

UPPER COLUMBIA RIVER

Quality Assurance Project Plan for the 2009 Beach Sediment Study Amendment No. 1

Prepared for
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SECTION A: PROJECT MANAGEMENT

A1 TITLE AND APPROVAL SHEET

QUALITY ASSURANCE PROJECT PLAN
FOR THE 2009 BEACH SEDIMENT STUDY
AMENDMENT NO. 1

Approvals

EPA Project Coordinator: Helen Bottcher *Helen H. Bottcher* Date: 4/13/10

EPA Quality Assurance (QA) Manager: Gina Grepo-Grove *Gina TG* Date: 4/13/10

Teck Project Coordinator: Marko Adzic *[Signature]* Date: 04-12-10

Task QA Coordinator: Craig Hutchings *[Signature]* Date: 4/13/10

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A3 DISTRIBUTION LIST

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Task Manager:	Joss Moore
Task QA Coordinator:	Craig Hutchings
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A4 INTRODUCTION

A4.1 Introduction

This amendment outlines proposed sampling plan modifications to five beaches as outlined within the March 2009 beach sediment study quality assurance project plan (QAPP). The modifications outlined herein are limited to targeting suitable fine-grain sediment substrate at five beaches outlined and approved per the March 2009 QAPP. The five beaches include: 1) Dalles Orchard, 2) China Bend, 3) Summer Island, 4) Barnaby Island, and 5) Northport Boat Launch.

All other aspects associated with field sampling and handling procedures, laboratory analysis, Quality Assurance/Quality Control (QA/QC) measures, and data validation activities remain unchanged from the approved QAPP (March 2009).

A4.2 Modifications

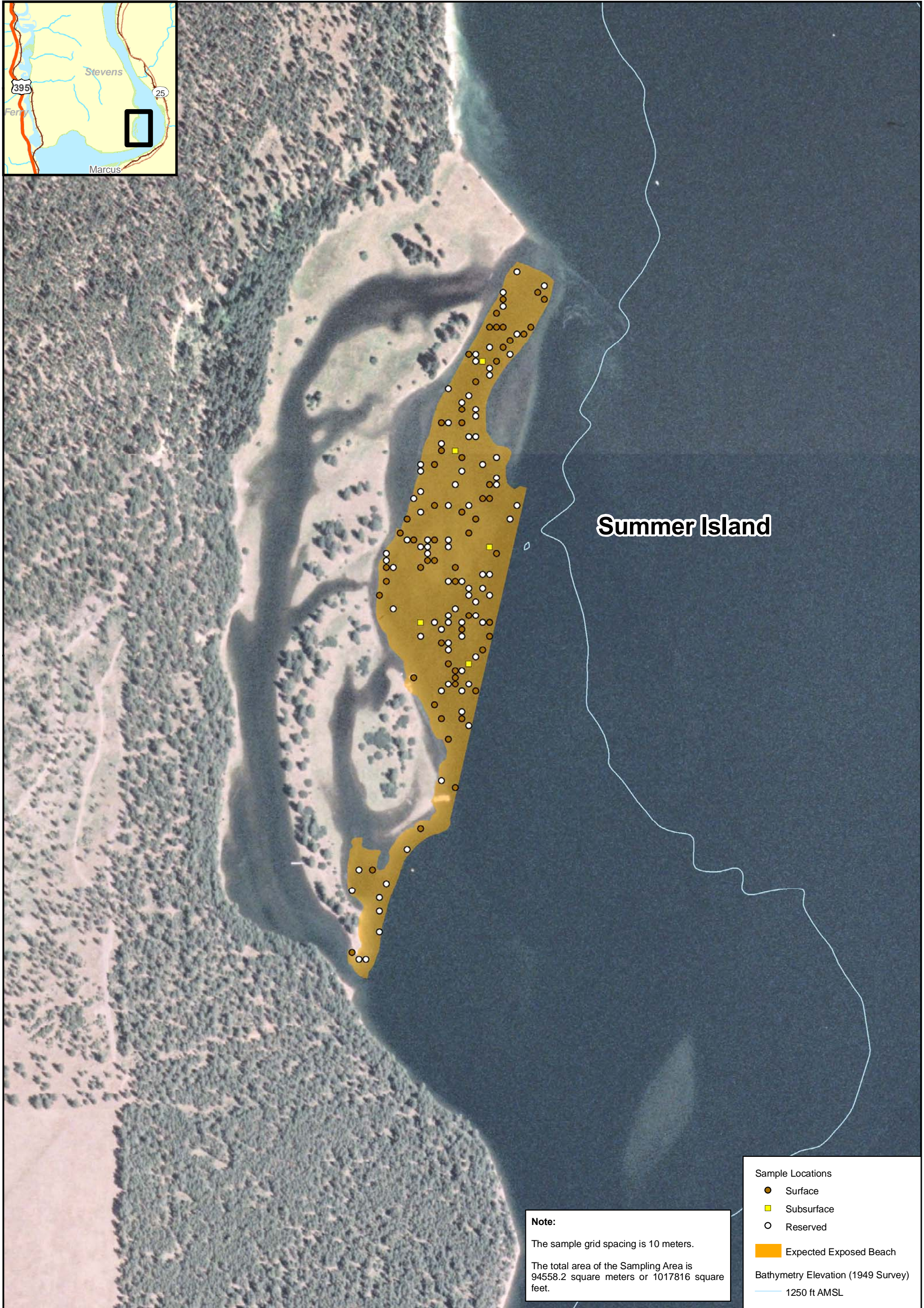
With the exception of Dalles Orchard and the Northport Boat Launch where the sampling design for surface samples will be modified from five composites of 12 samples per composite (5×12) to three composites of 12 samples per composite (3×12), the sampling design remains unchanged from the March 2009 QAPP for China Bend, Summer Island, and Barnaby Island. The only required modification at China Bend, Summer Island, and Barnaby Island is to refine the sampling area (i.e., polygon) to encompass fine-grained sediments as illustrated within Figures A-1, A-2, and A-3, respectively. Due to their relatively small size the sampling grid at Dalles Orchard and the Northport Boat Launch was redesigned to 3×12 and as illustrated within Figures A-4 and A-5, respectively.

SECTION B: REFERENCES

Teck American Incorporated. 2008. Upper Columbia River: Quality Assurance Project Plan for the 2009 Beach Sediment Study. Prepared for Teck American Incorporated. March, 2008. Integral Consulting Inc., Seattle, WA, and Parametrix, Bellevue, WA.

FIGURES





Note:
 The sample grid spacing is 10 meters.
 The total area of the Sampling Area is 94558.2 square meters or 1017816 square feet.

- Sample Locations**
- Surface
 - Subsurface
 - Reserved
- Expected Exposed Beach**
- Bathymetry Elevation (1949 Survey)**
- 1250 ft AMSL

Integral Parametrix

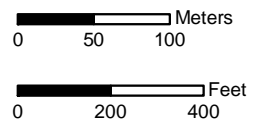
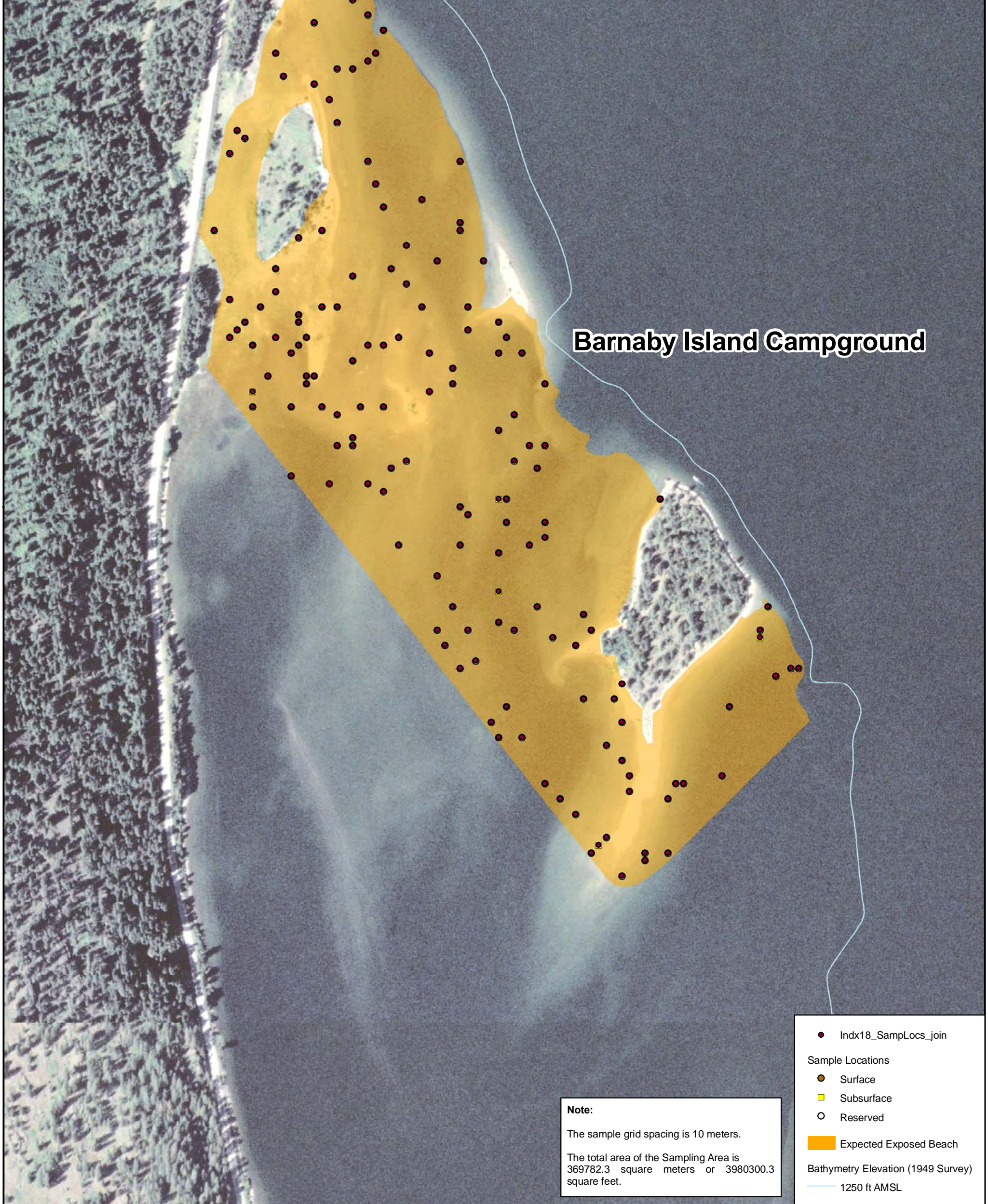


Figure A-2.

Summer Island – Beach Sediment Sampling Stations



Note:
 The sample grid spacing is 10 meters.
 The total area of the Sampling Area is 369782.3 square meters or 3980300.3 square feet.

- Indx18_SampLocs_join
- Sample Locations
 - Surface
 - Subsurface
 - Reserved
- Expected Exposed Beach
- Bathymetry Elevation (1949 Survey)
 - 1250 ft AMSL

Integral Parametrix

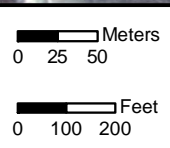


Figure A-3. **Barnaby Island – Beach Sediment Sampling Stations**



Dalles Orchard

Note:
 The sample grid spacing is 2 meters.
 The total area of the Sampling Area is 1025 square meters or 11033 square feet.

Sample Locations

- Surface
- Subsurface
- Reserved

Expected Exposed Beach

Bathymetry Elevation (1949 Survey)

— 1250 ft AMSL

