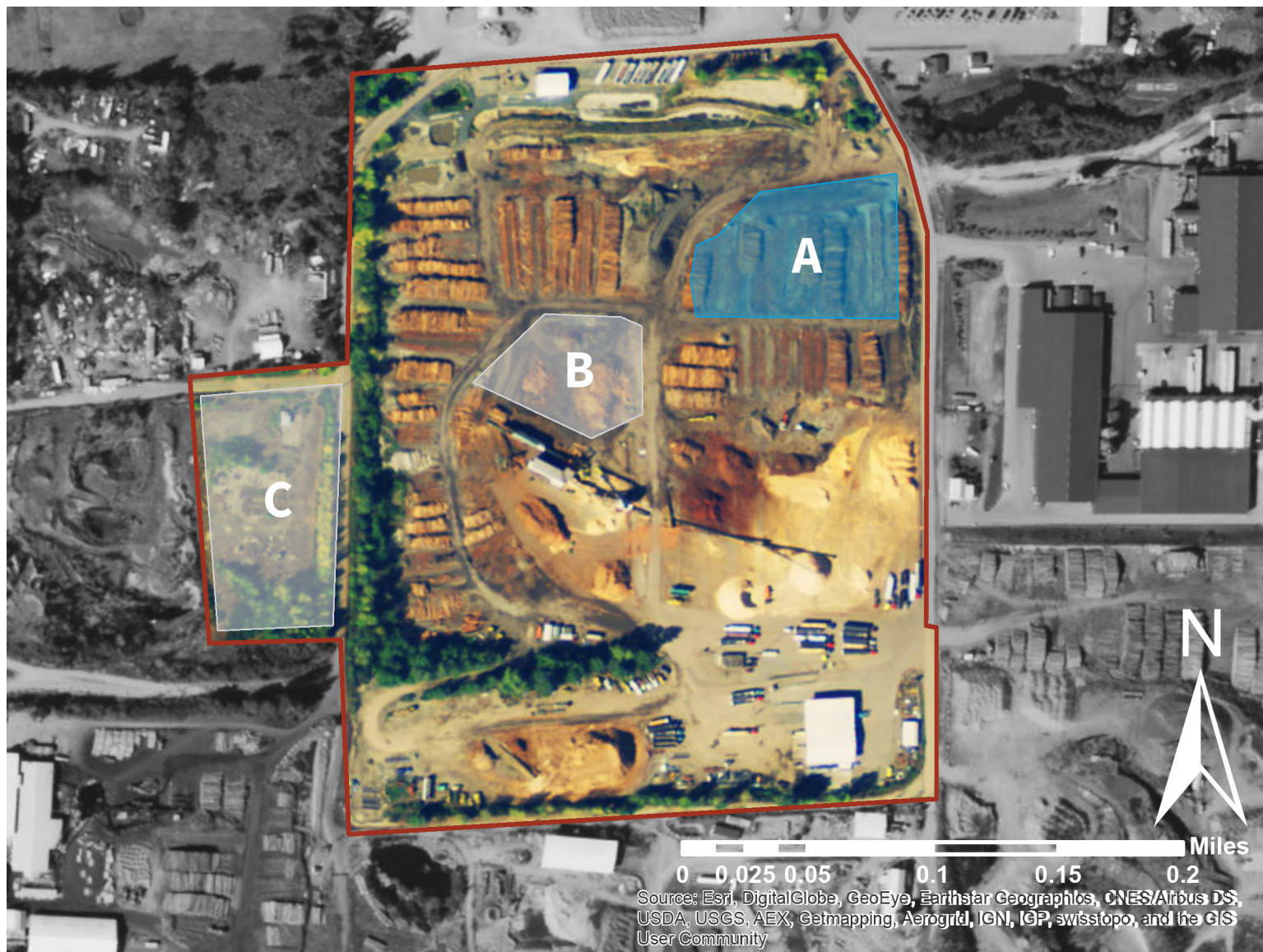
REASONING

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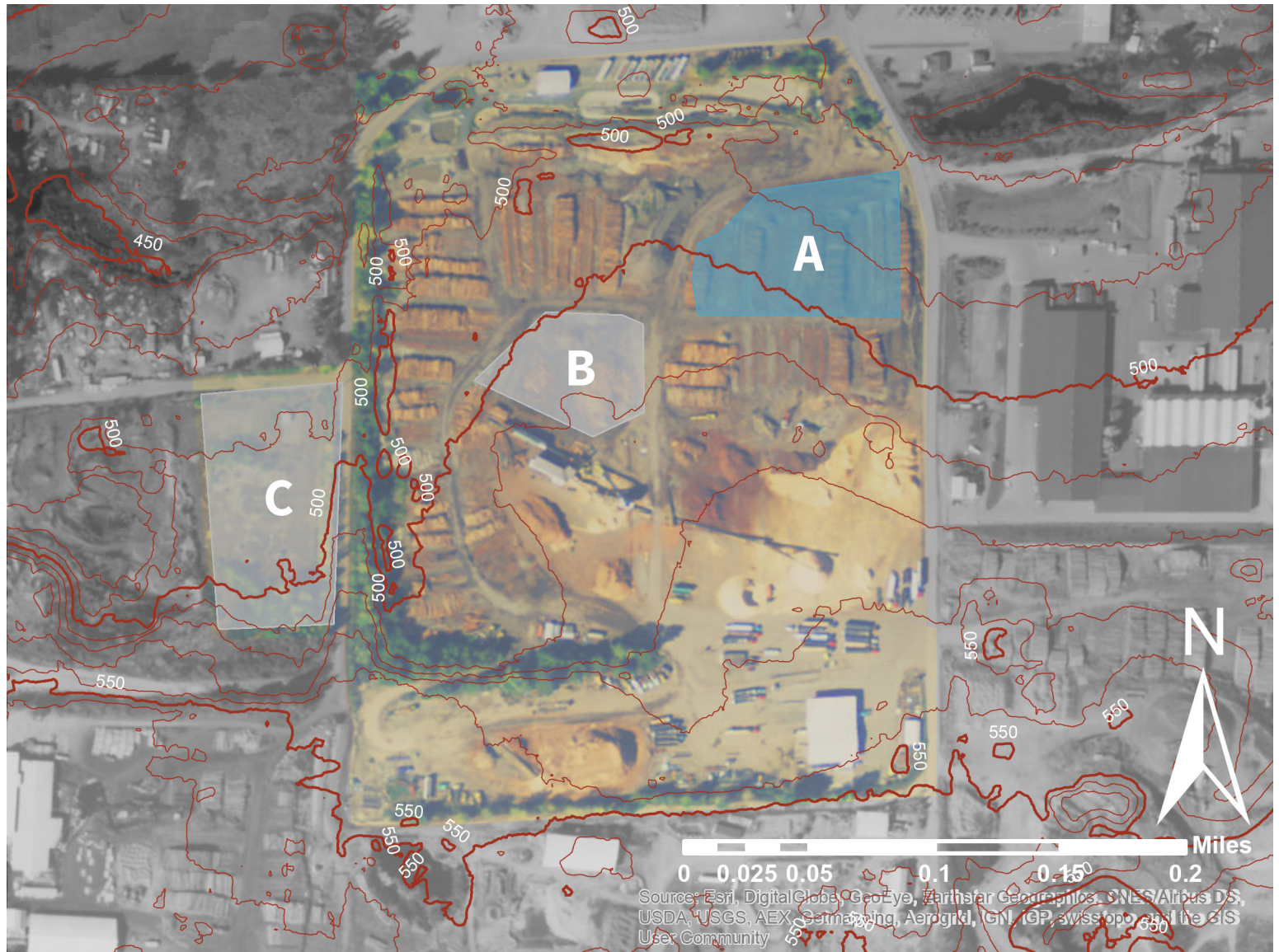
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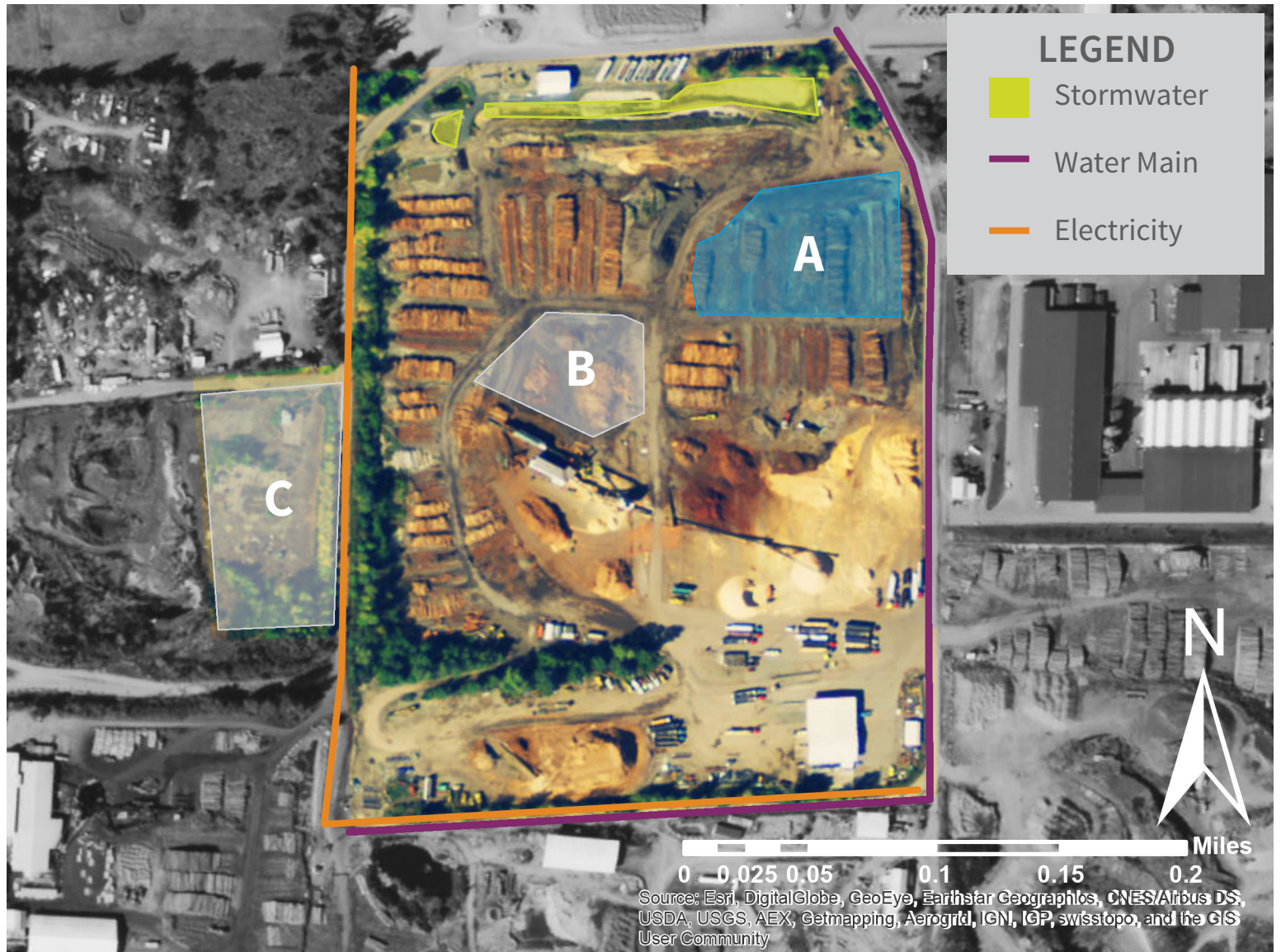
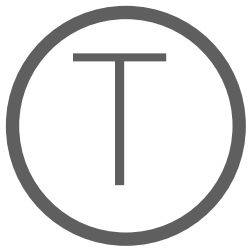
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SITE A

UTILITIES



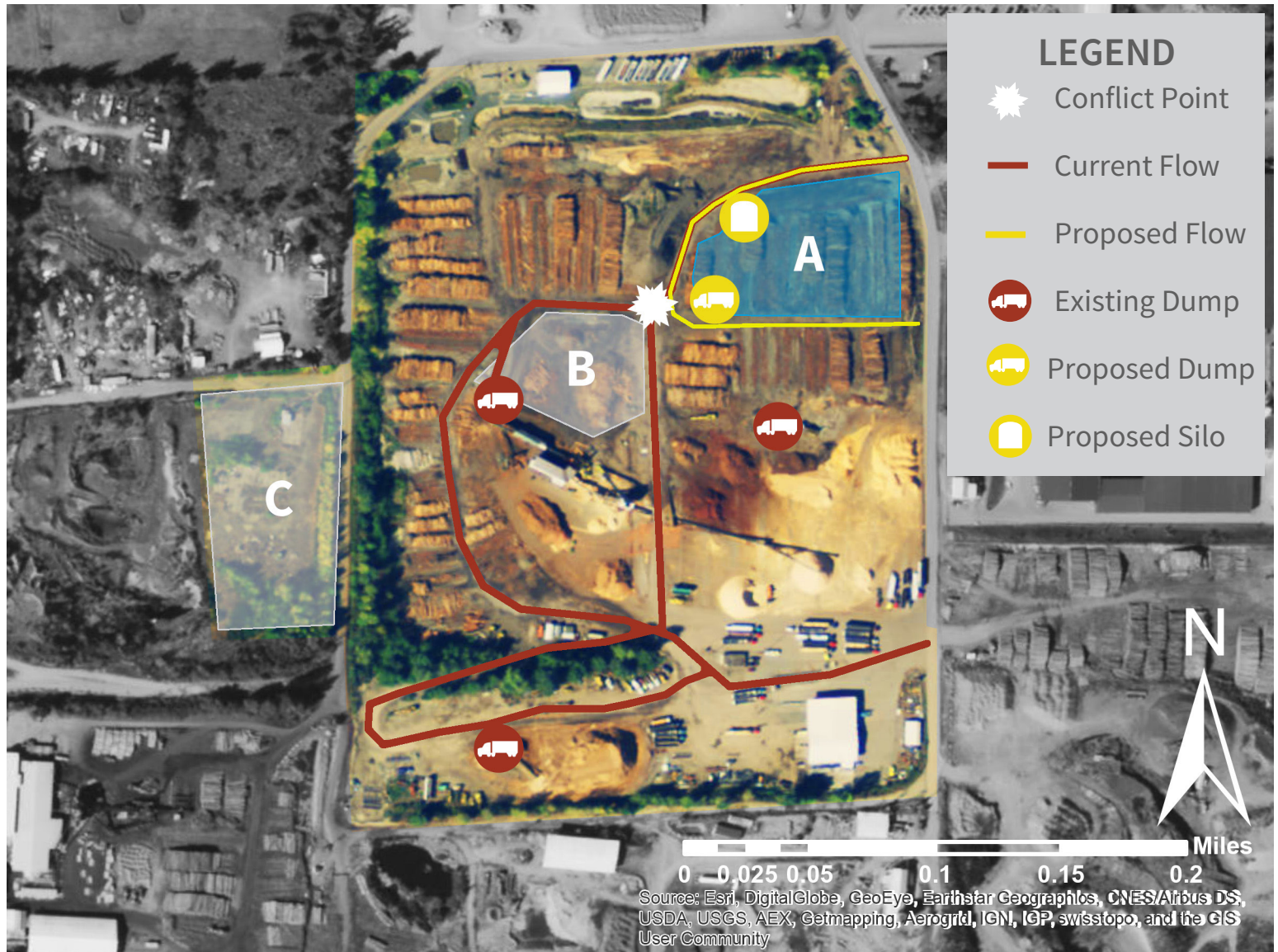
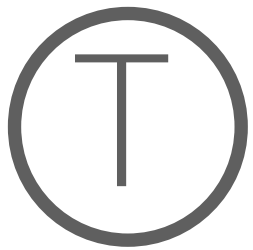
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SITE A Flow



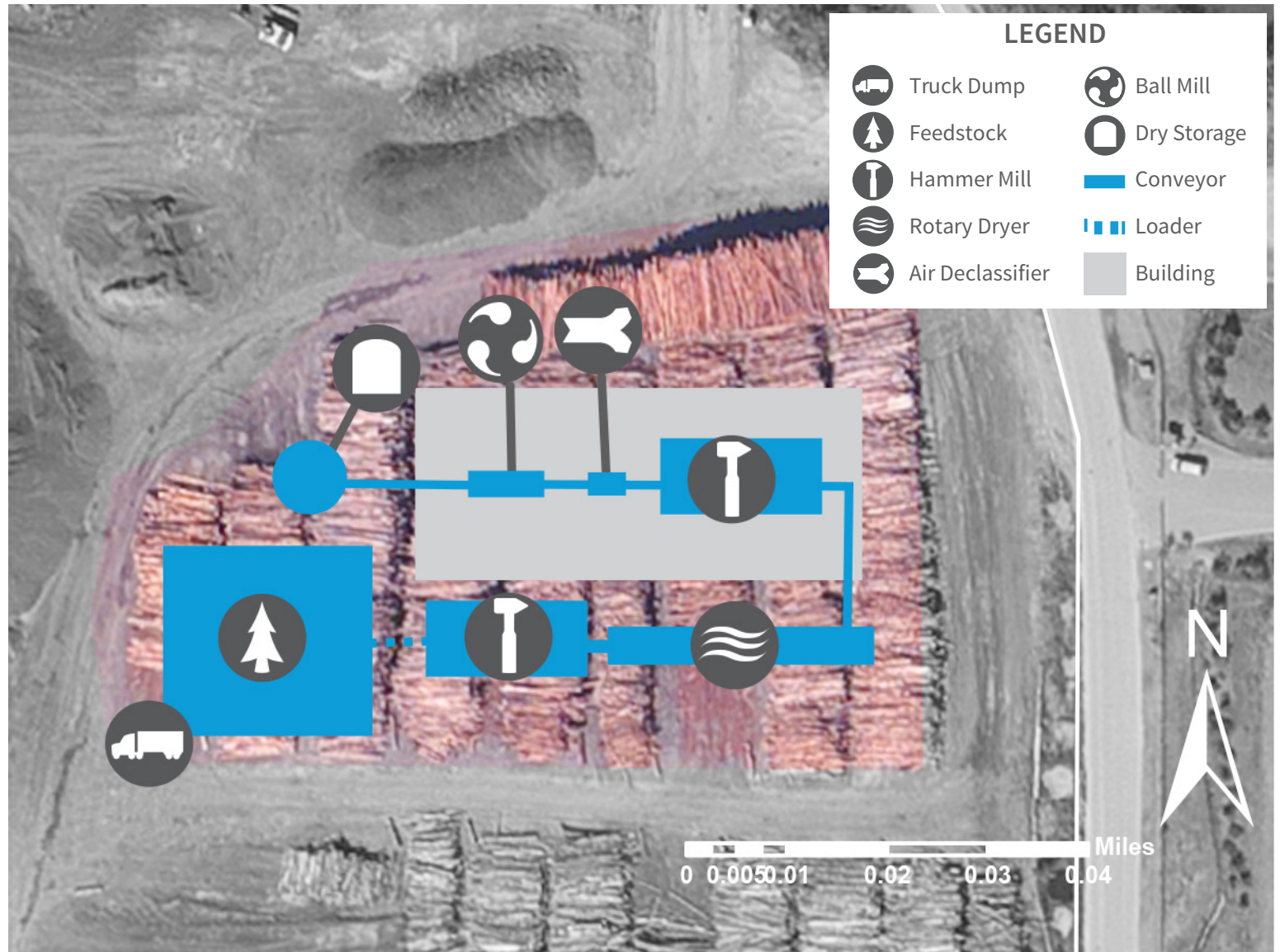
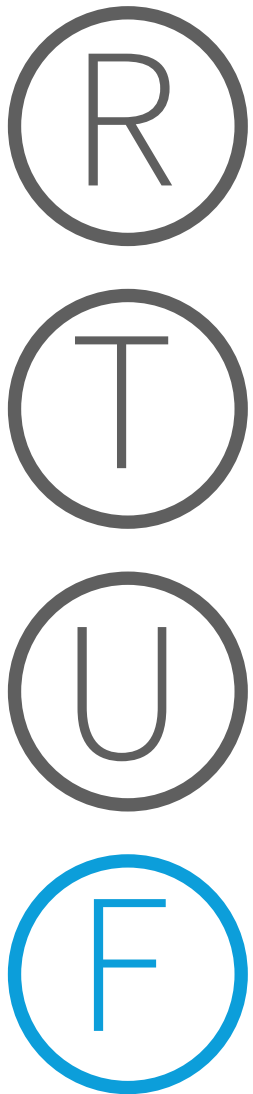
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SITE A Flow



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SITE B

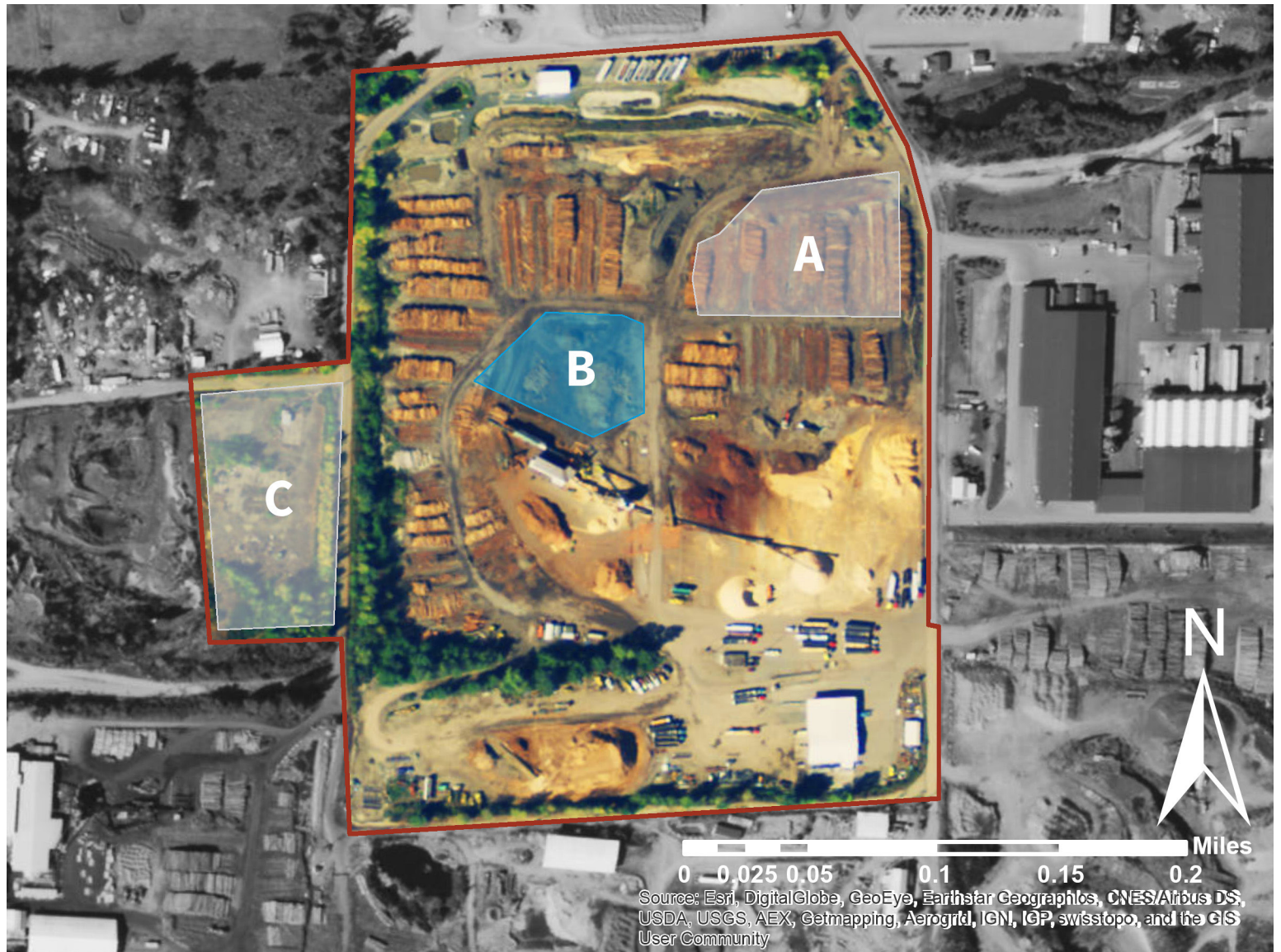
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SITE B

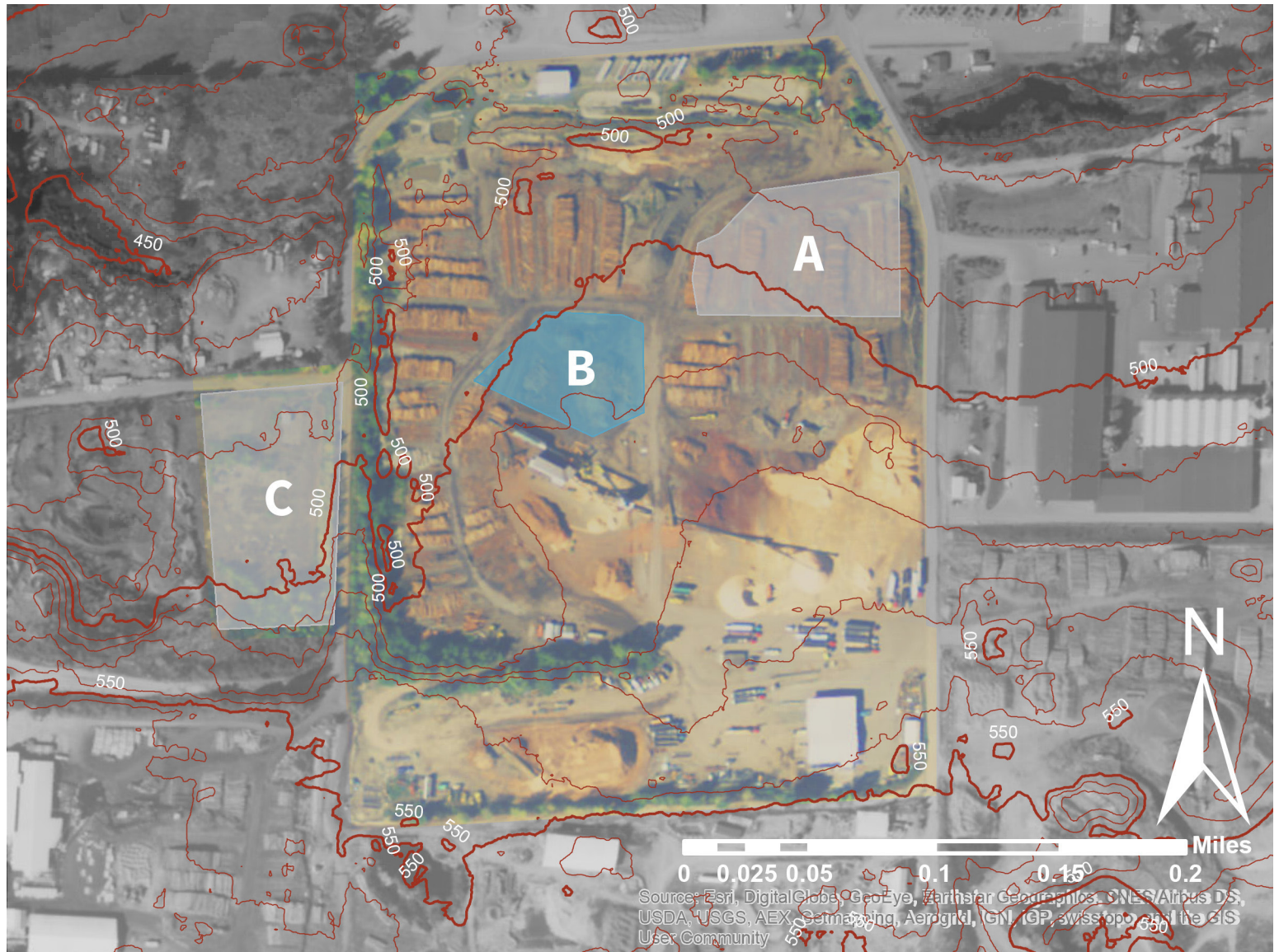
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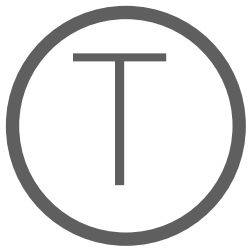
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SITE B

UTILITIES



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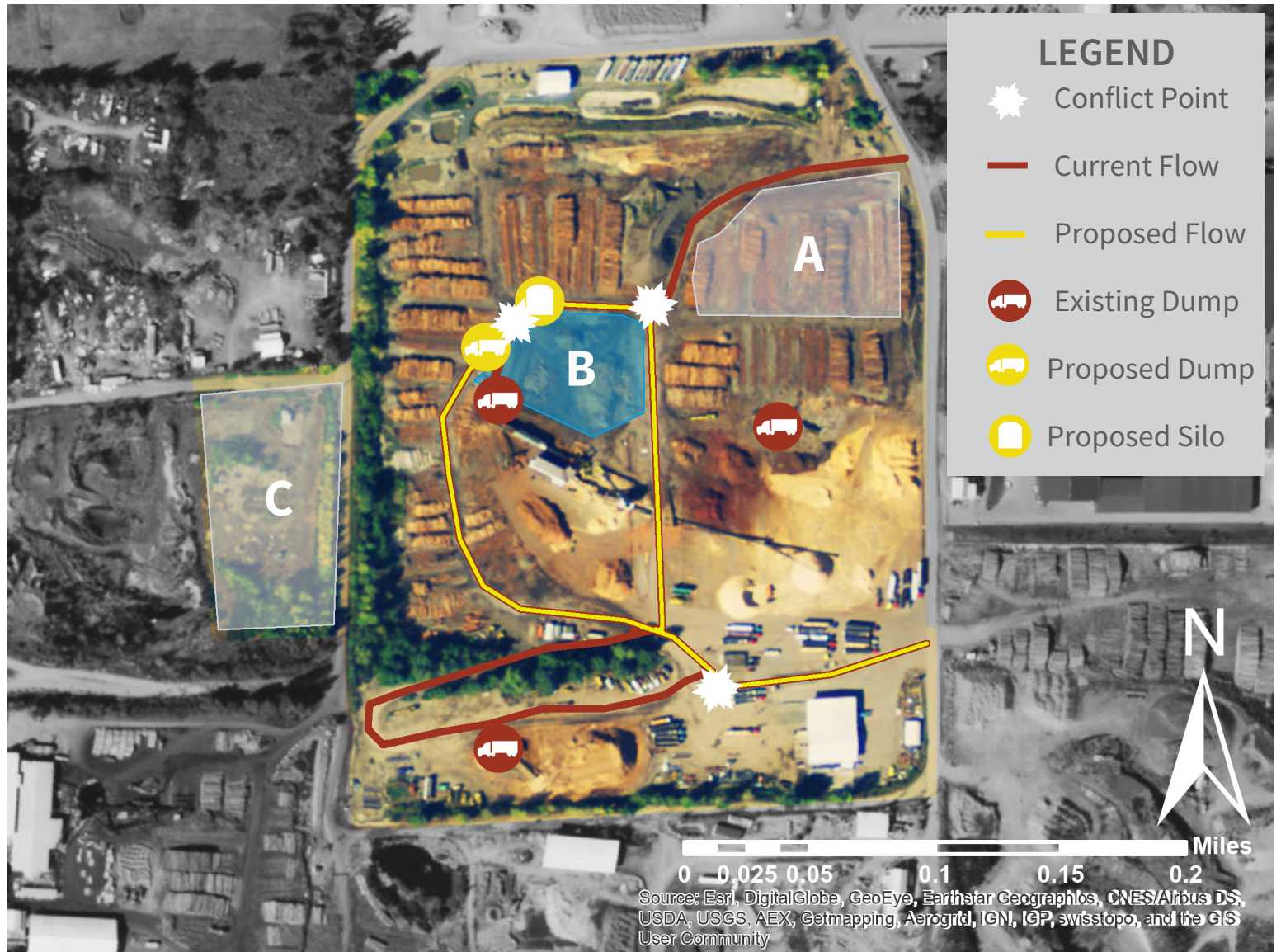
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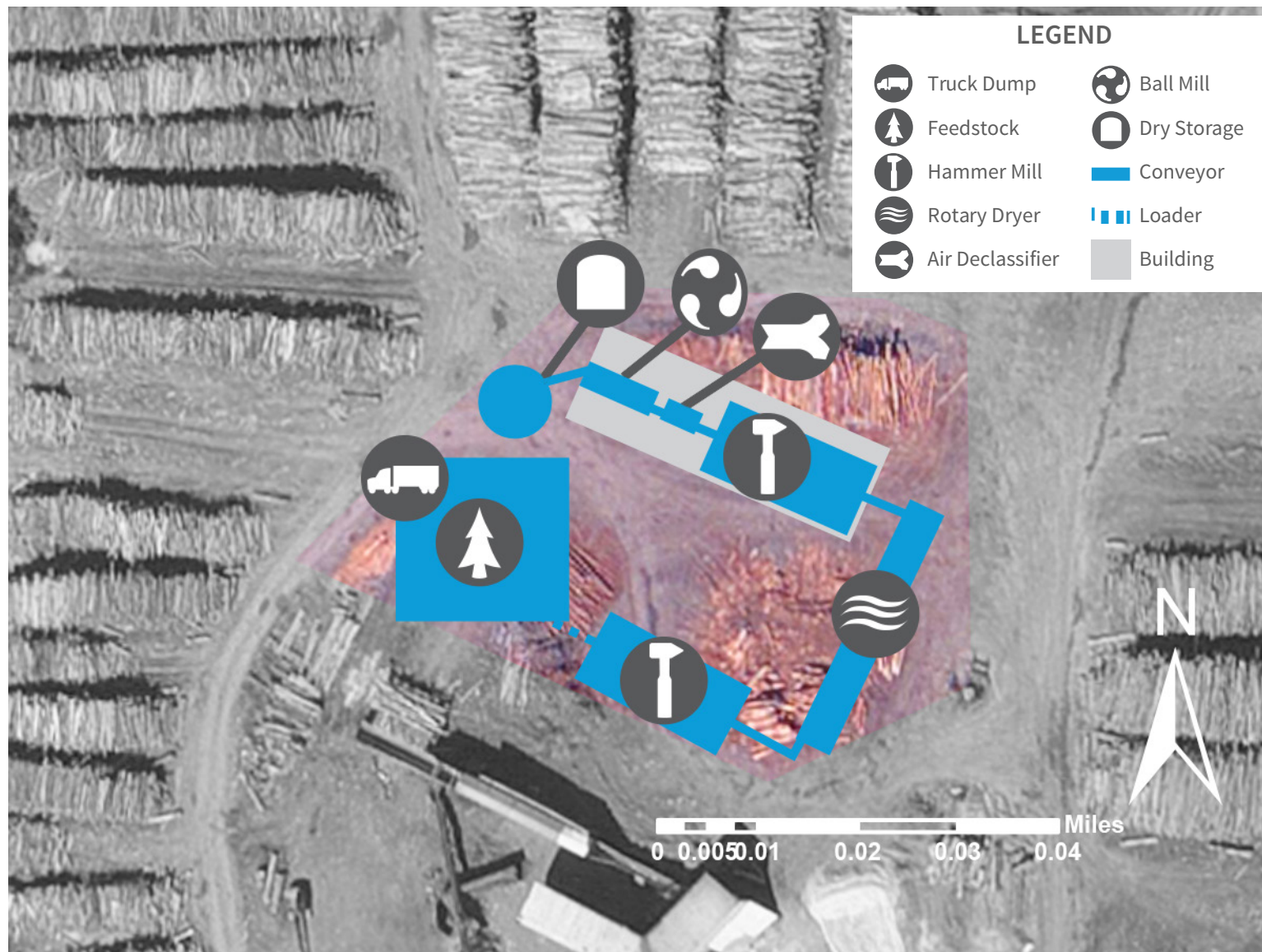
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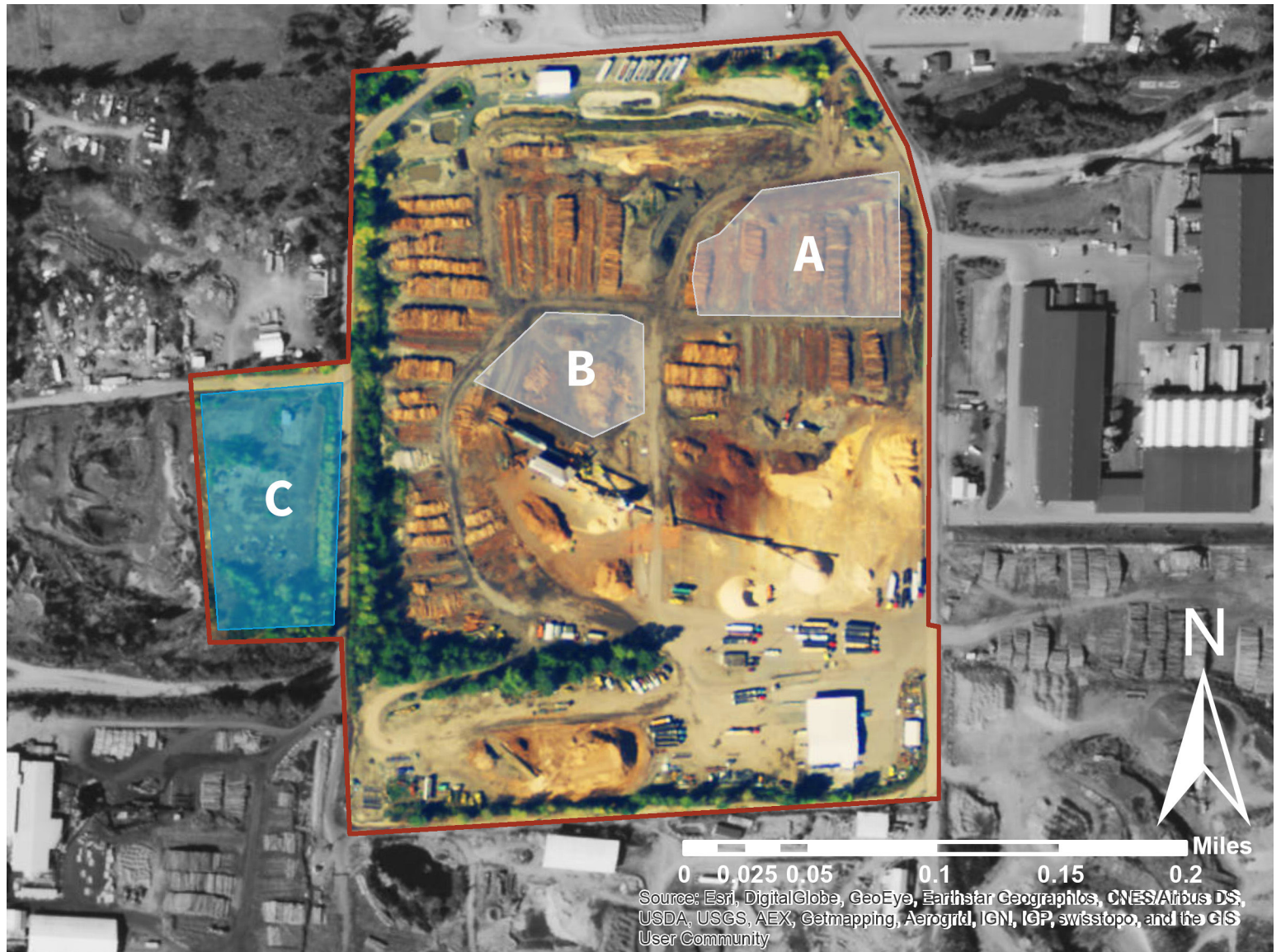
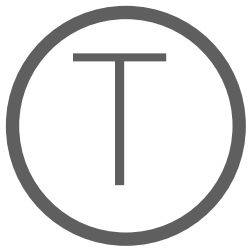
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SITE C

REASONING



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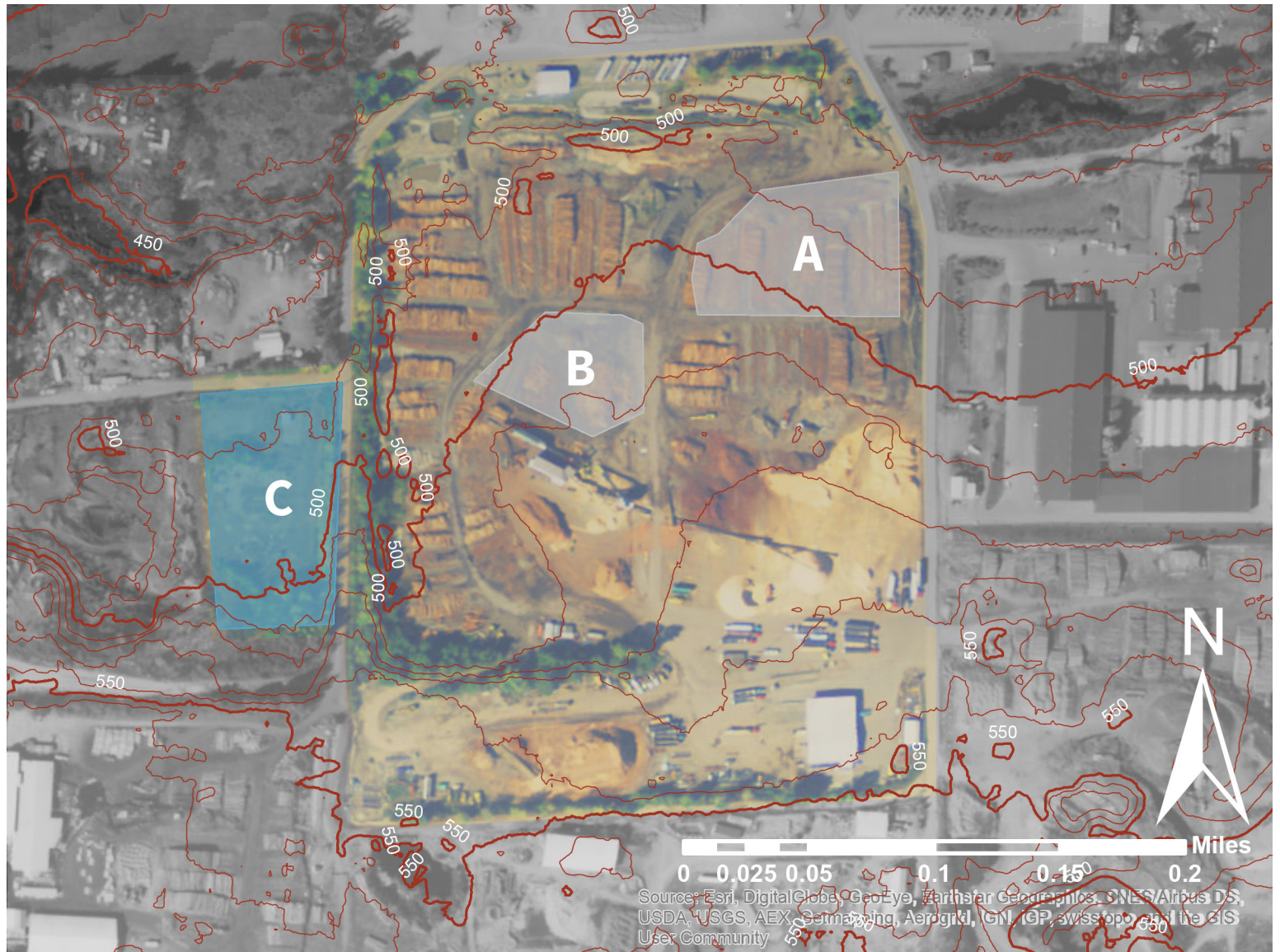
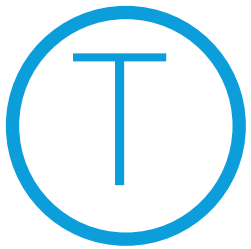
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SITE C

TOPOGRAPHY



NARA

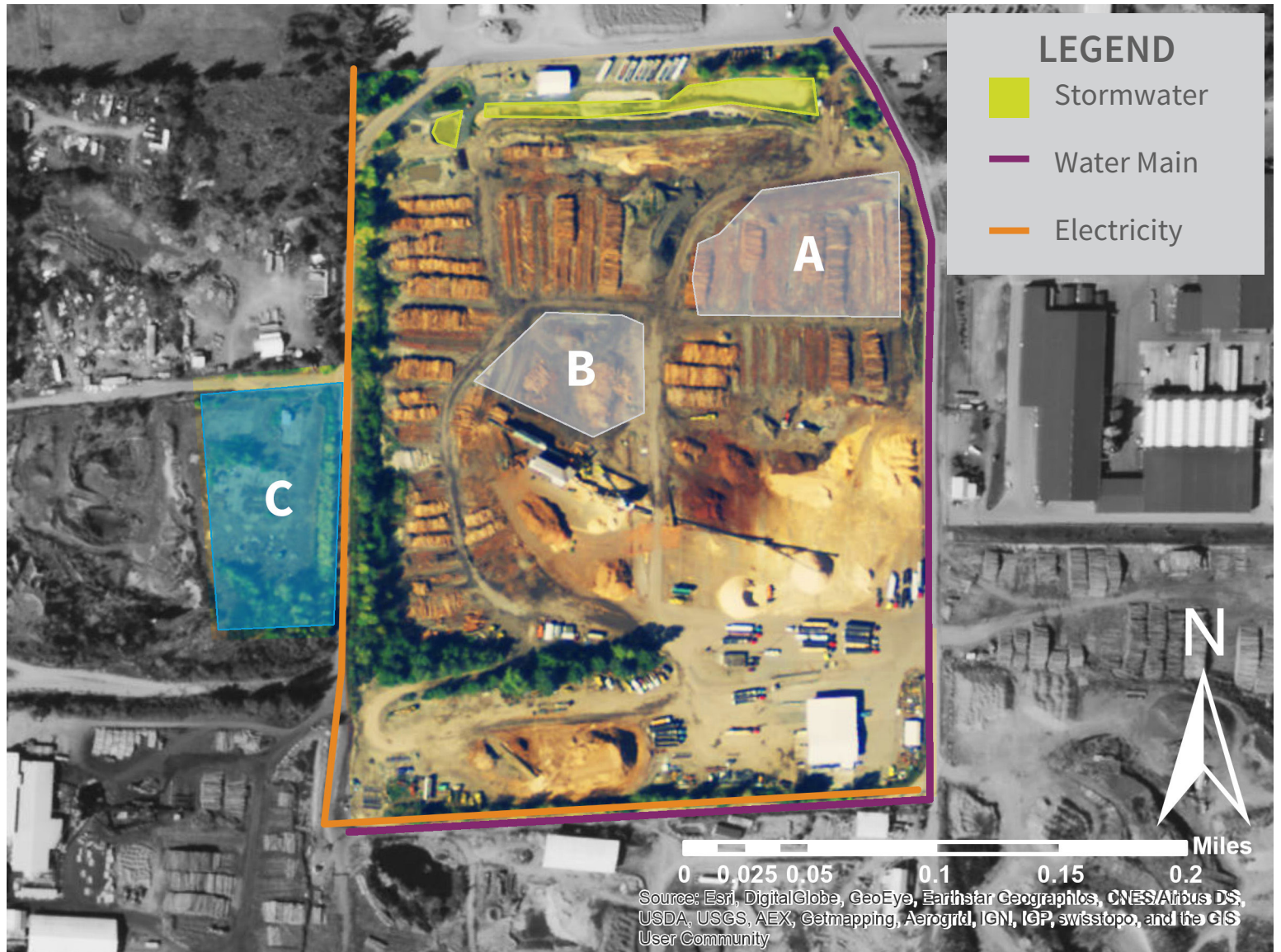
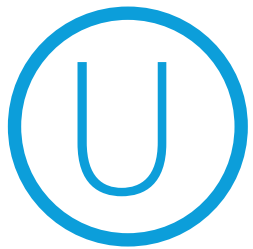
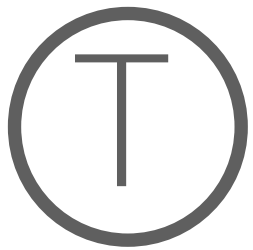
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SITE C

UTILITIES



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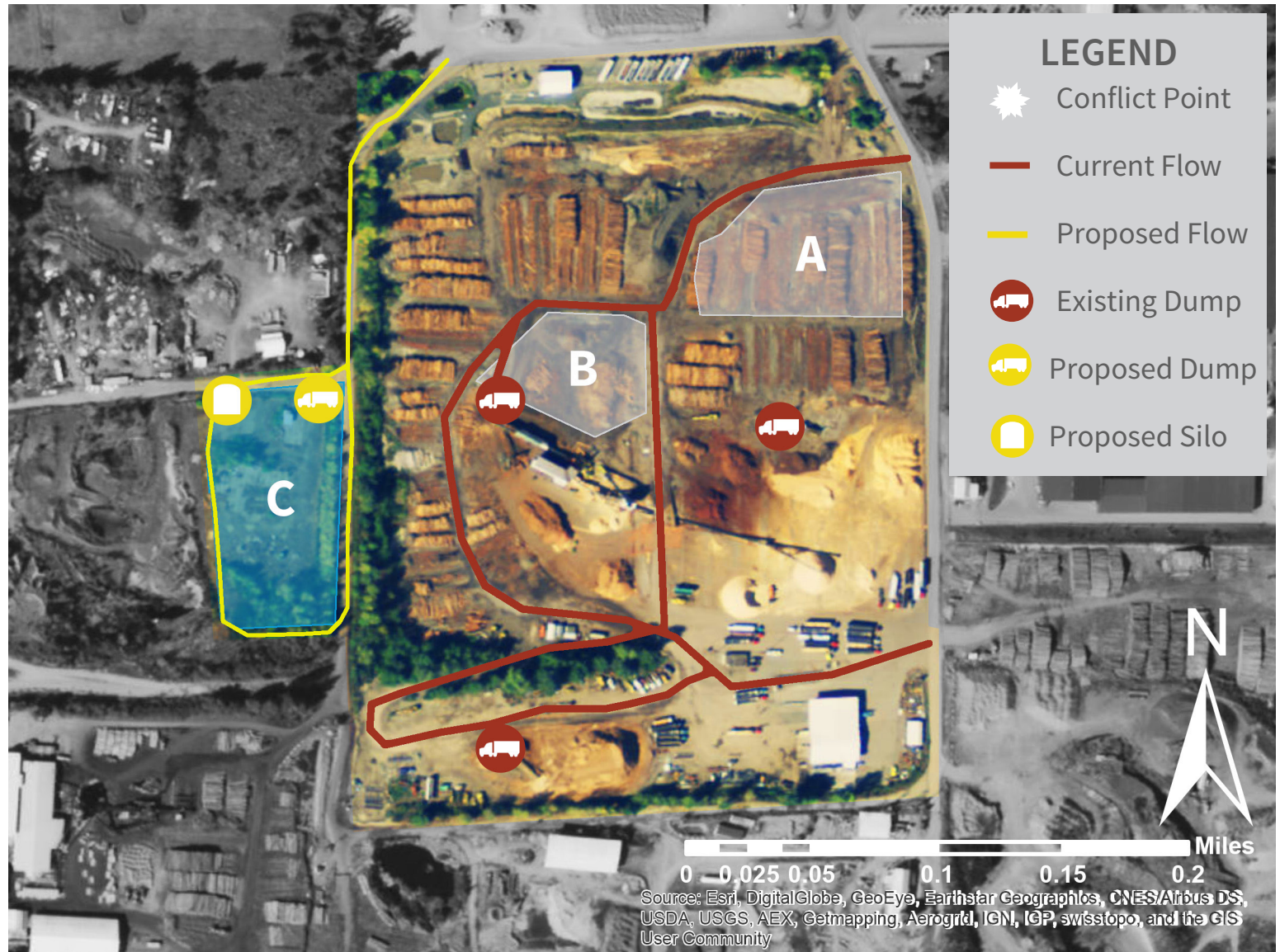
SITE C FLOW

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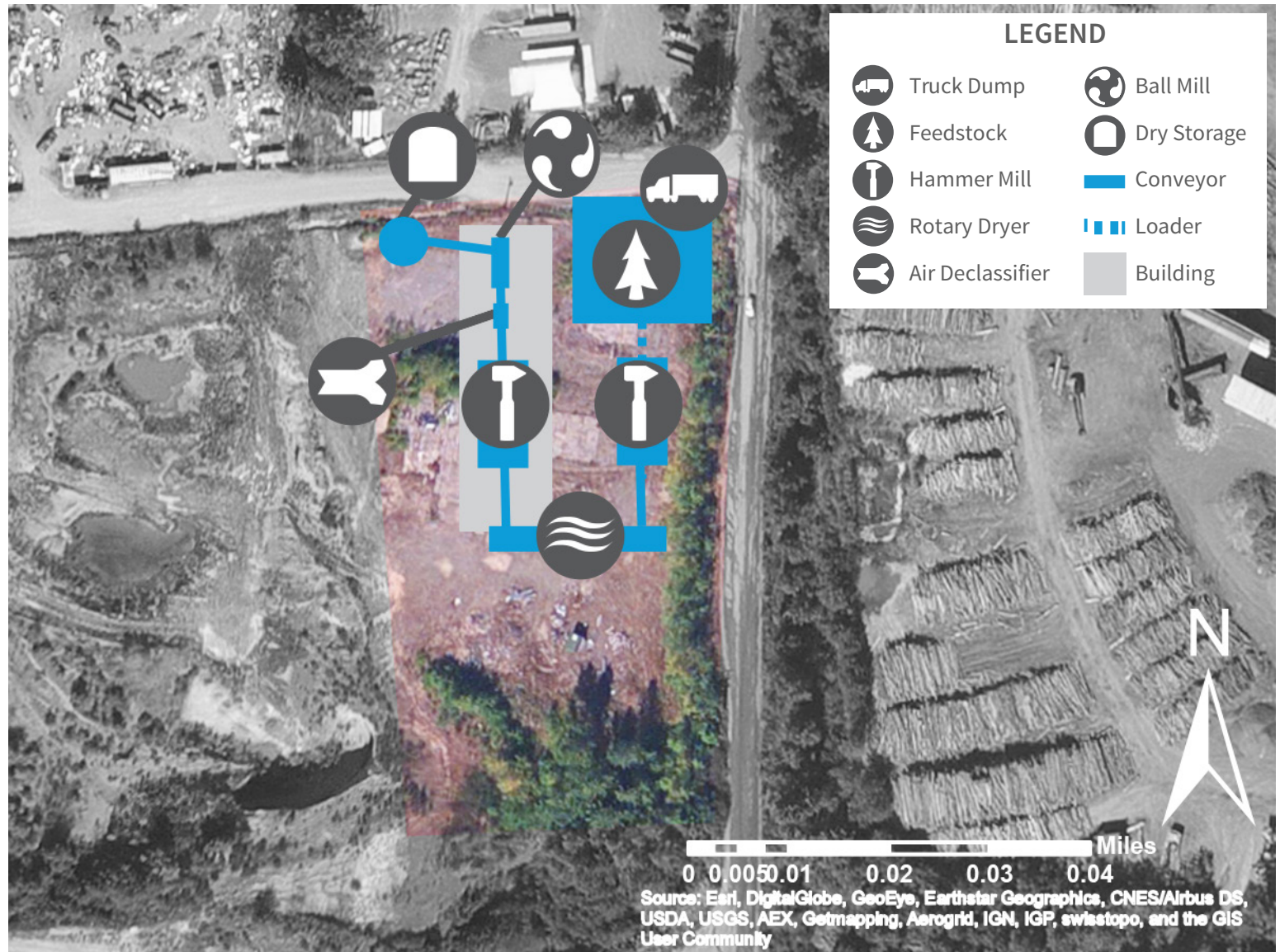
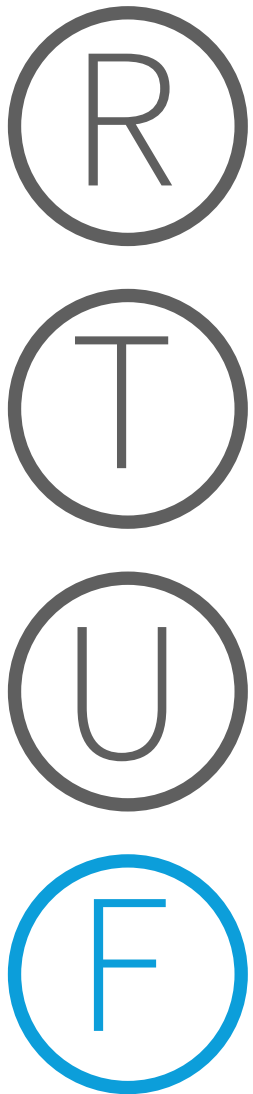
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SITE C Flow



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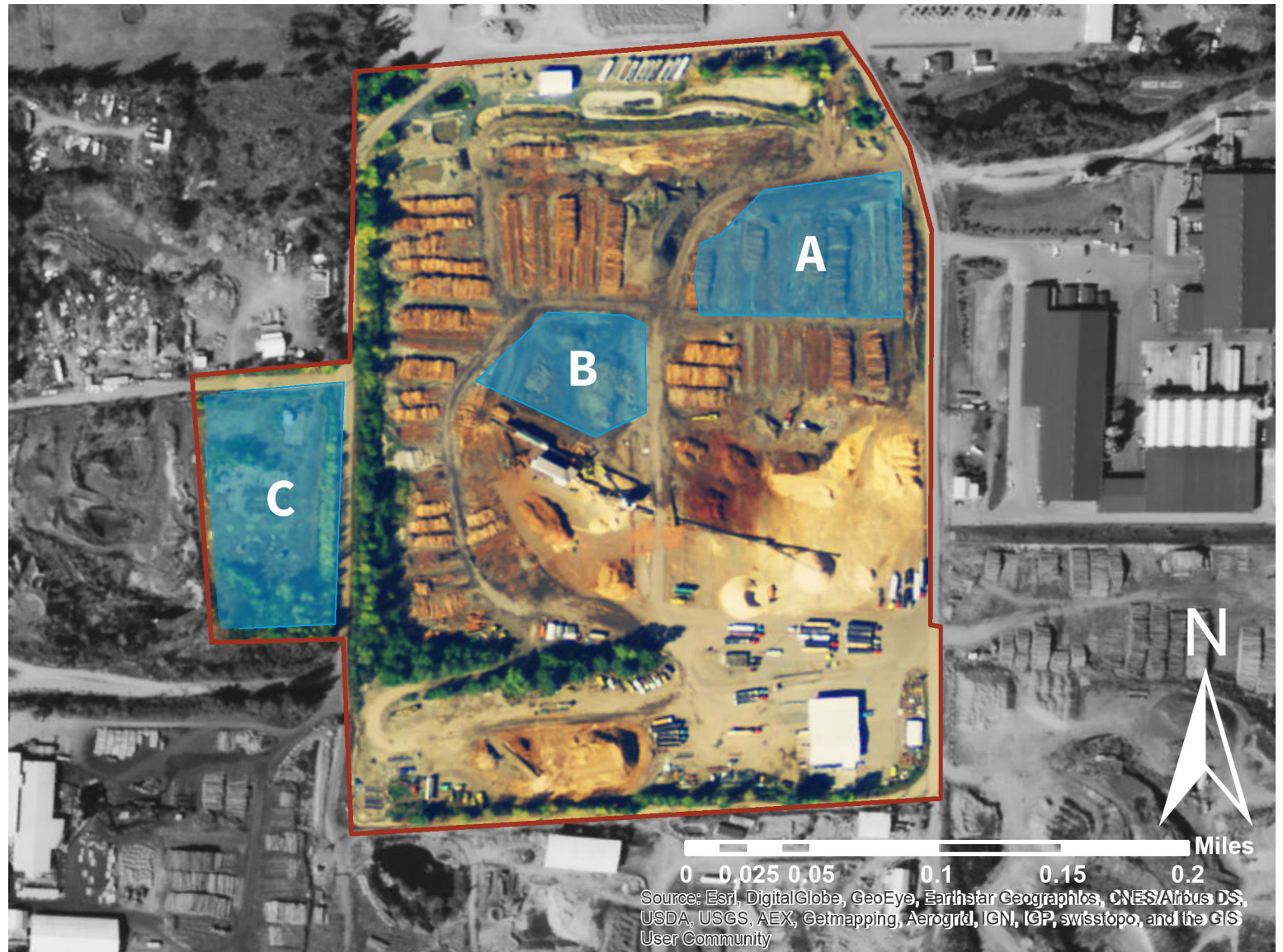
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SITE COMPARISON

OVERVIEW



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SITE COMPARISON

SUMMARY TABLE

	Site A	Site B	Site C
Reasoning	Being used for log Storage	Used for storing waste from Log Chipper	Not being used
Topography	No apparent issues	No apparent issues	No apparent issues
Utilities	Some utilities adjacent	Utilities directly adjacent	Some utilities adjacent
Flow	Interferes with existing flow	Greatly interferes with existing flow	Isolated flow



NARA

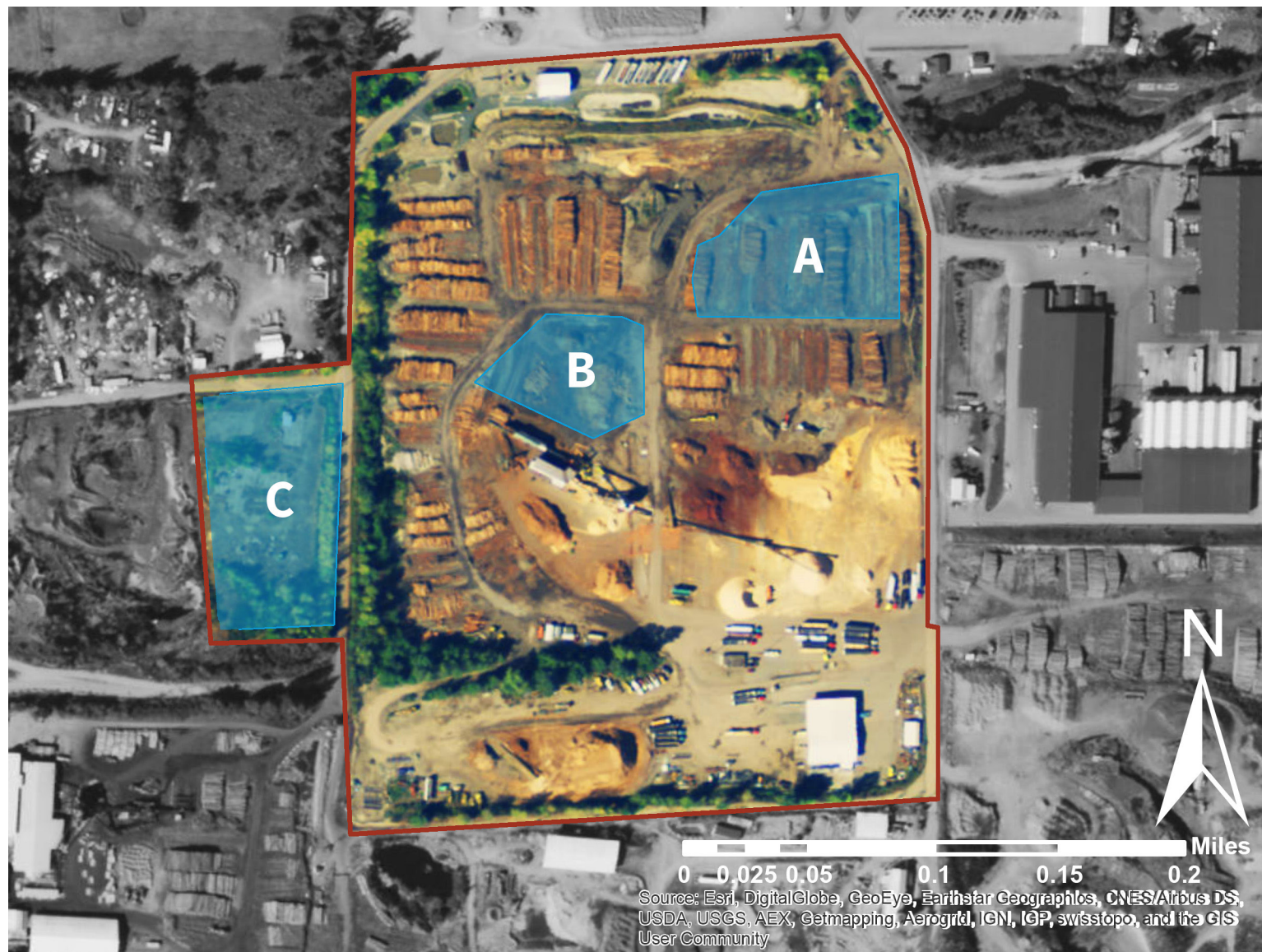
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SITE COMPARISON

CONCLUSION



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