

## AGENDA

**DES MOINES CITY COUNCIL  
ENVIRONMENT COMMITTEE  
City Council Chambers  
21630 11th Avenue S, Suite C.  
Des Moines, Washington  
Thursday, January 9, 2025 - 5:00 PM**

**Environment Committee:** Chair JC Harris, Vice Chair Yoshiko Grace Matsui, Gene Achziger

### CALL TO ORDER

### AGENDA

- Item 1. APPROVAL OF THE MINUTES FROM THE MEETING OF 12.12.2024  
[11.21.24 Draft Environment Committee Minutes](#)
- Item 2. 2025 WORK PLAN  
Staff will provide a draft Environment Work Plan for discussion.  
[2025 Environment Work Plan - Draft](#)
- Item 3. DES MOINES CREEK ESTUARY PRESENTATION
- Staff will provide a presentation on project background and potential design alternatives for Council/Committee review and input.  
[Des Moines Creek Estuary Presentation](#)  
[Des Moines Creek Estuary PowerPoint Presentation](#)

### ADJOURNMENT

**DRAFT MINUTES – ENVIRONMENT COUNCIL COMMITTEE MEETING 11.21.2024**

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The meeting was called to order at 5:02 PM, Thursday, November 21, 2024 in the Council Chamber with the following in attendance:

**Council Members**

J.C. Harris (Chair)  
Yoshiko Grace Matsui (Vice Chair)  
Gene Achziger

**City Staff**

Katherine Caffrey – City Manager  
Michael Slevin – Public Works Director  
Bonnie Wilkins – Director of Community and  
Administrative Services  
Tyler Beekley – Surface Water/Environmental Engineering  
Manager  
Michael Posey – Surface Water Coordinator  
Tommy Owen – City Engineer  
Jeff Friend – Finance Director  
Matthew Hutchins – Assistant City Attorney  
Laura Hopp – Administrative Coordinator I  
Jodi Grager – Administrative Coordinator I

Guests – Mayor Traci Buxton and Councilmember Matt Mahoney  
Chuck Coleman, Barbara McMichael

**AGENDA**

1. Approval of the minutes from the 09.12.2024 and the 10.10.2024 meetings
2. Source Control Program Update

**MEETING:**

1. Unanimous approval of the 09.12.2024 and the 10.10.2024 minutes.
2. Surface Water/Environmental Engineering Manager Tyler Beekley introduced Michael Posey, Surface Water Coordinator. Mr. Posey provided the committee a memo (see Item #2 Attachment in the packet). He reviewed the Source Control Background, Source Control Progress in 2024 and Transition to City Led Source Control Inspections. The Committee discussion included:
  - Examples of public outreach – City Current Articles, StormFest, Adopt-a-Drain Program
  - Catch Basin Focus
  - Partnering with City of Kent
  - Pollution generating businesses are identified for inspections

The Committee requested a “Green Streets” presentation at a future meeting.

Meeting adjourned at 5:24 p.m. Minutes respectfully submitted by: Jodi Grager, Admin Coordinator

## **Draft 2025 Environment Committee Work Program**

### **January 9, 2025**

2025 Work Plan Discussion  
Des Moines Creek Estuary Presentation

### **February 13, 2025**

CIP Project Updates

### **March 13, 2025**

NPDES Program Overview  
2025 Stormwater Management Program Plan

### **April 10, 2025**

WRIA 9 ILA Update

### **May 8, 2025**

Operations and Maintenance Overview

### **June 12, 2025**

CIP Project Updates

### **July 10, 2025**

Stormfest Program Overview

### **August 14, 2025**

Des Moines Creek Basin Committee Status Report  
Draft 2026-2031 SWM CIP Budget

### **September 11, 2025**

Final 2026-2031 SWM CIP Budget  
CIP Project Updates

### **October 9, 2025**

Poverty Bay Shellfish Protection District Status

### **November 13, 2025**

Public Works Yard Groundwater Remediation Update  
Source Control Program Update

### **December 11, 2025**

CIP Project Updates



# DES MOINES CREEK ESTUARY RESTORATION

01/09/2025

**Parametrix**





## AGENDA

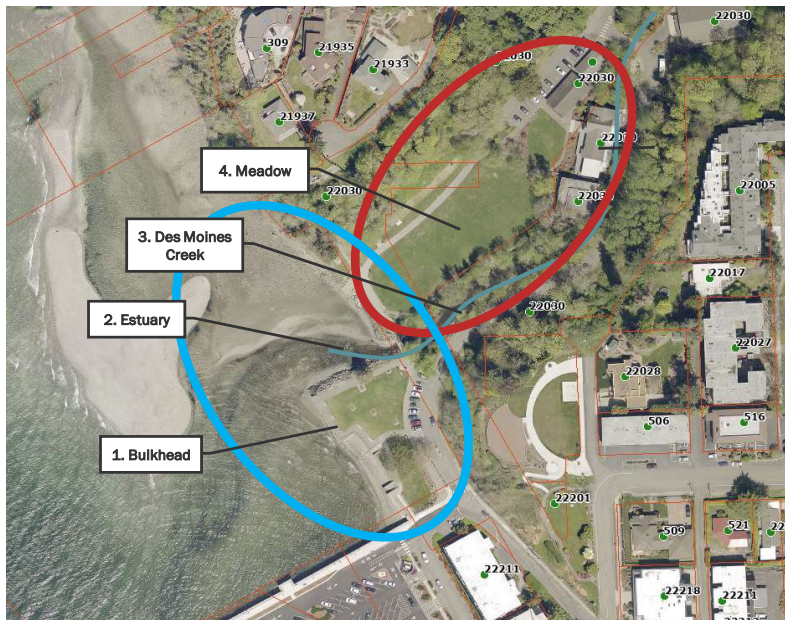
- Project Background
- Project Goals
- Constraints and Considerations
- Meadow Alternatives
- Bulkhead Alternatives

**ParametriX**





# PROJECT BACKGROUND



2023 Aerial







## PROJECT GOALS – GRANT FUNDING

| Cooperative Watershed Management Grant   | Flood Reduction Grant   |
|--|---|
| <p><b>Grant Focus:</b></p> <ul style="list-style-type: none"><li>• Recovering ESA-listed salmon species and restoring watershed ecosystems</li><li>• Habitat restoration</li><li>• Water quality improvements</li><li>• Monitoring</li><li>• Planning and public outreach</li></ul> <p><b>Project Goals:</b></p> <ul style="list-style-type: none"><li>• Improve estuary habitat for salmonoids and other species</li><li>• Shoreline and stream bank improvements</li></ul> | <p><b>Grant Focus:</b></p> <ul style="list-style-type: none"><li>• Address potential flooding issues</li><li>• Protect public safety</li><li>• Preserve important infrastructure</li></ul> <p><b>Project Goals:</b></p> <ul style="list-style-type: none"><li>• Address flooding impacts to Des Moines Beach Park</li><li>• Identify bulkhead improvement opportunities</li></ul> |

**ParametriX**



## PROJECT GOALS – CITY

- Improve public access to the beach near mouth of Des Moines Creek
- Evaluate public access and connectivity to the estuary from the Des Moines Marina to the Des Moines Beach Park

**ParametriX**



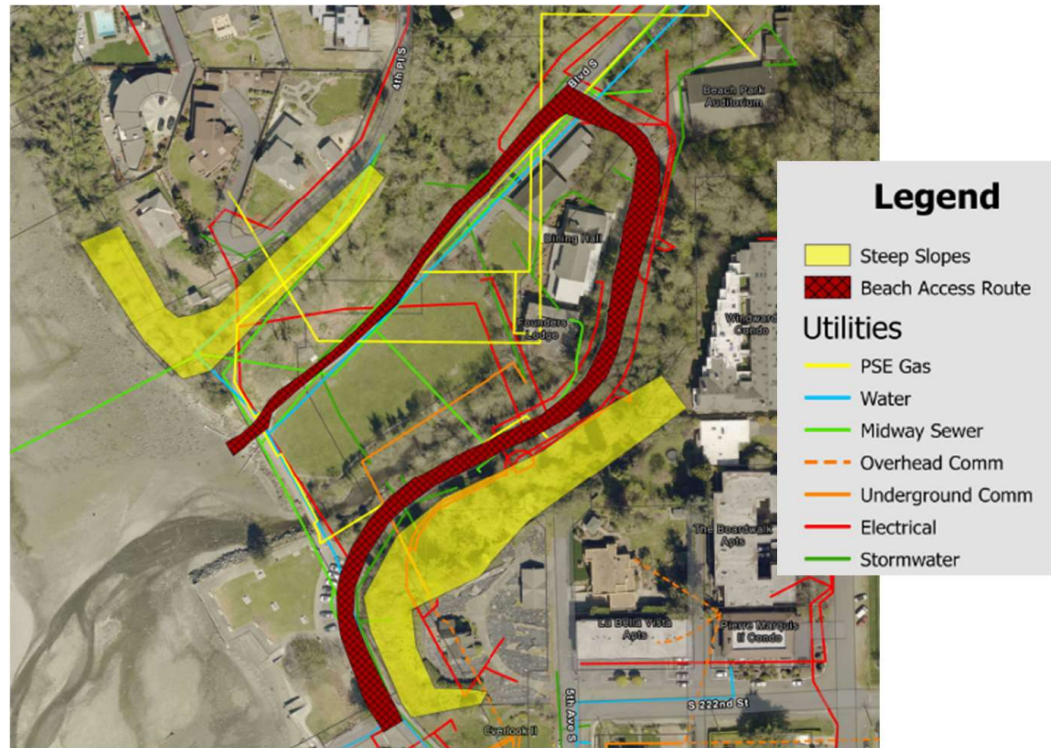
## CONSTRAINTS AND CONSIDERATIONS

### Constraints

- Steep Slopes
- Beach Access
- Utilities

### Considerations

- Recent and Anticipated Flooding
- Bulkhead Condition

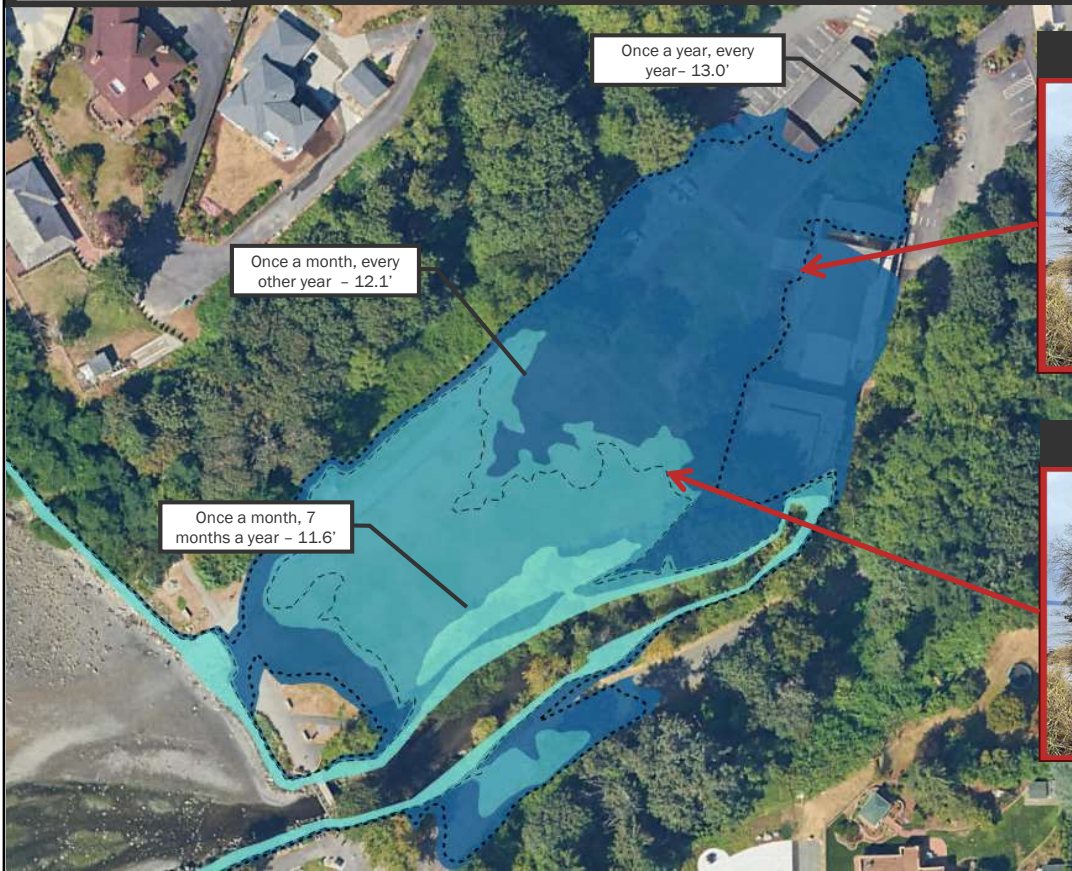


Parametrix

# ALTERNATIVES – MEADOW AREA



# RECENT AND ANTICIPATED FLOODING



### December 2022 King Tide



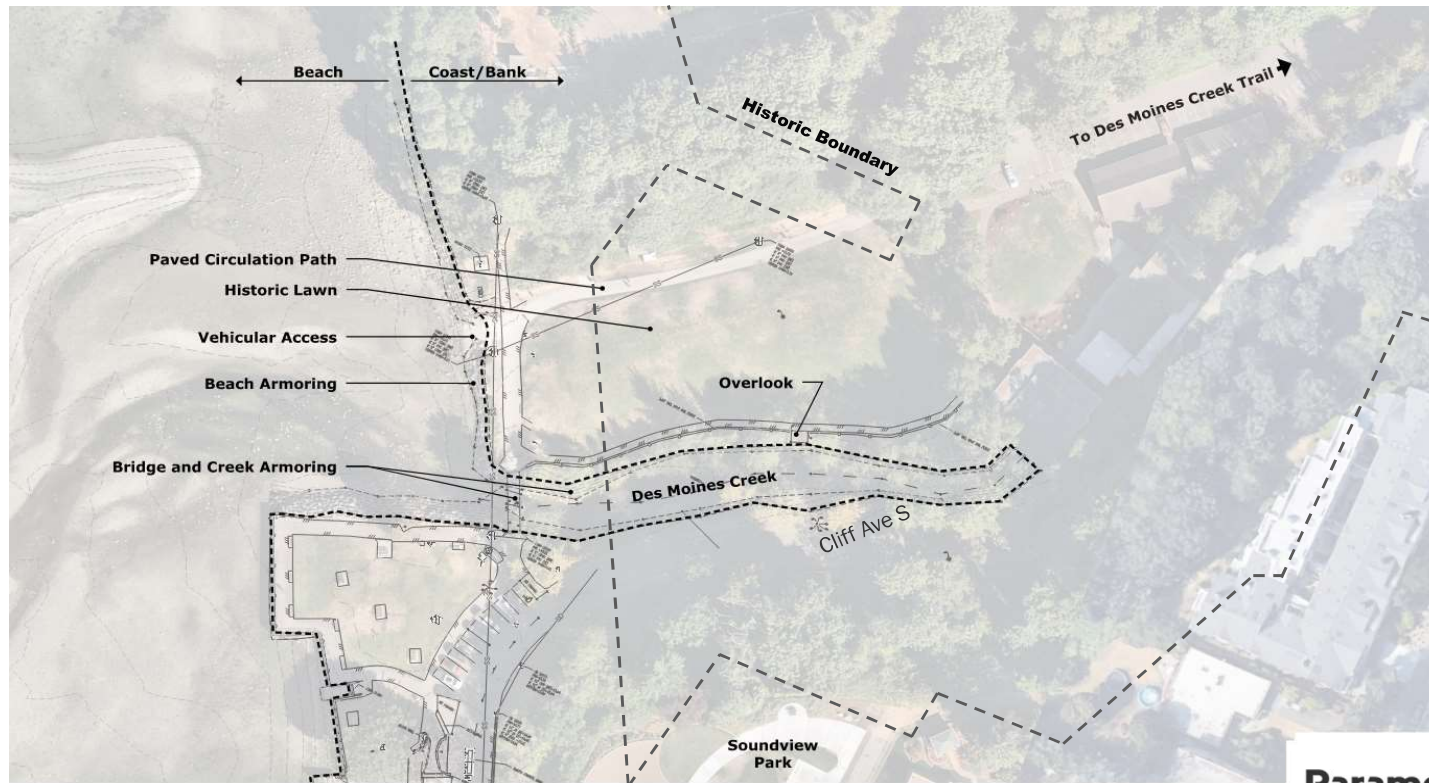
### December 2024 Tide



**ParametriX**



# EXISTING CONDITIONS

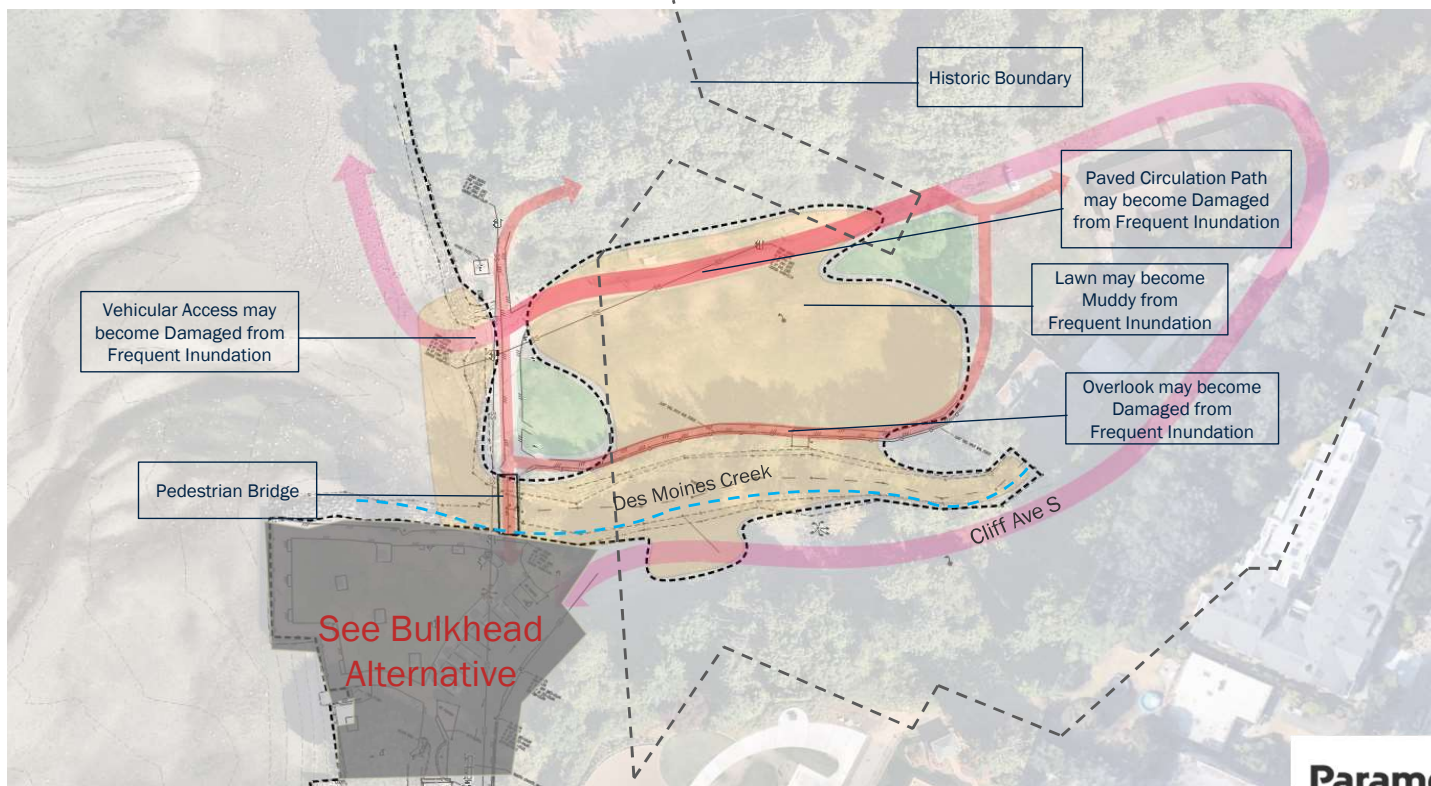


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# MEADOW ALTERNATIVE 1 – LOW/NO ACTION ALTERNATIVE

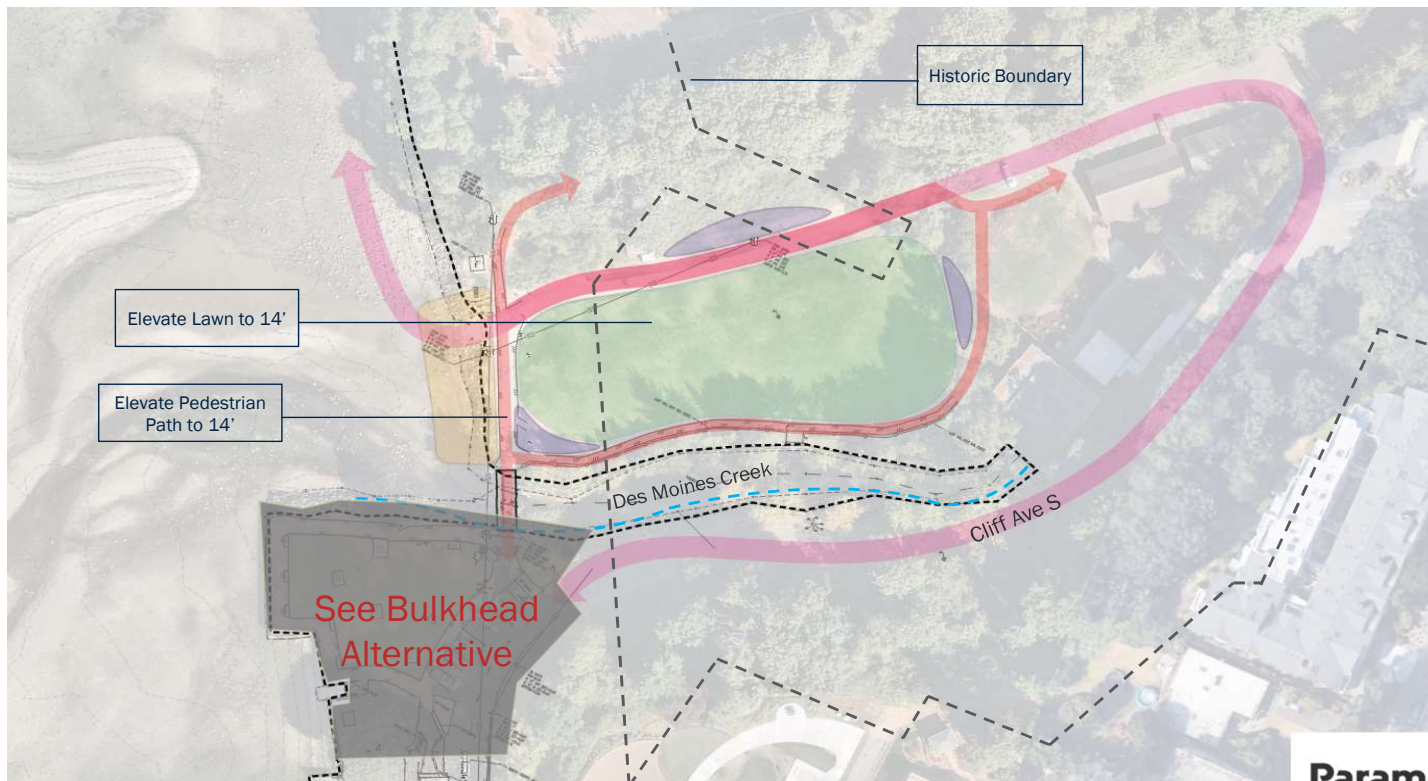


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## MEADOW ALTERNATIVE 2 – ELEVATE LAWN AREA

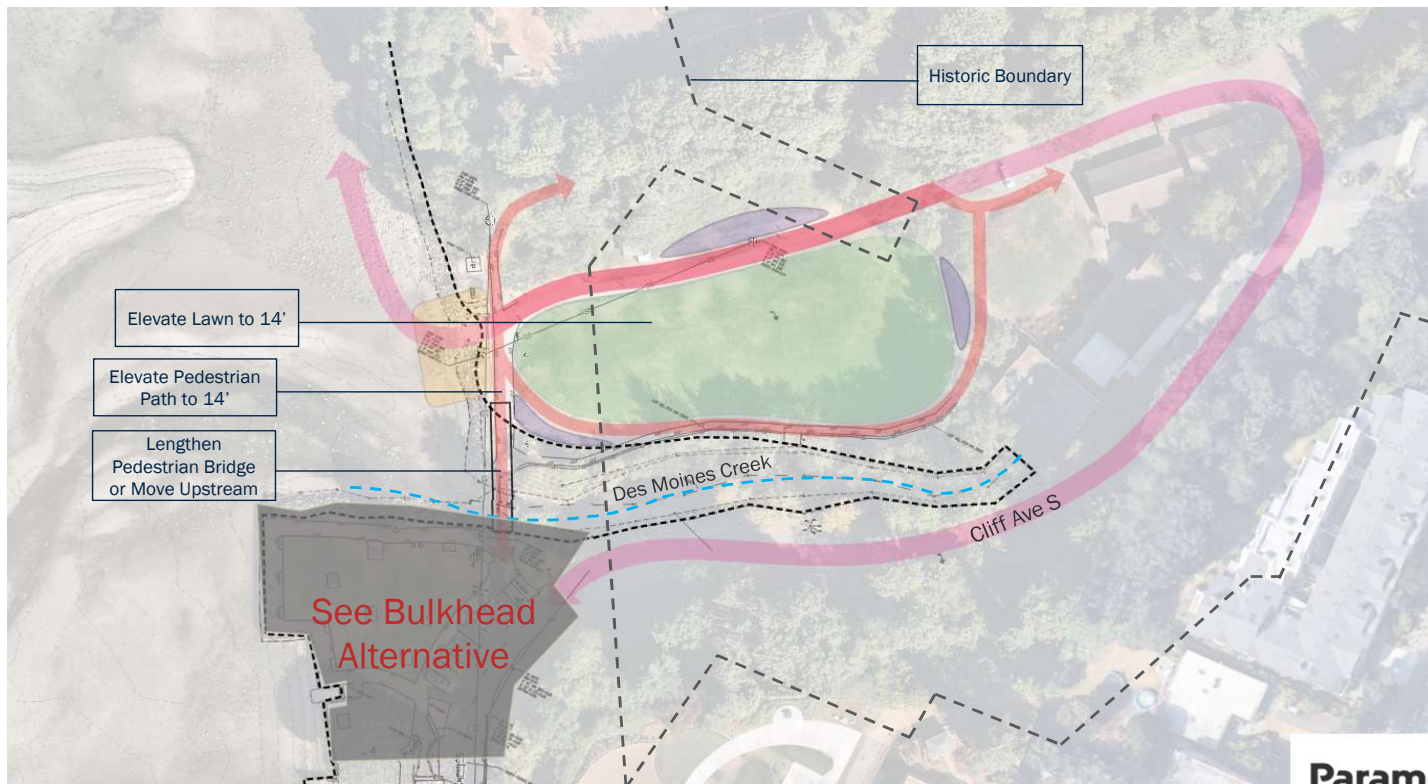


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## MEADOW ALTERNATIVE 3 – WIDEN ESTUARY MOUTH

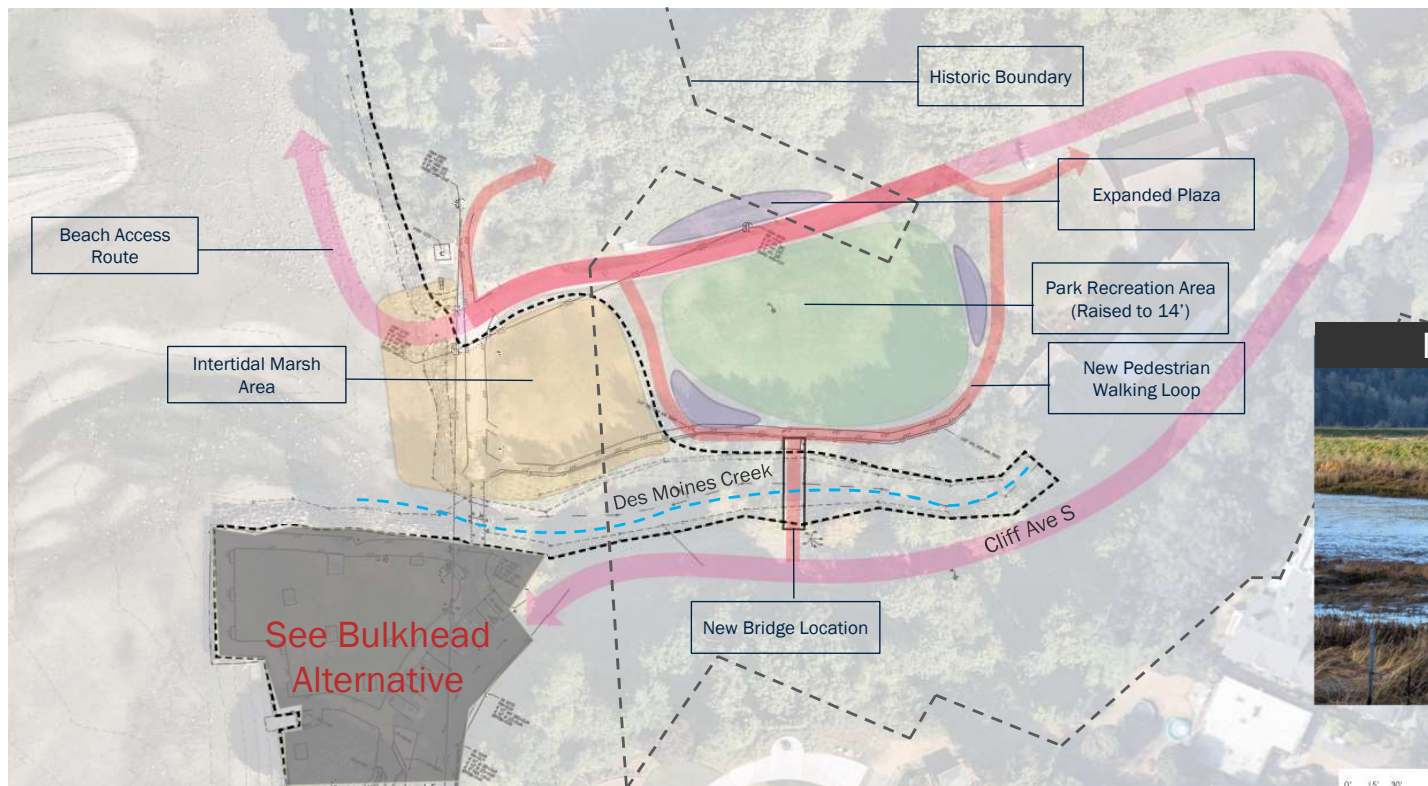


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# MEADOW ALTERNATIVE 4 – PARTIAL ESTUARY (STAFF PREFERRED)



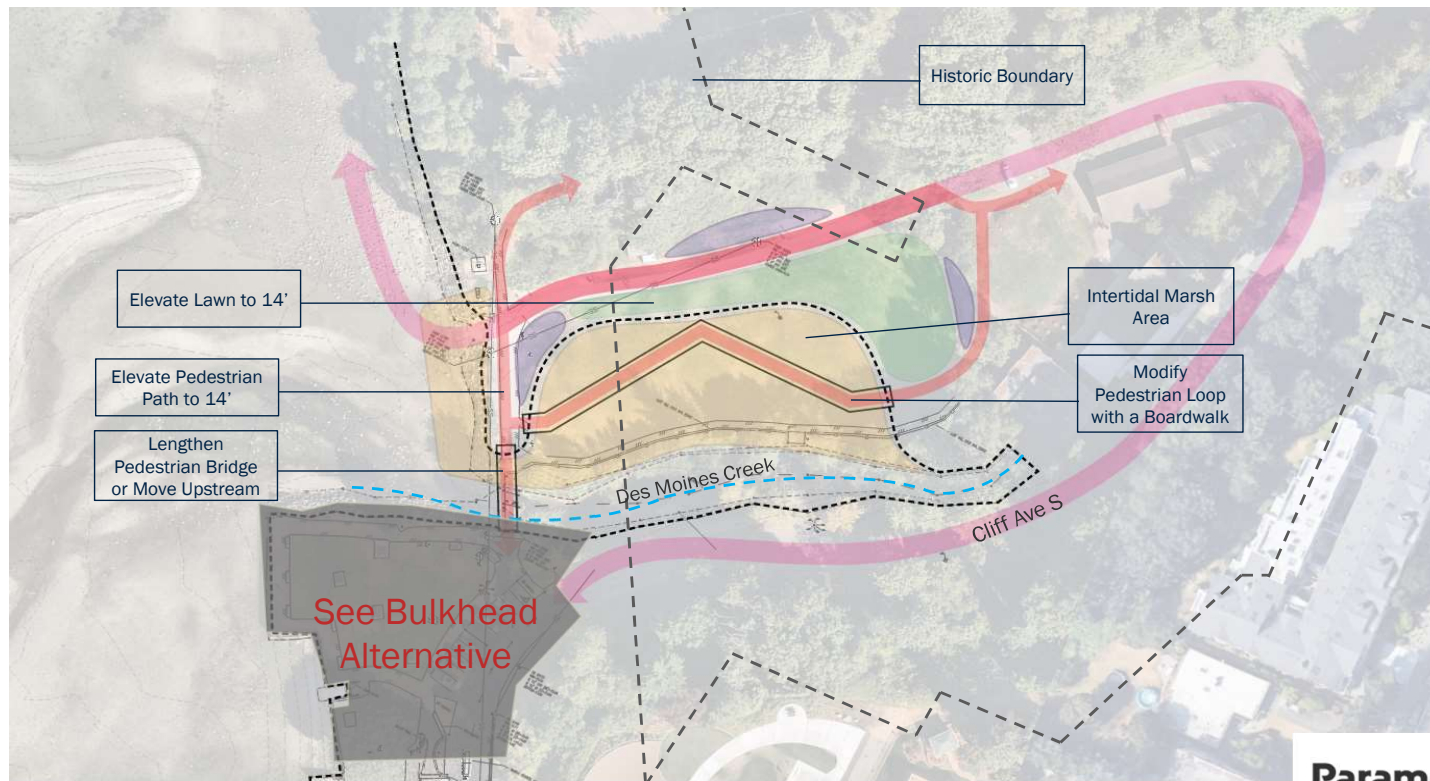
Intertidal Marsh

Parametrix





## MEADOW ALTERNATIVE 5 – ESTUARY

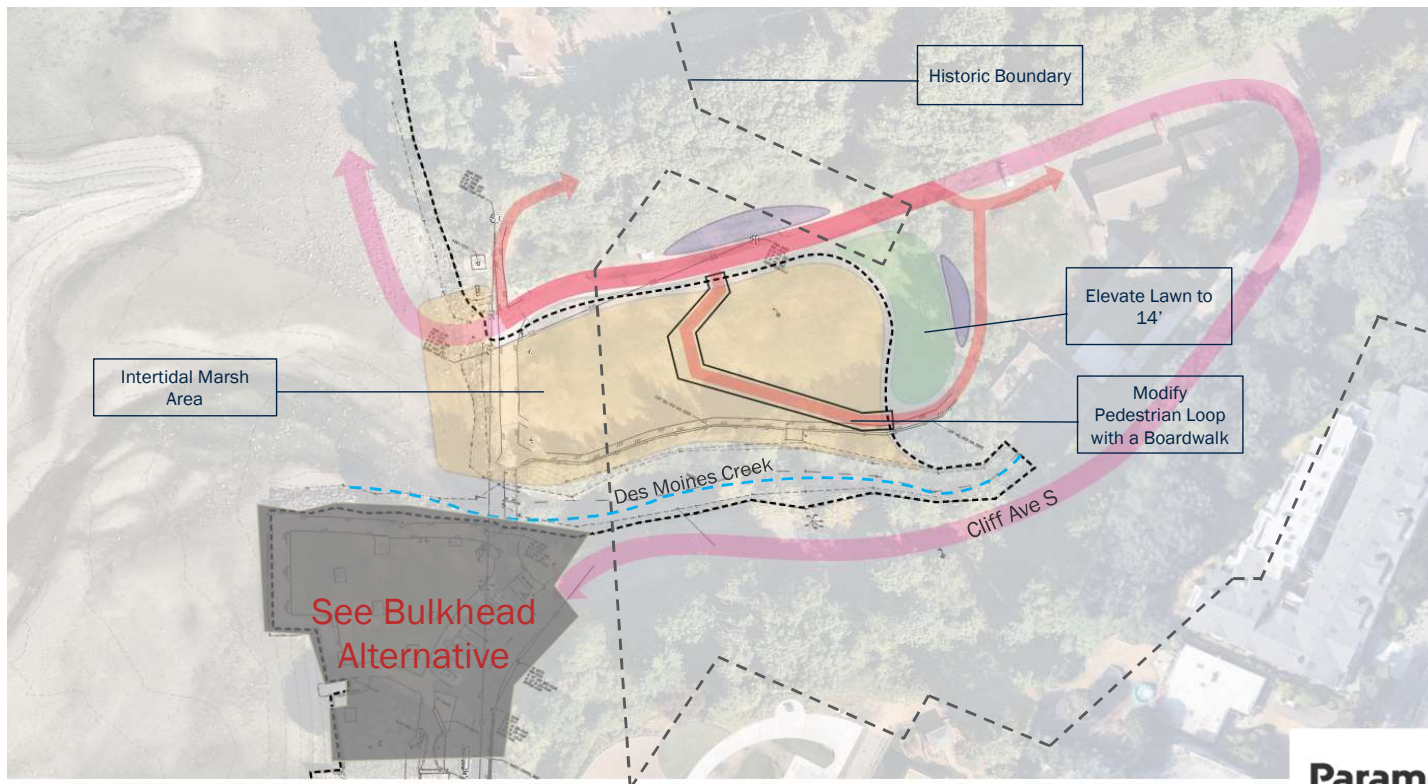


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## MEADOW ALTERNATIVE 5 – MAXIMUM ESTUARY



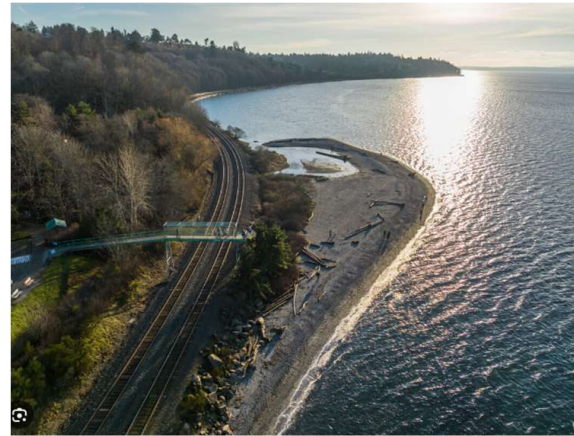
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## PROJECT ANALOGS

- Carkeek Beach – Seattle

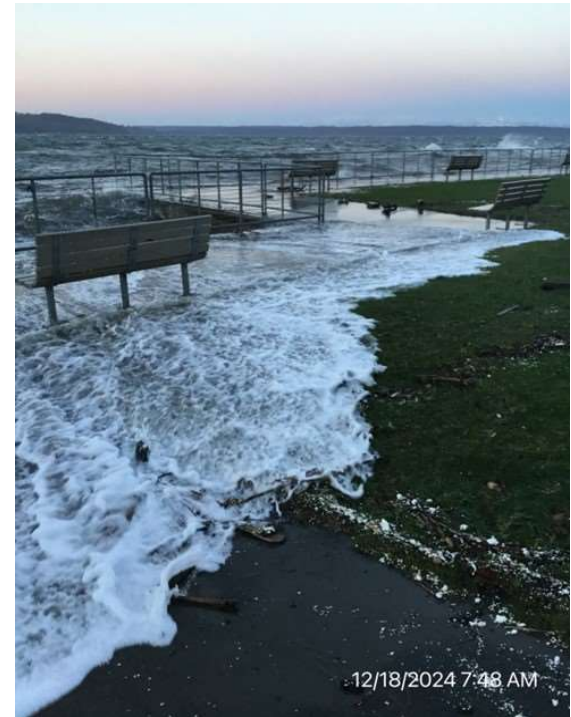
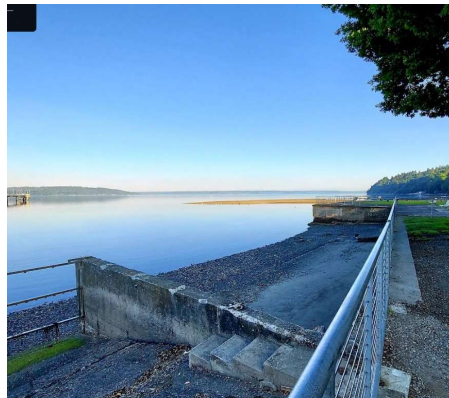


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# ALTERNATIVES – BULKHEAD AREA



# BULKHEAD CONDITION



Parametrix

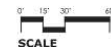
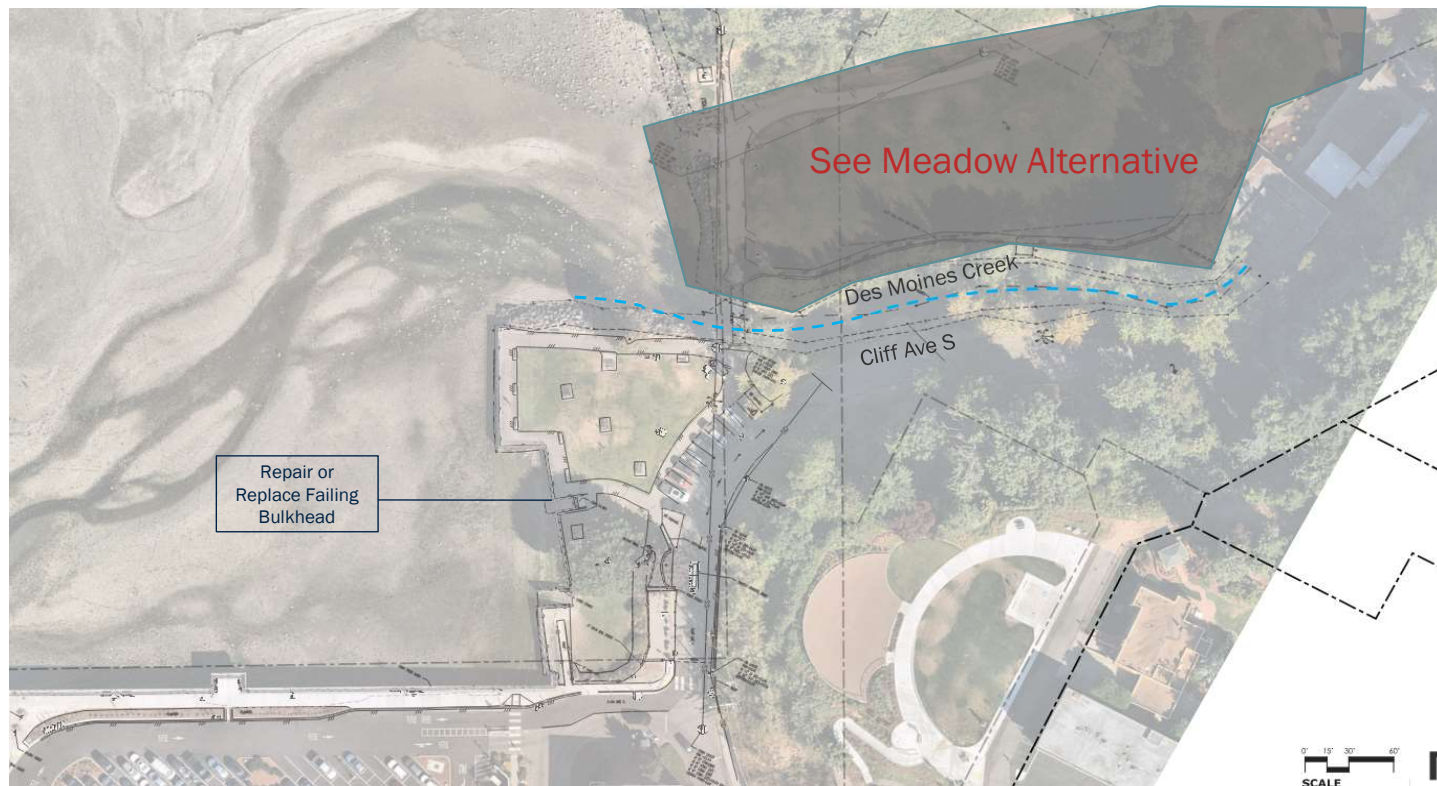


# EXISTING CONDITIONS





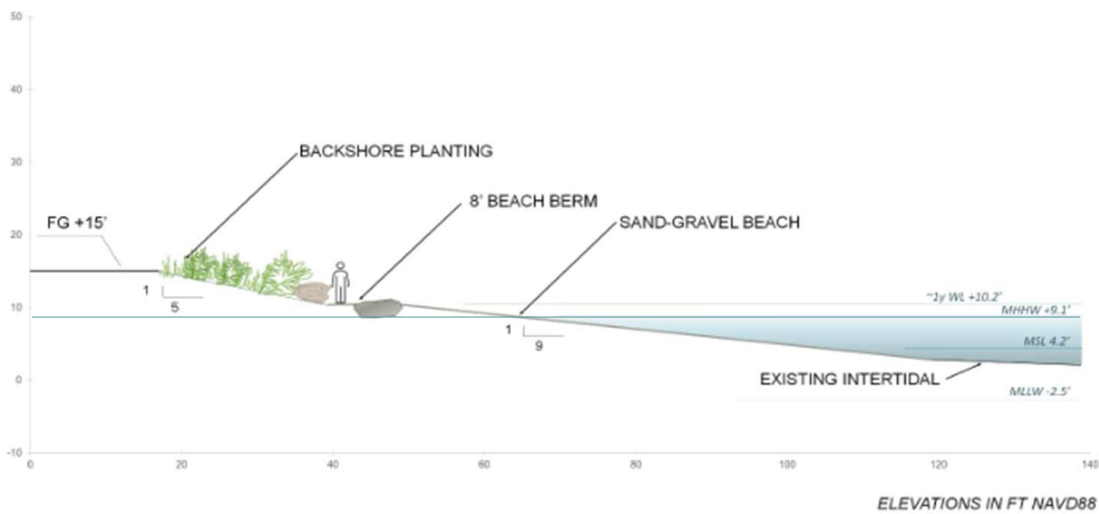
# BULKHEAD ALTERNATIVE 1 – LOW/NO ACTION ALTERNATIVE



SCALE

ParametriX





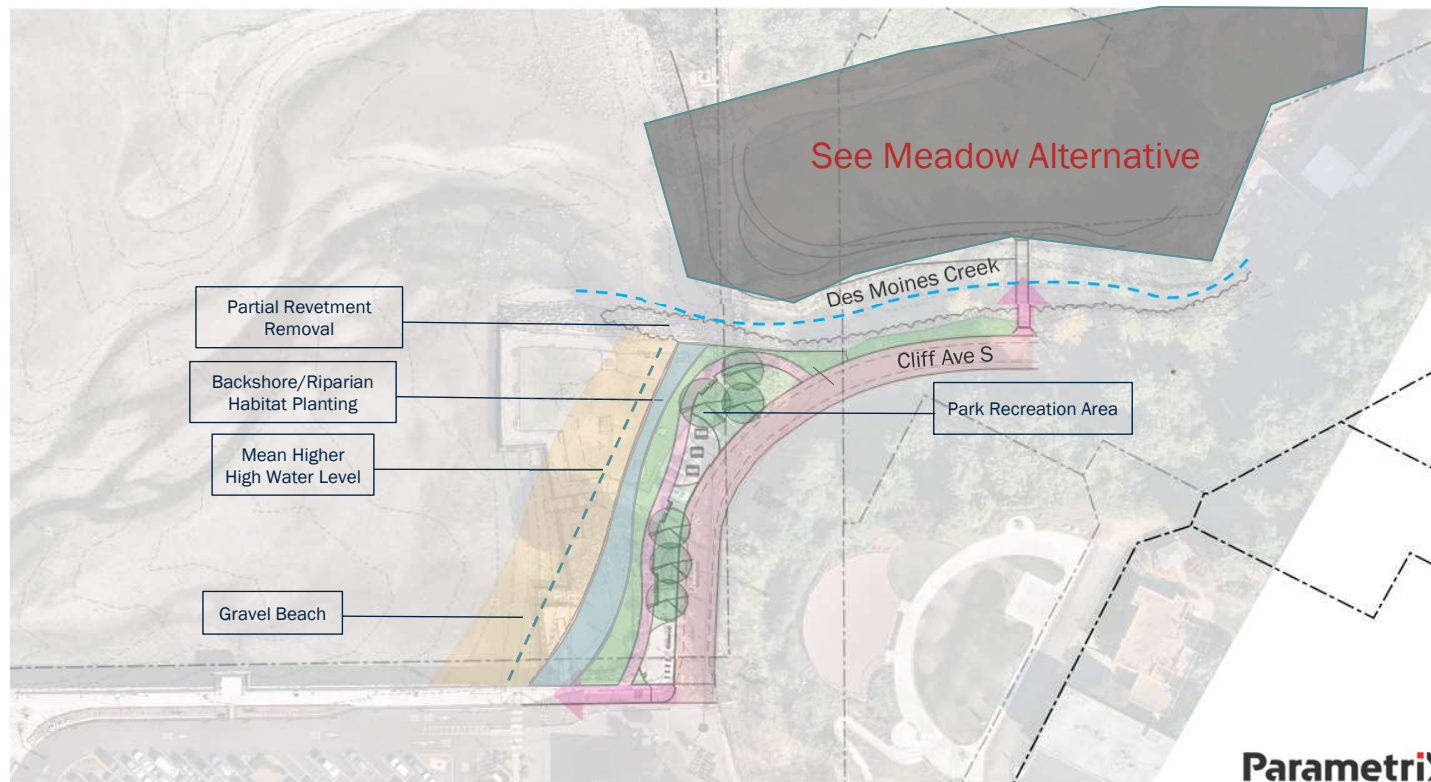
**TYPICAL BEACH SECTION**  
DES MOINES CREEK ESTUARY RESTORATION



**Parametrix**

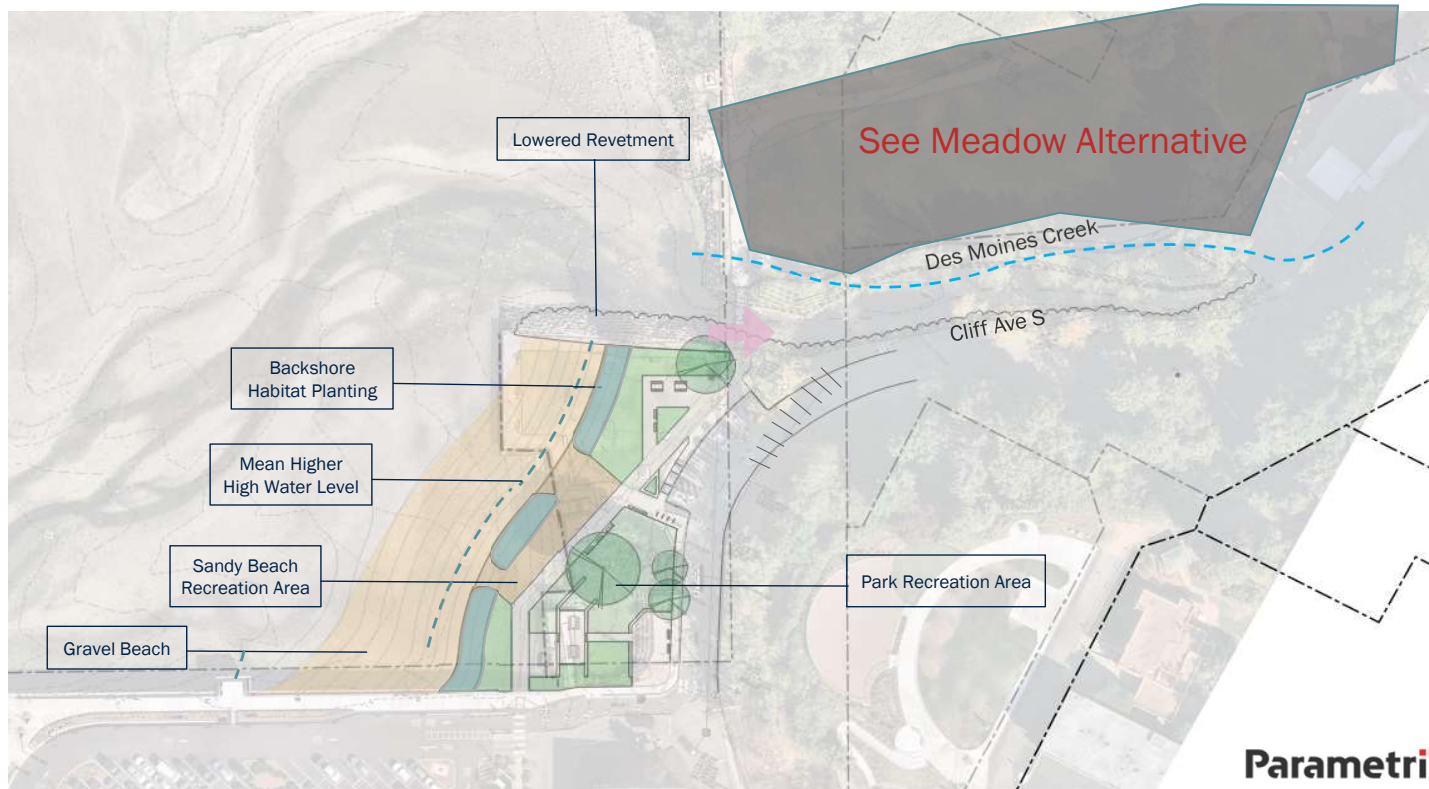


## BULKHEAD ALTERNATIVE 2 – MAXIMUM HABITAT ALTERNATIVE



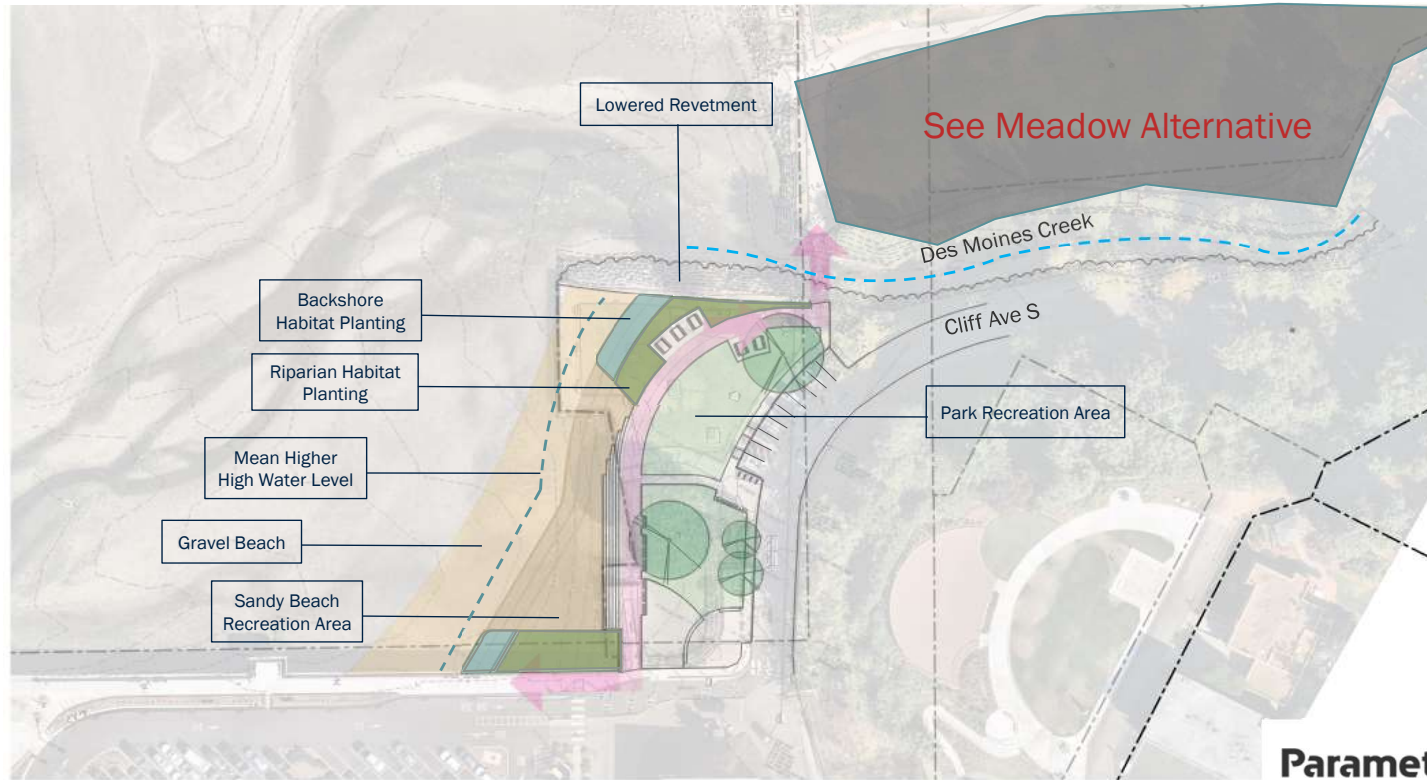


## BULKHEAD ALTERNATIVE 3 – MAXIMUM PARK ALTERNATIVE





## BULKHEAD ALTERNATIVE 4 – MODERATE PARK AREA (STAFF PREFERRED)



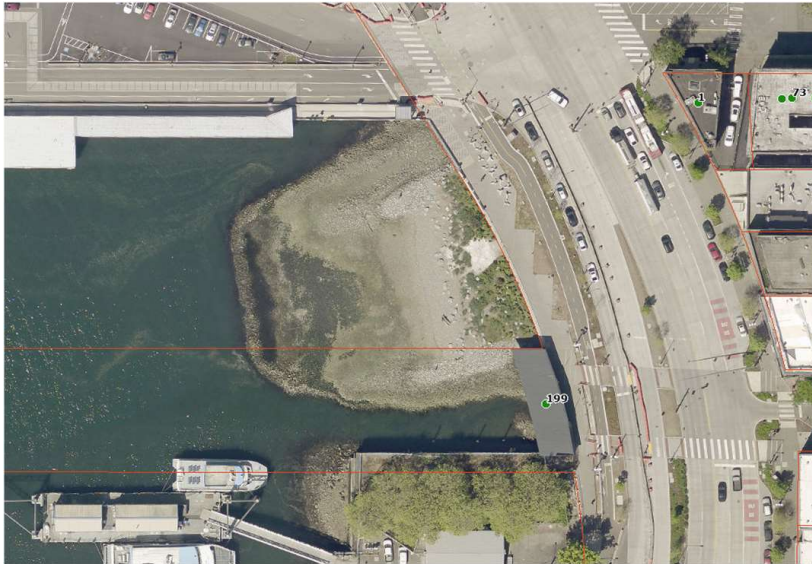
ParametriX





## PROJECT ANALOGS

- Habitat Beach – Seattle



2023 Aerial



2013 Aerial

Parametrix



## PROJECT ANALOGS

- Habitat Beach – Seattle



2023 Aerial



2013 Aerial



Parametrix

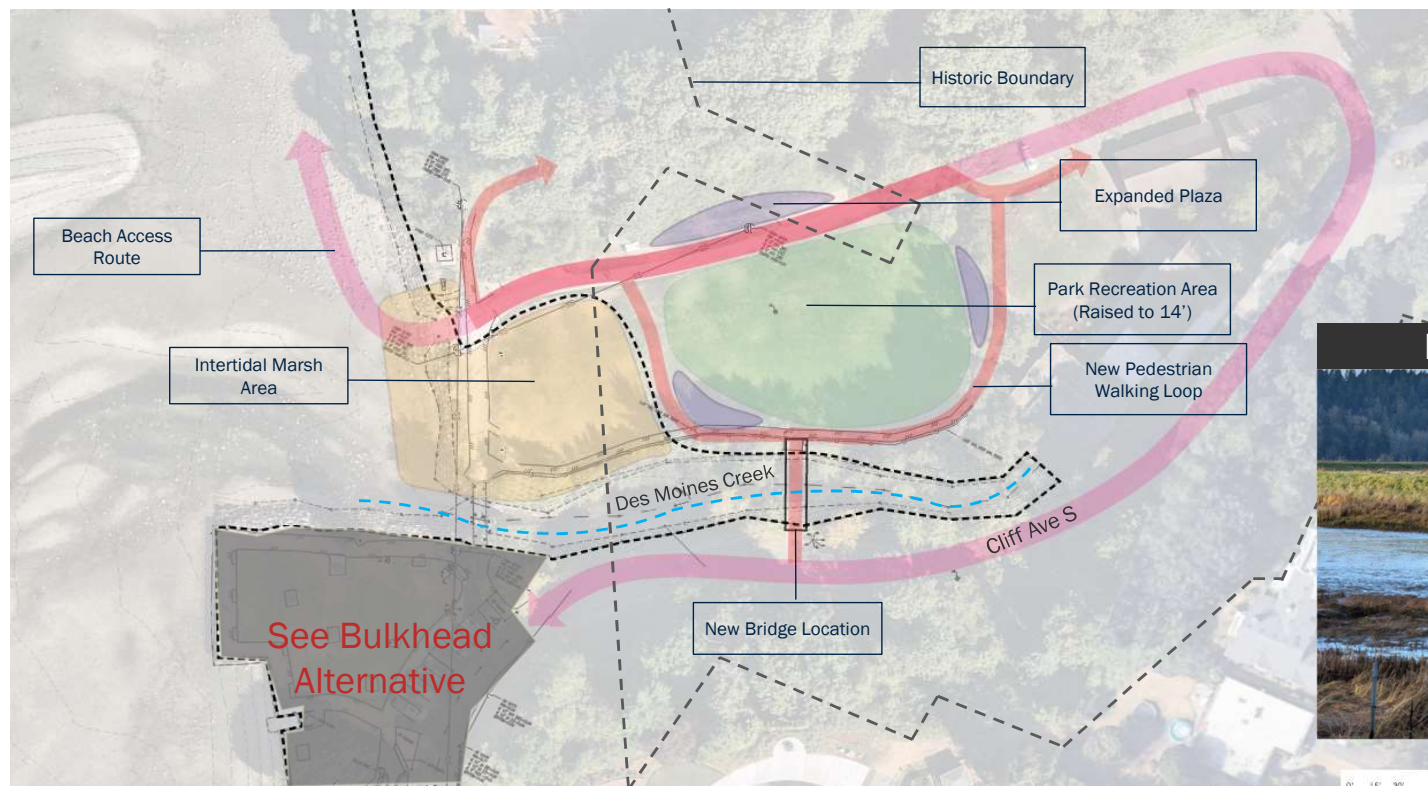


# Questions?

**ParametriX**



# STAFF PREFERRED MEADOW ALTERNATIVE



Intertidal Marsh

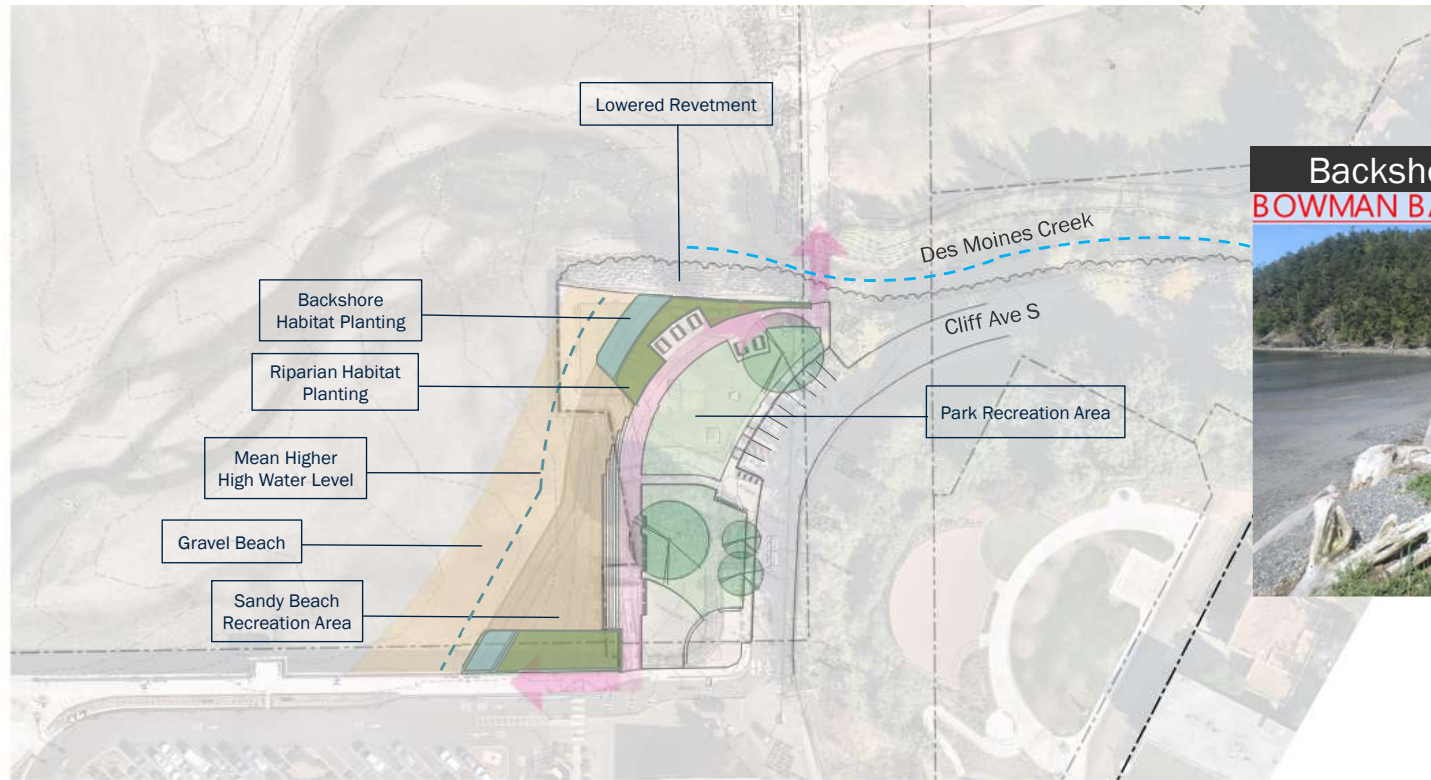
0' 15' 30'

Parametrix

MACLE  
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# STAFF PREFERRED BULKHEAD ALTERNATIVE



# GREEN/DUWAMISH & CENTRAL PUGET SOUND WATERSHED (WRIA 9)



**Salmon Habitat Plan  
2021 Update**

MAKING OUR WATERSHED FIT FOR A KING

GREEN/DUWAMISH AND  
CENTRAL PUGET SOUND WATERSHED  
Water Resource Inventory Area 9 (WRIA 9)

Approved by the WRIA 9 Watershed Ecosystem Forum on  
February 11, 2021



# GREEN/DUWAMISH & CENTRAL PUGET SOUND WATERSHED (WRIA 9)

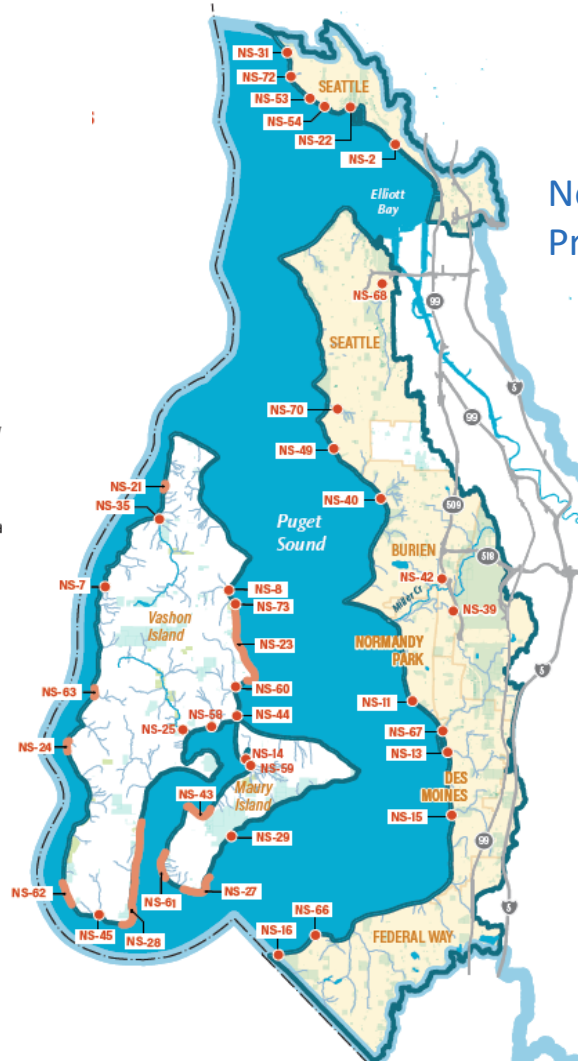


**Salmon Habitat Plan  
2021 Update**

MAKING OUR WATERSHED FIT FOR A KING

GREEN/DUWAMISH AND  
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Water Resource Inventory Area 9 (WRIA 9)

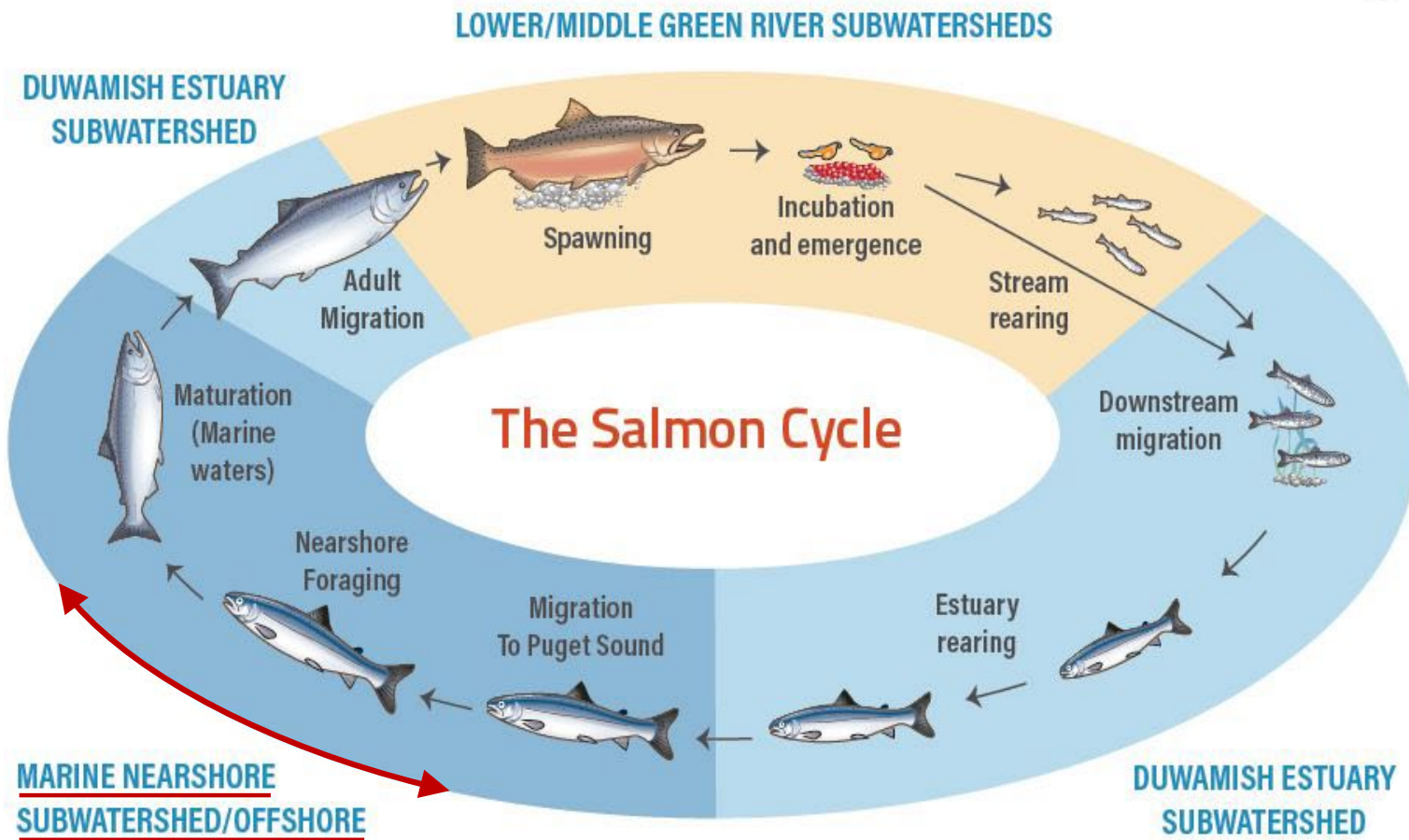
Approved by the WRIA 9 Watershed Ecosystem Forum on  
February 11, 2021



Nearshore Habitats  
Projects

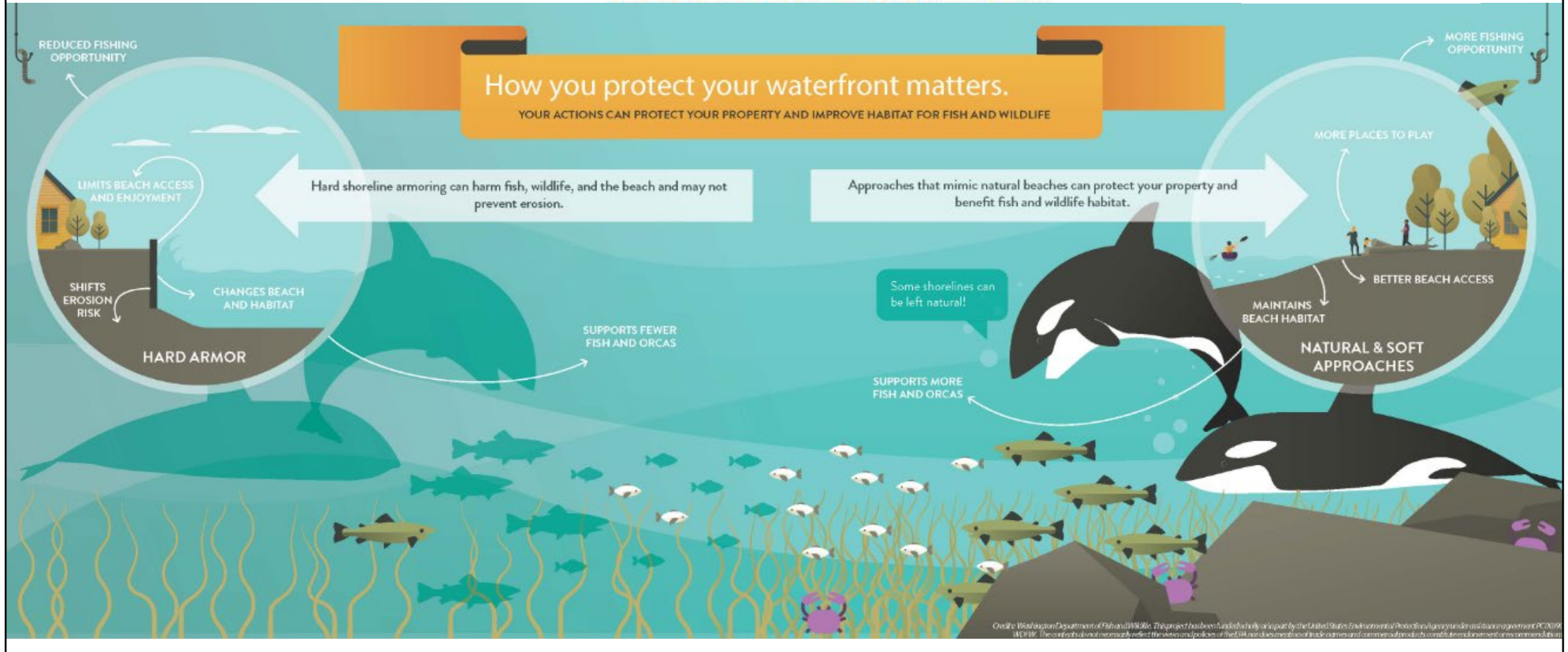
# WHY NEARSHORE HABITAT?

## LOCAL CONTEXT



# WHY NEARSHORE HABITAT?

## LOCAL CONTEXT





# DES MOINES CREEK ESTUARY RESTORATION

01/09/2025

**Parametrix**





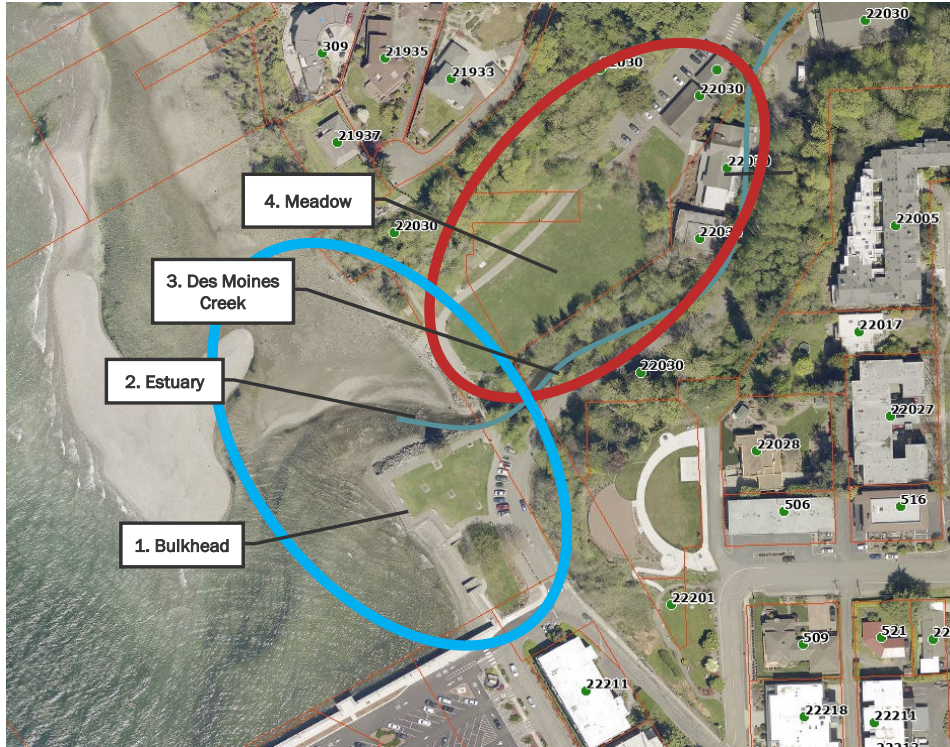
# AGENDA

- Background
- Goals and Funding
- Constraints
- Meadow Alternatives
- Bulkhead Alternatives





# PROJECT BACKGROUND



2023 Aerial



1936 Aerial

ParametriX



# PROJECT GOALS AND FUNDING

## Project Goals

Identify Potential Improvements Near Des Moines Creek for the Following:

- Estuary Habitat
- Shoreline Habitat
- Flooding Impacts
- Public Access to Shoreline
- Connectivity to Des Moines Marina

## Funding Sources

**Cooperative Watershed Management Grant Focus:**

- Recovering ESA-listed salmon species and restoring watershed ecosystems
- Habitat restoration
- Water quality improvements
- Monitoring
- Planning and public outreach

**Project Goals:**

- Estuary Habitat
- Shoreline Habitat

**Flood Reduction Grant Focus:**

- Address potential flooding issues
- Protect public safety
- Preserve important infrastructure

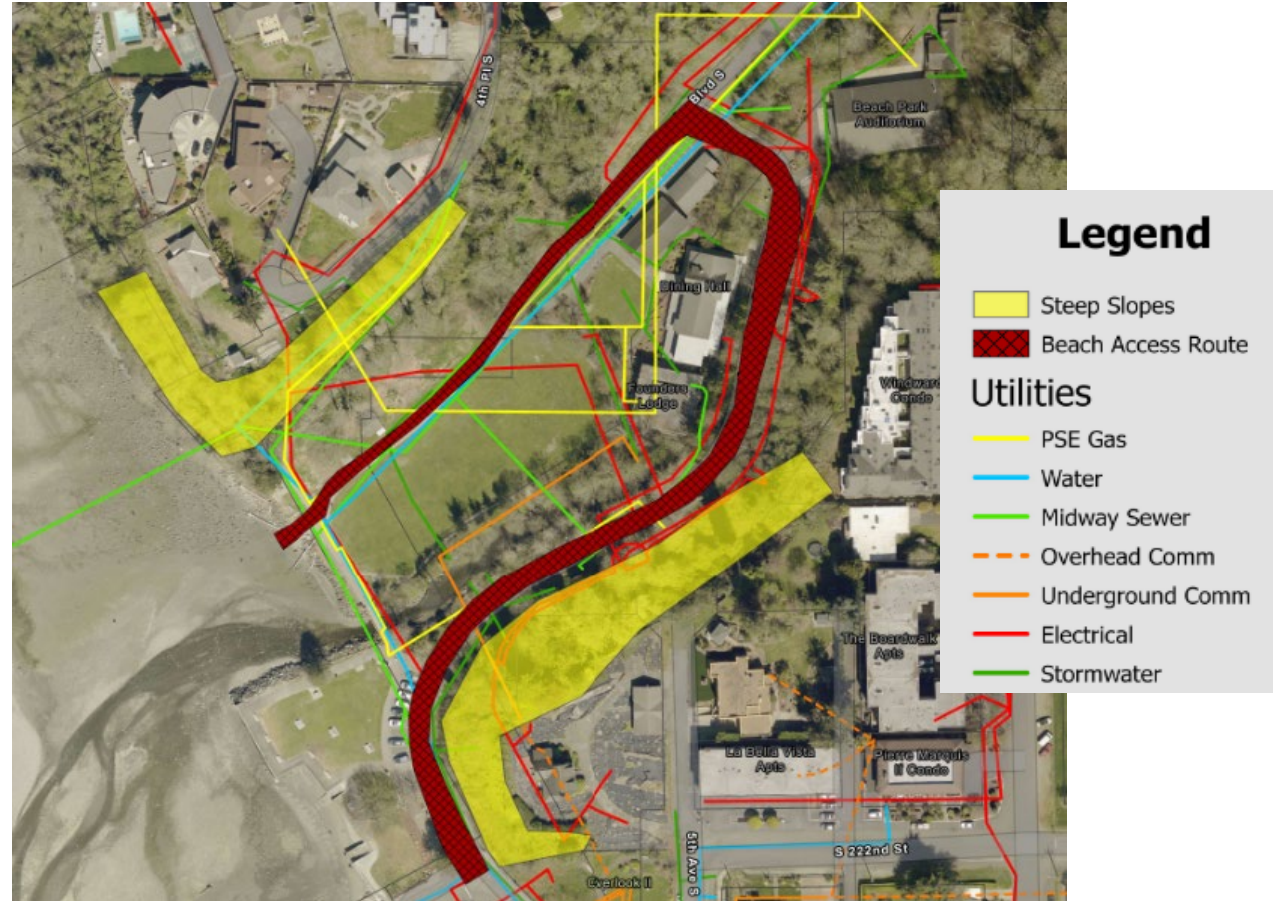
**Project Goals:**

- Flooding Impacts

# CONSTRAINTS

## Constraints

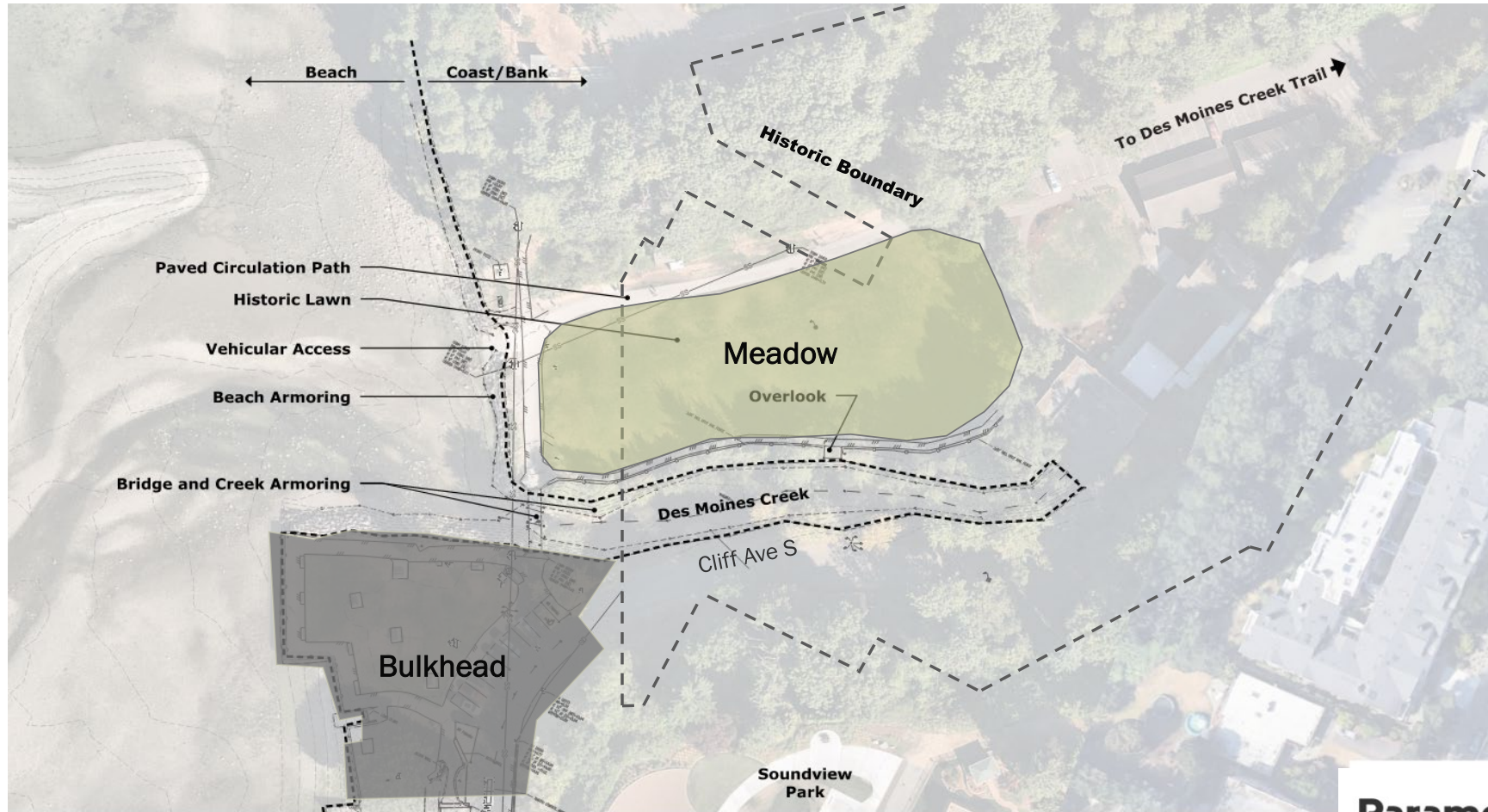
- Steep Slopes
- Beach Access
- Utilities



# ALTERNATIVES – MEADOW AREA



# EXISTING CONDITIONS

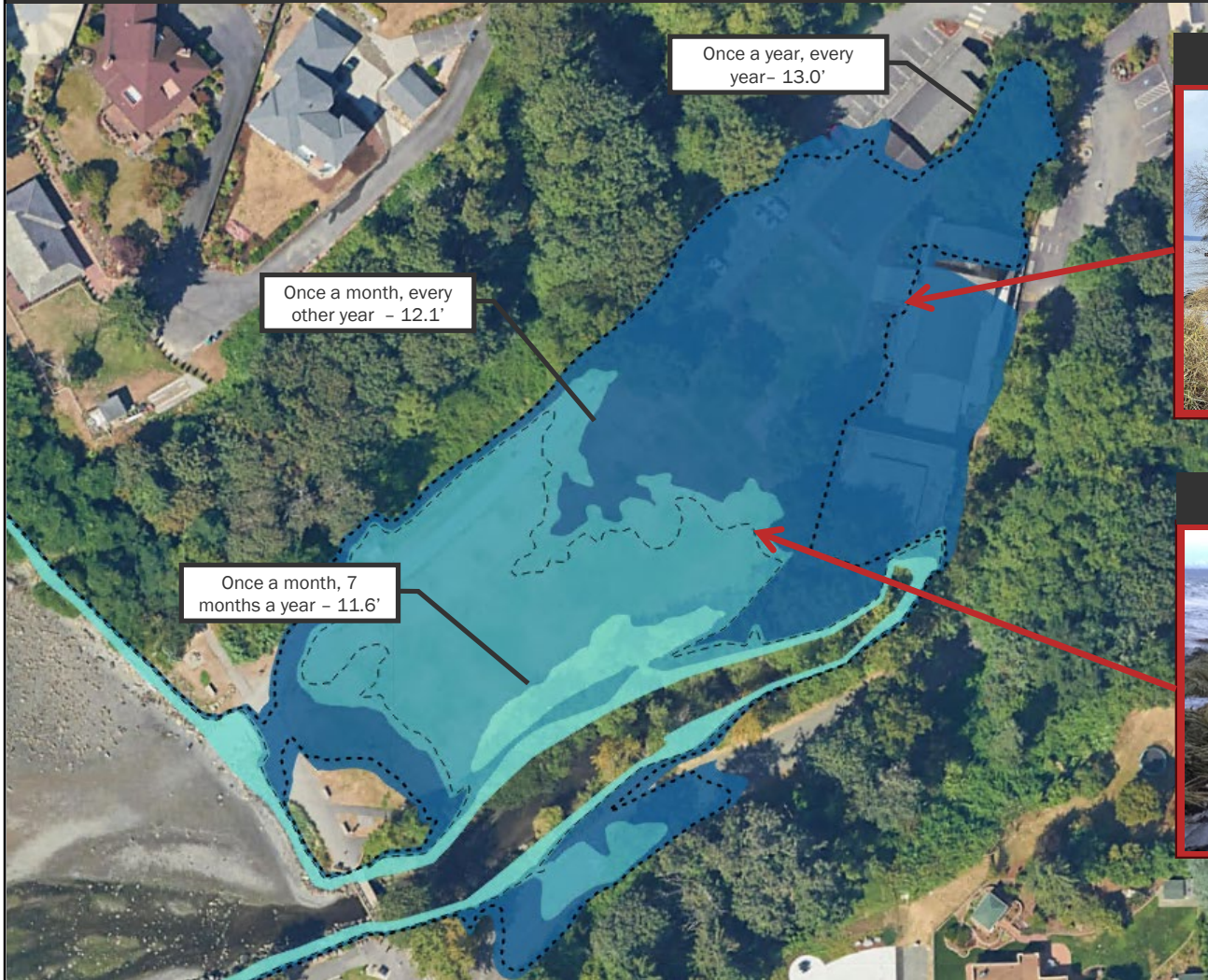


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# RECENT AND ANTICIPATED FLOODING



### December 2022 King Tide



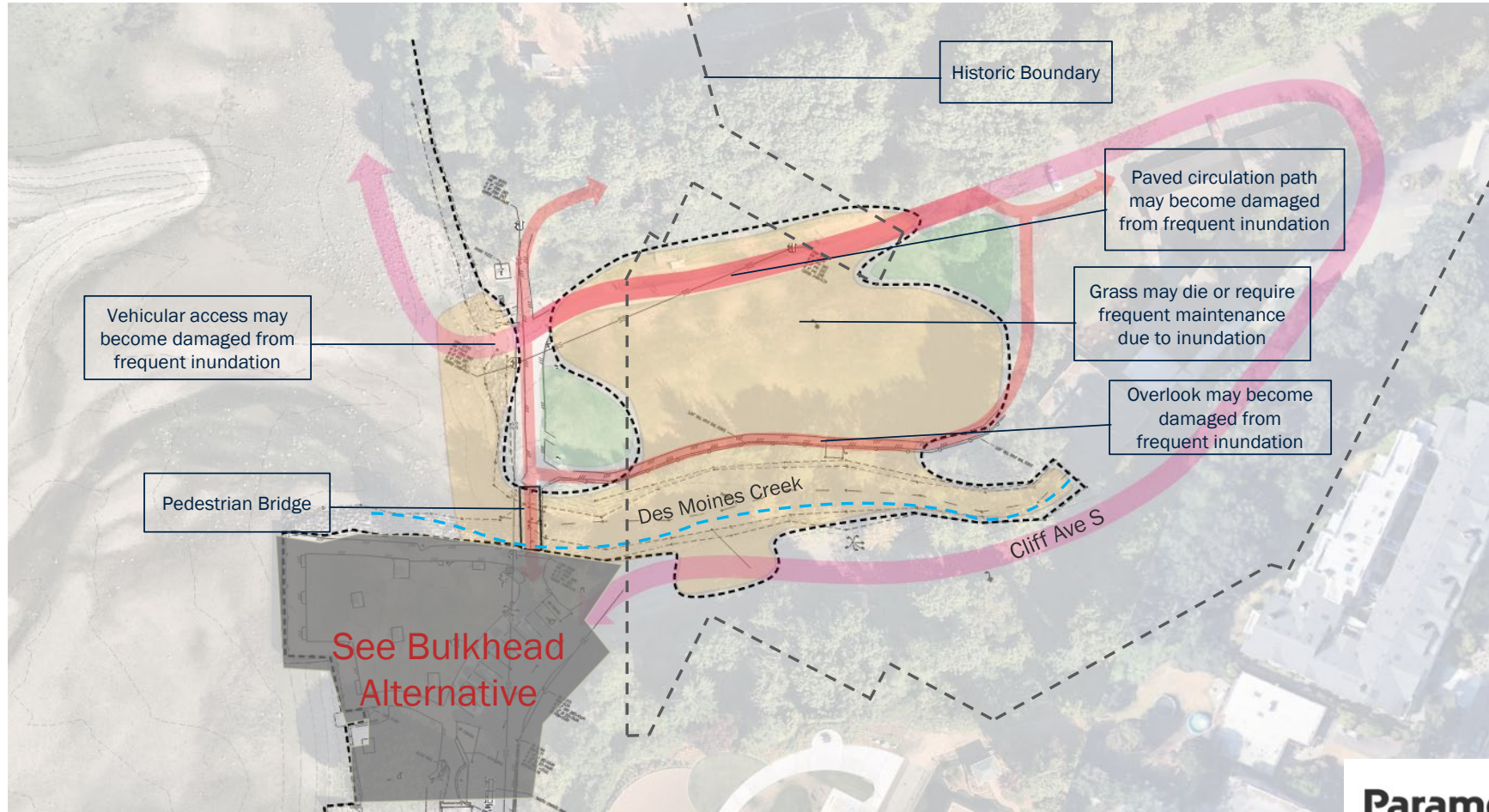
### December 2024 Tide



**ParametriX**



# LOW/NO ACTION MEADOW ALTERNATIVE

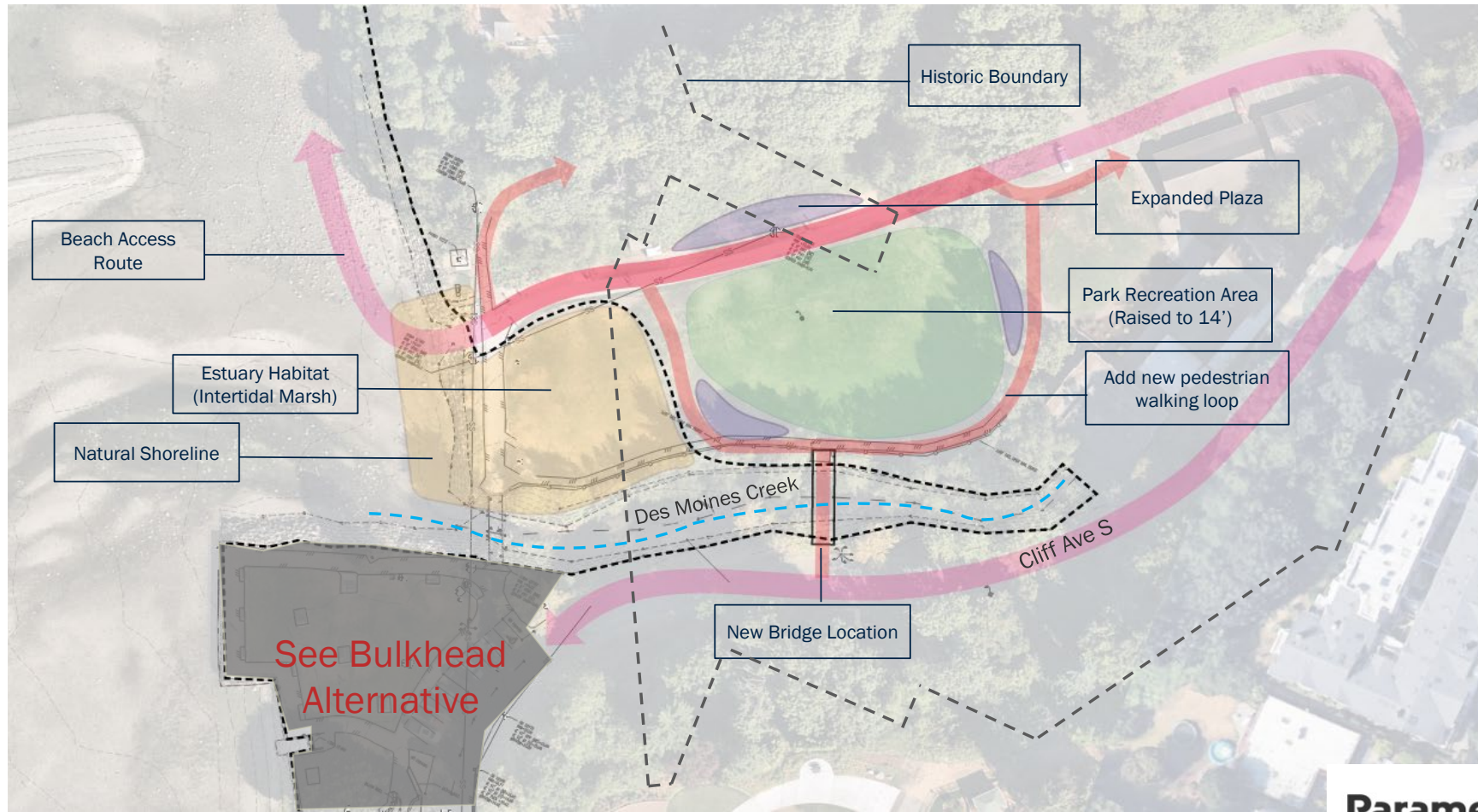


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# PARTIAL ESTUARY MEADOW ALTERNATIVE (STAFF PREFERRED)

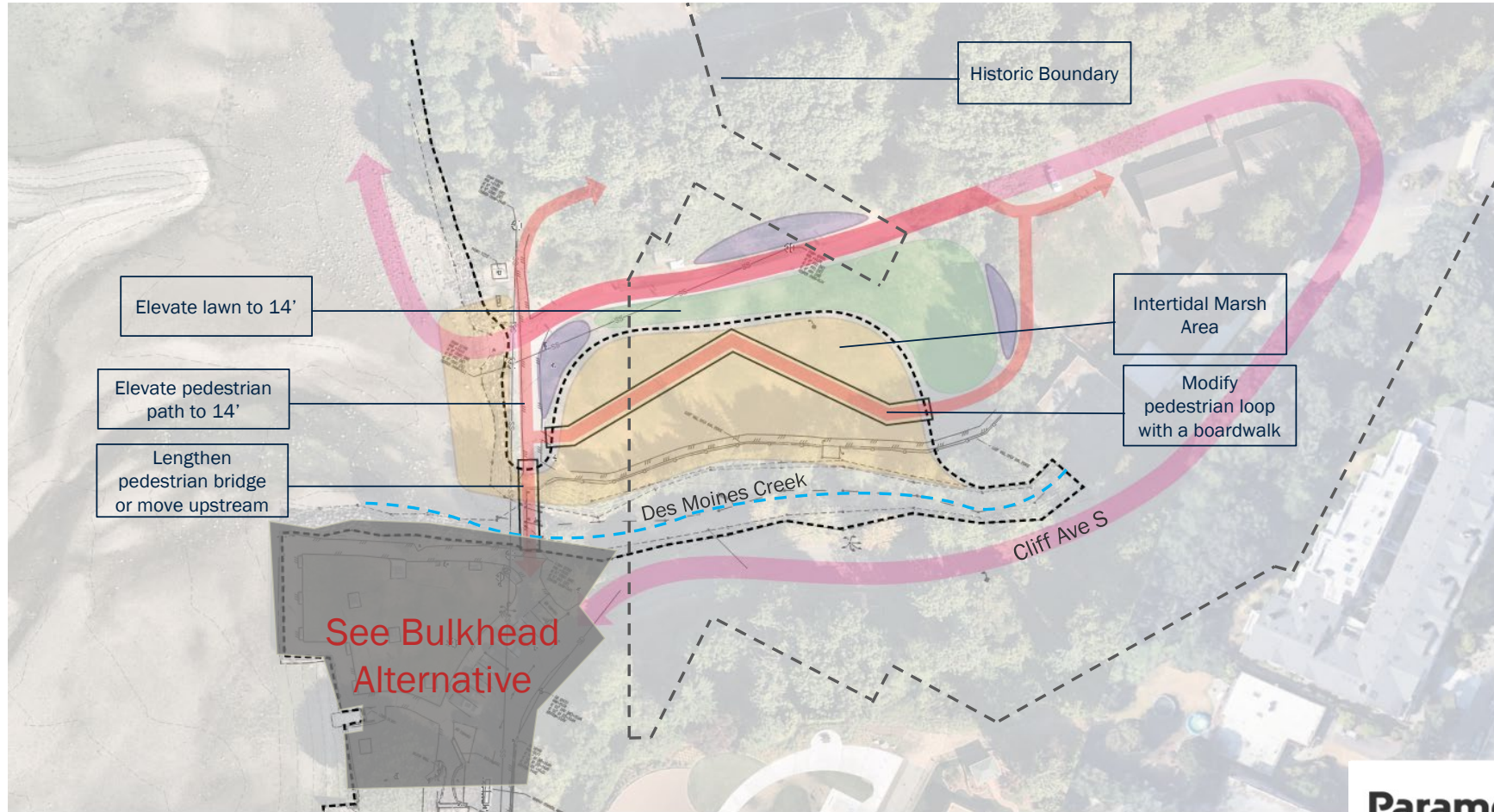


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# OPTIONS CONSIDERED- ESTUARY

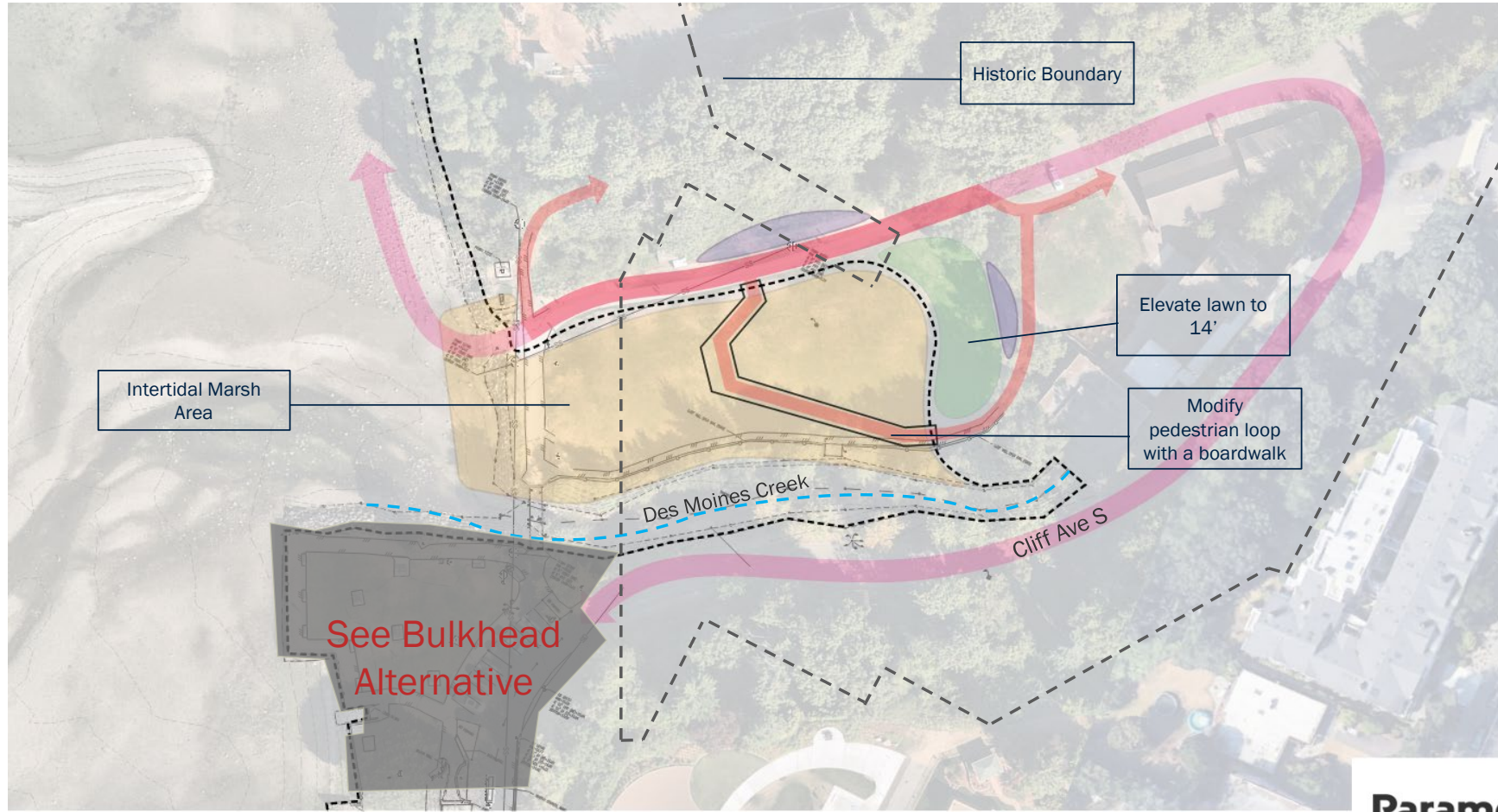


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# OPTIONS CONSIDERED- MAXIMUM ESTUARY

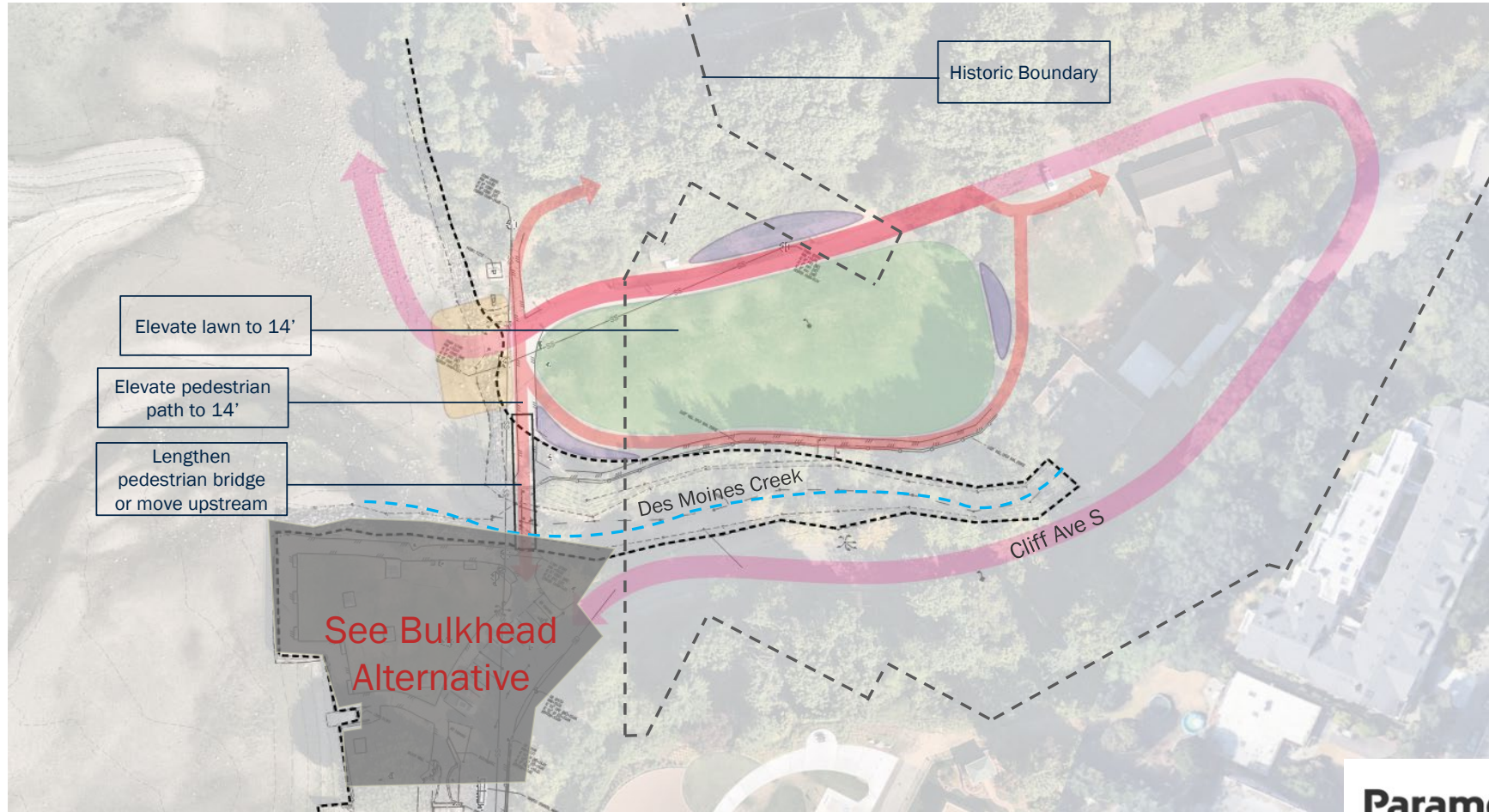


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# OPTIONS CONSIDERED- WIDEN ESTUARY MOUTH

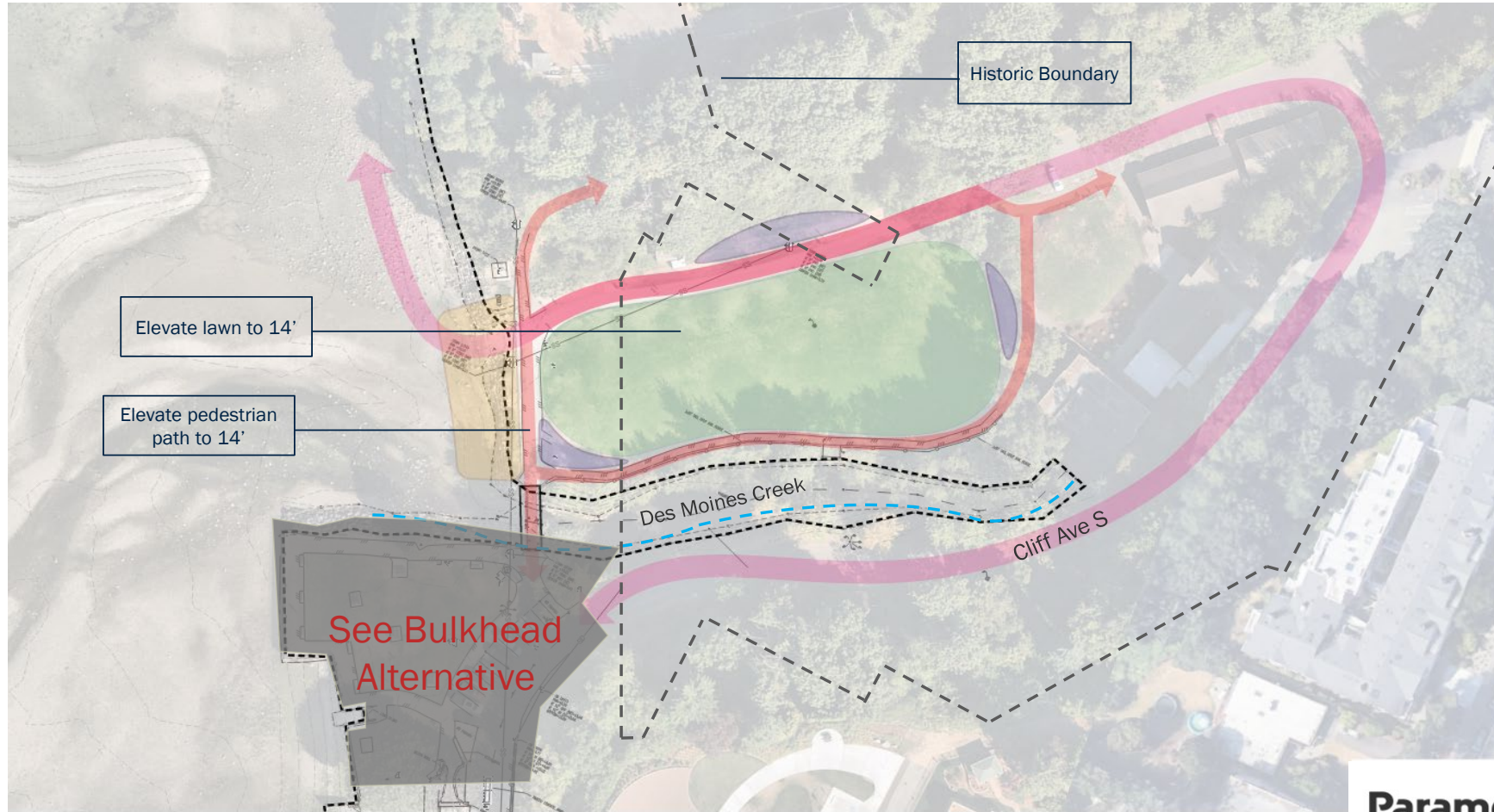


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# OPTIONS CONSIDERED- ELEVATE LAWN AREA

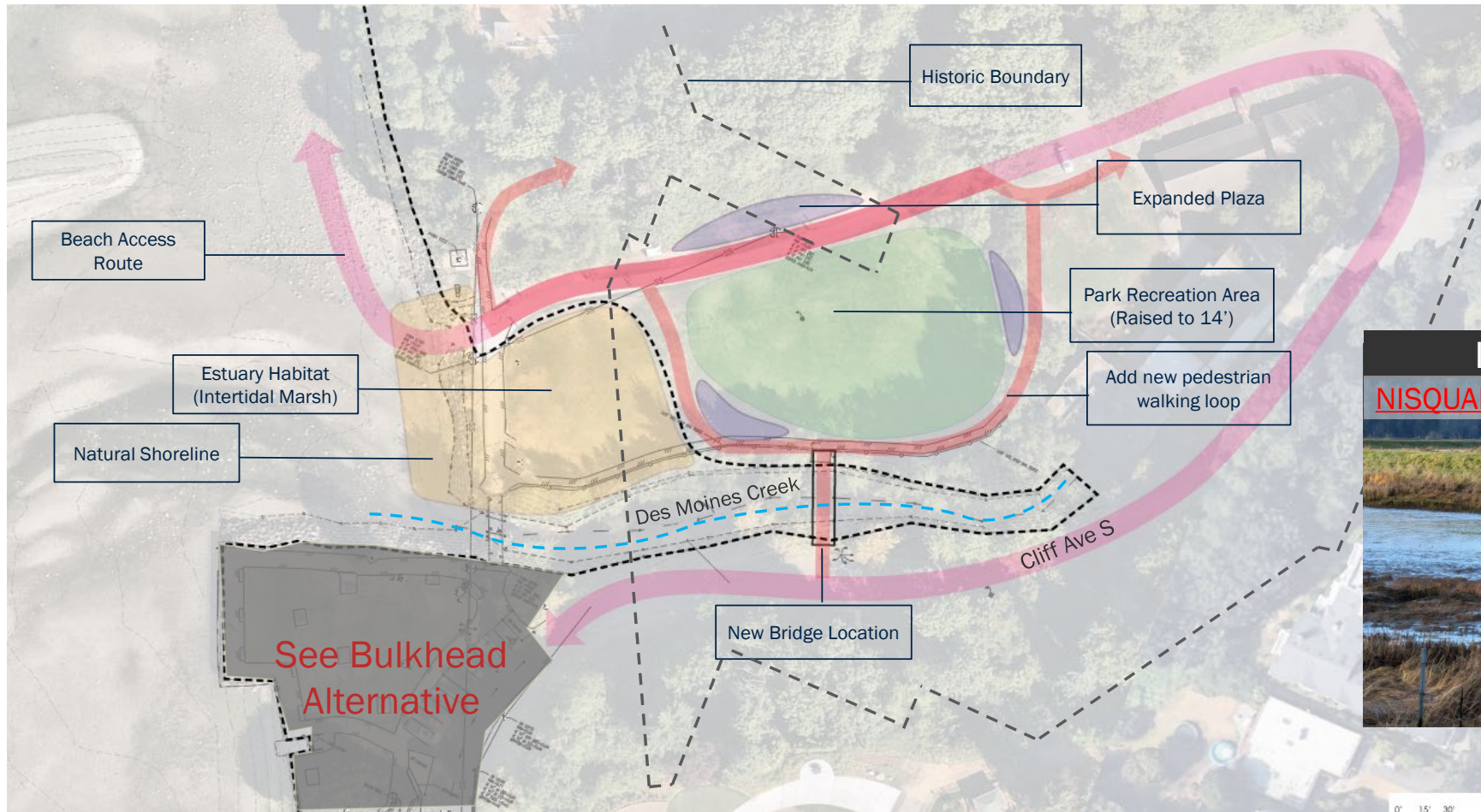


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# PARTIAL ESTUARY MEADOW ALTERNATIVE (STAFF PREFERRED)

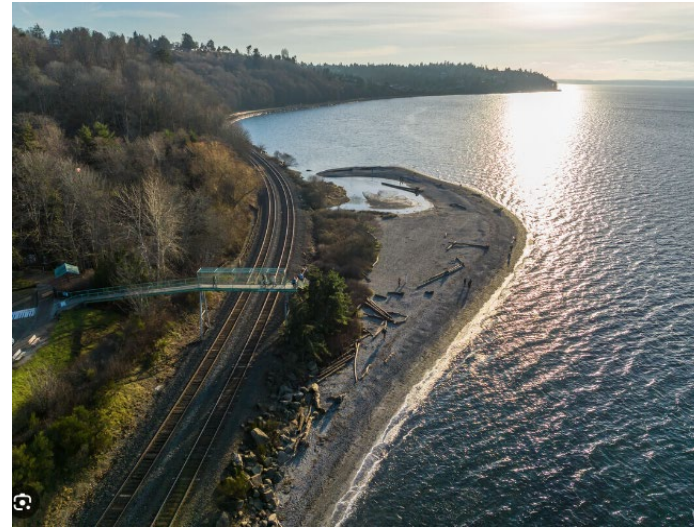


Parametrix



# PROJECT ANALOGS

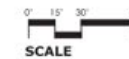
- Carkeek Park Beach – Seattle



# ALTERNATIVES – BULKHEAD AREA



# EXISTING CONDITIONS



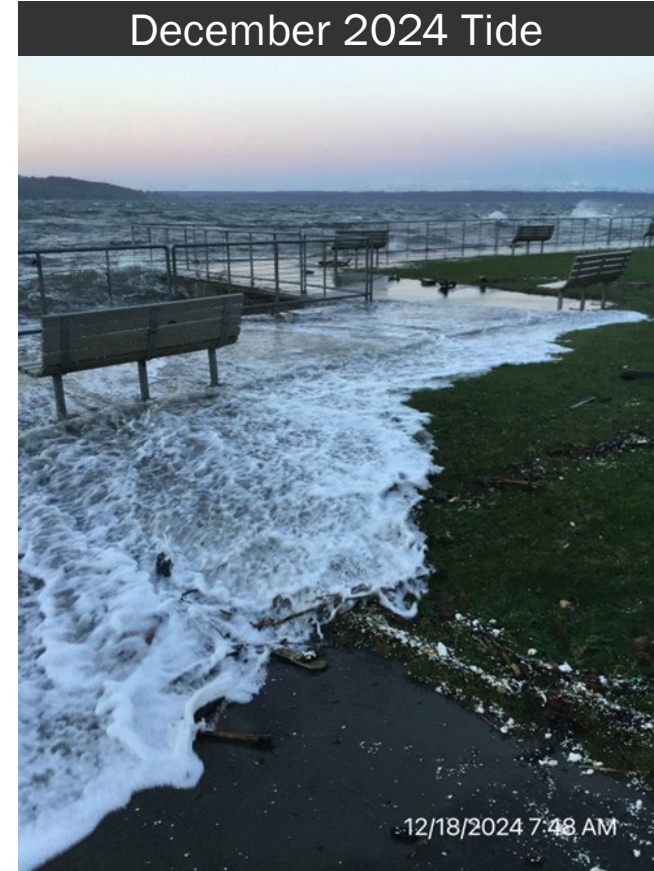
SCALE

ParametriX





# BULKHEAD CONDITION



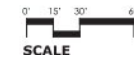
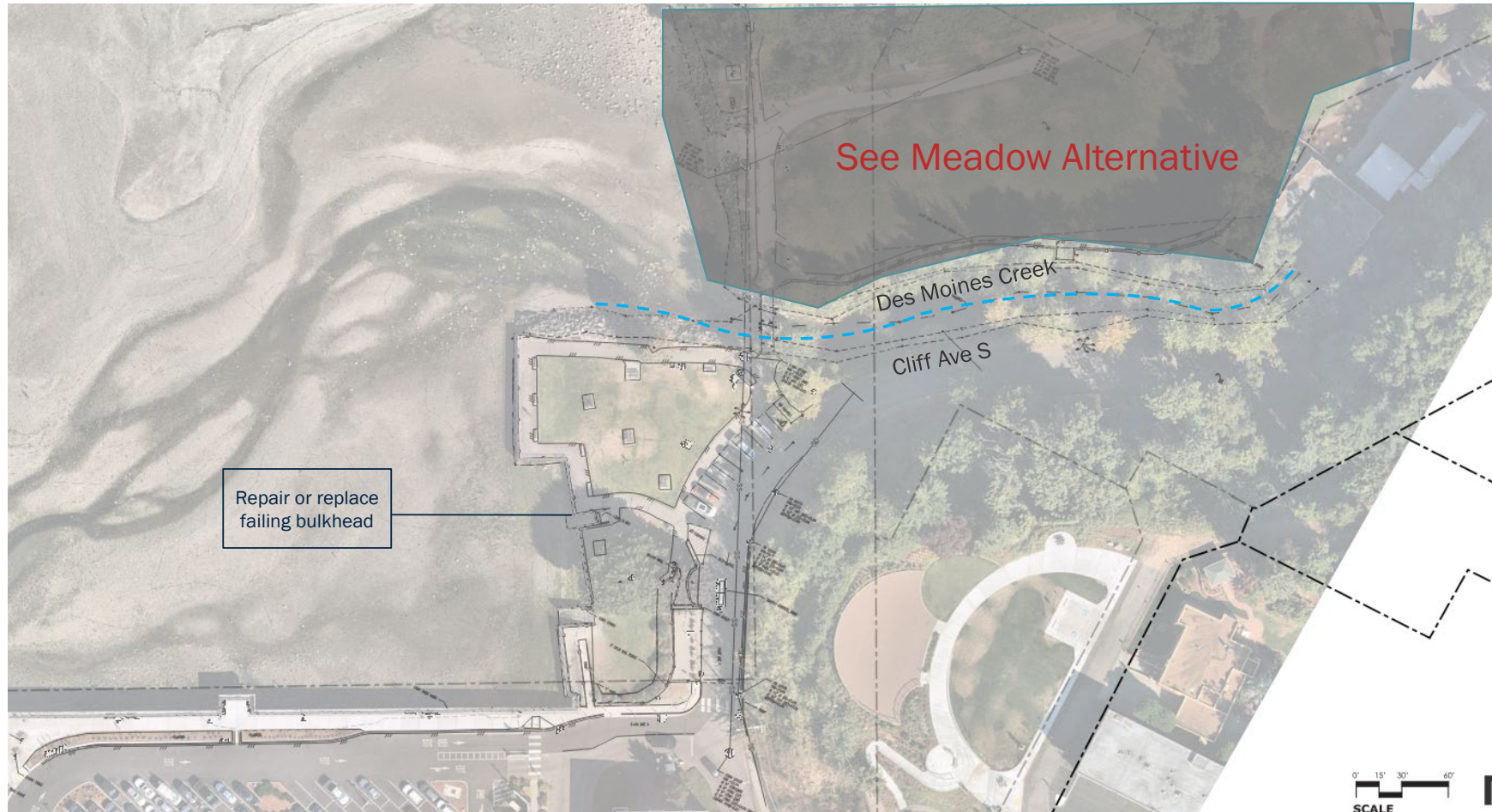
December 2024 Tide

12/18/2024 7:48 AM

**ParametriX**



# LOW/NO ACTION BULKHEAD ALTERNATIVE

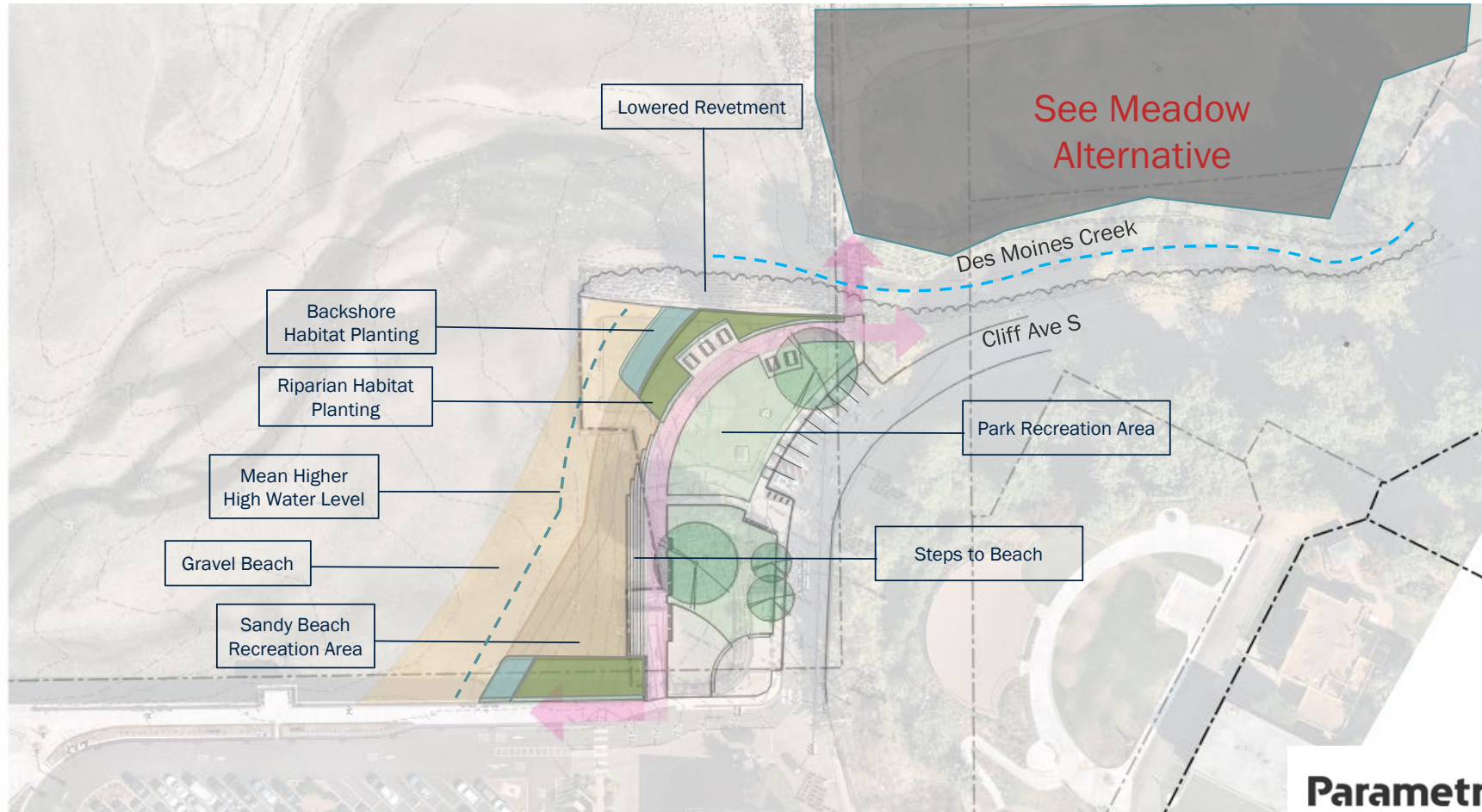


Parametrix





# MODERATE UPLAND BULKHEAD ALTERNATIVE (STAFF PREFERRED)

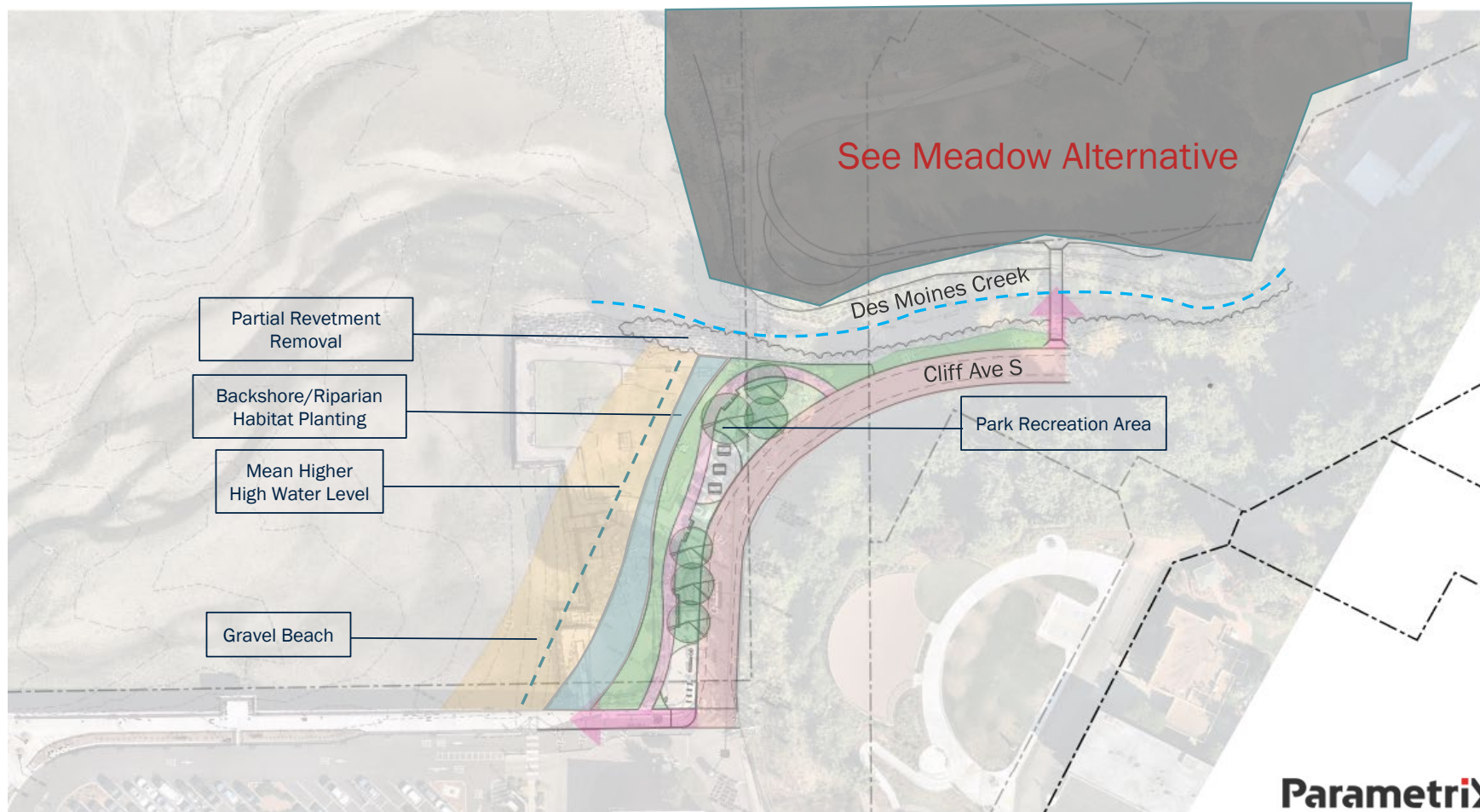


ParametriX





# OPTIONS CONSIDERED – MINIMUM UPLAND RETAINED

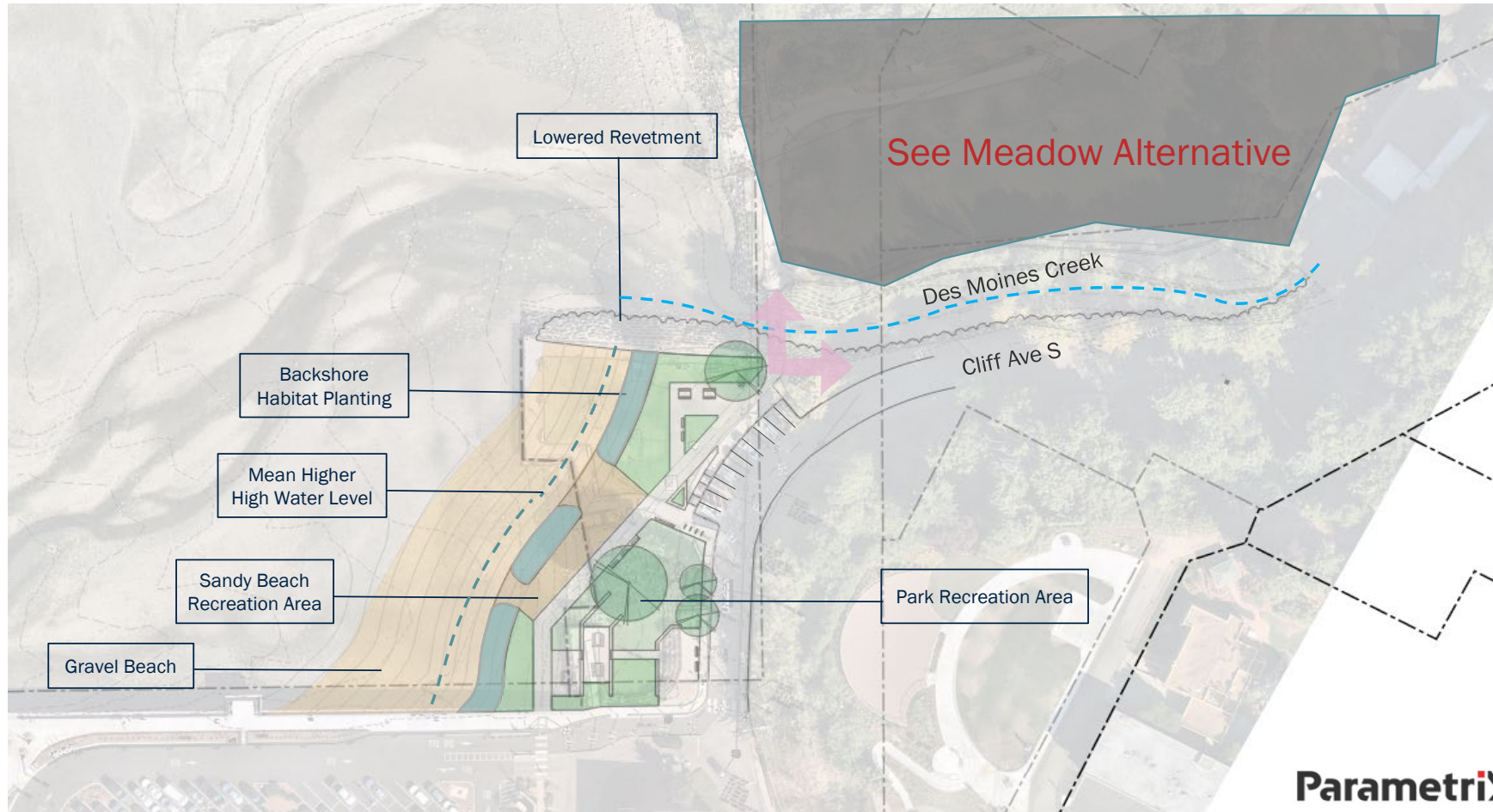


ParametriX





# OPTIONS CONSIDERED – MAXIMUM UPLAND RETAINED

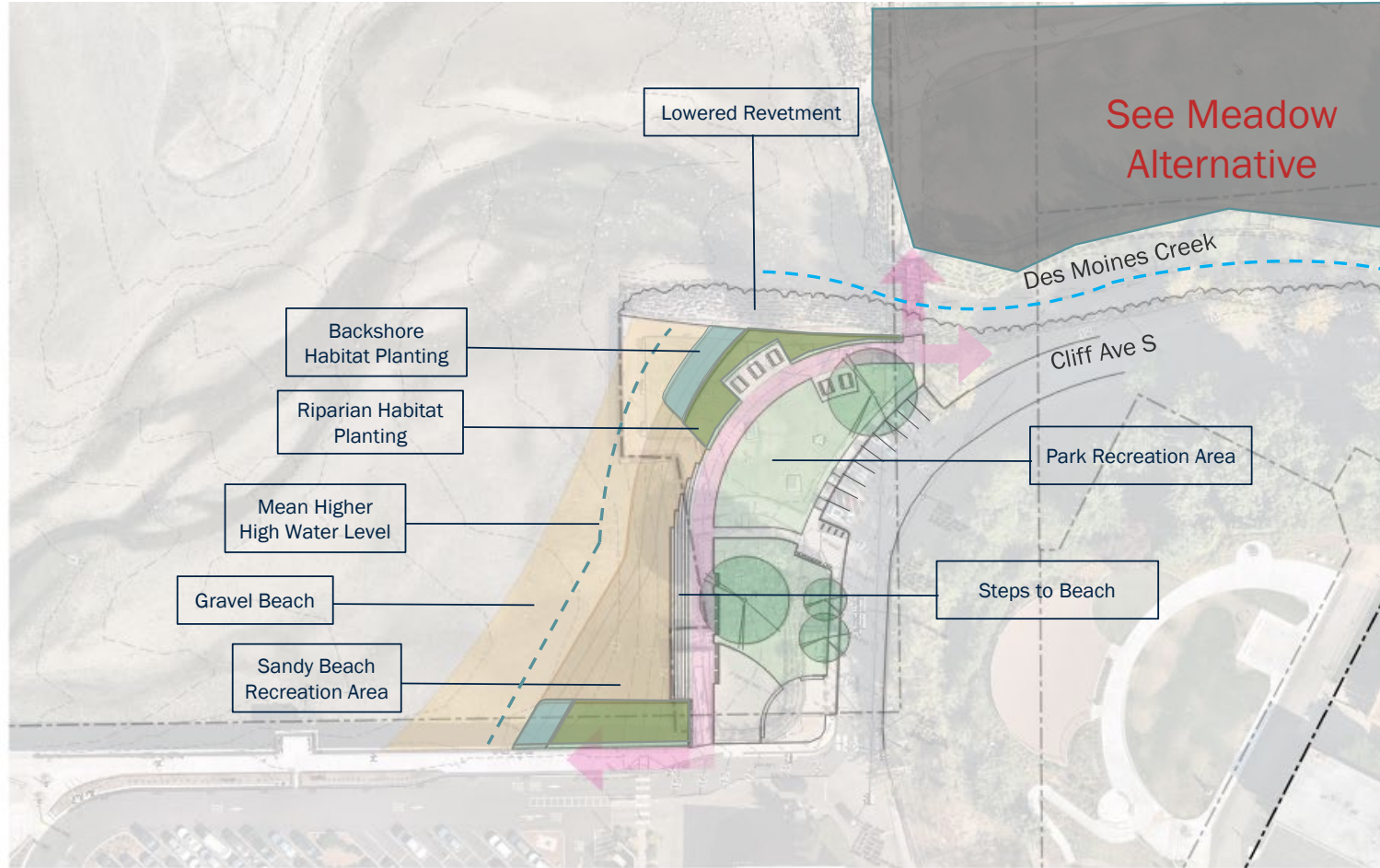


Parametrix



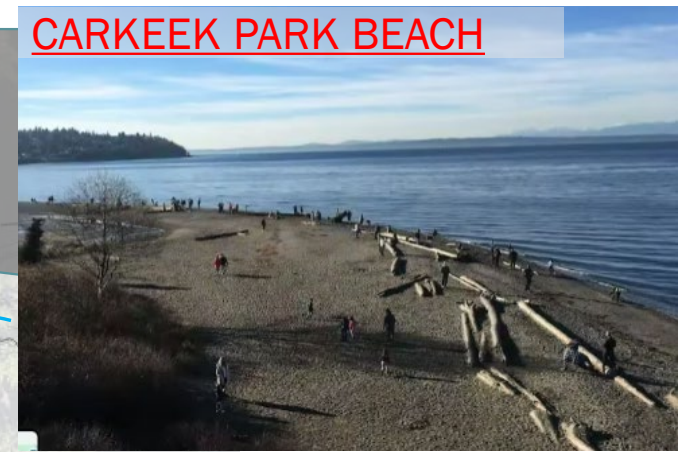


# MODERATE UPLAND BULKHEAD AREA ALTERNATIVE (STAFF PREFERRED)



Sand Gravel Beach Slope

**CARKEEK PARK BEACH**



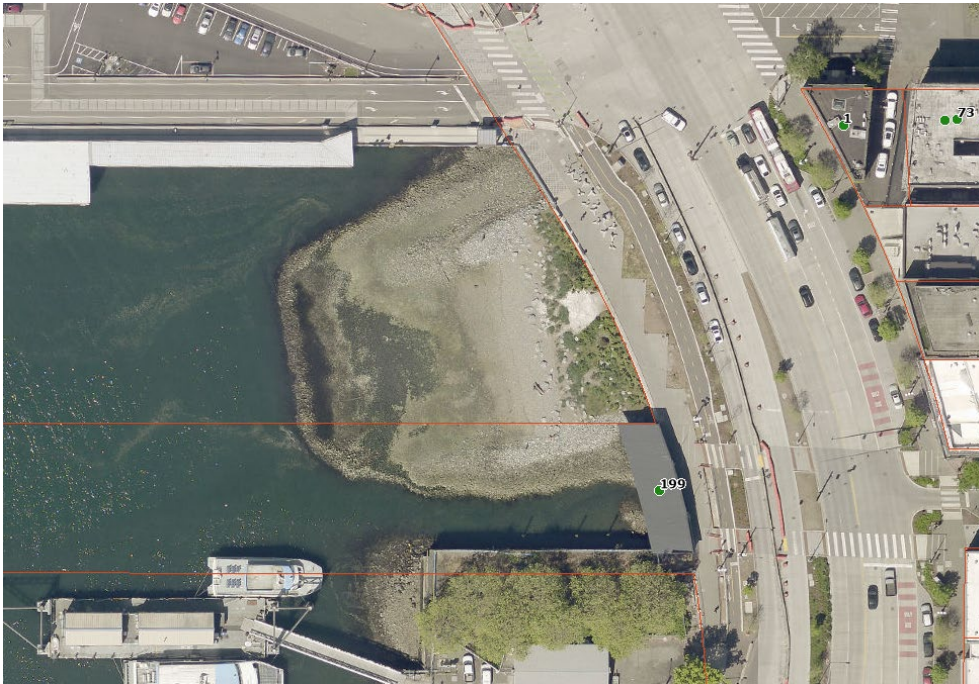
Backshore Planting

**BOWMAN BAY STATE PARK**

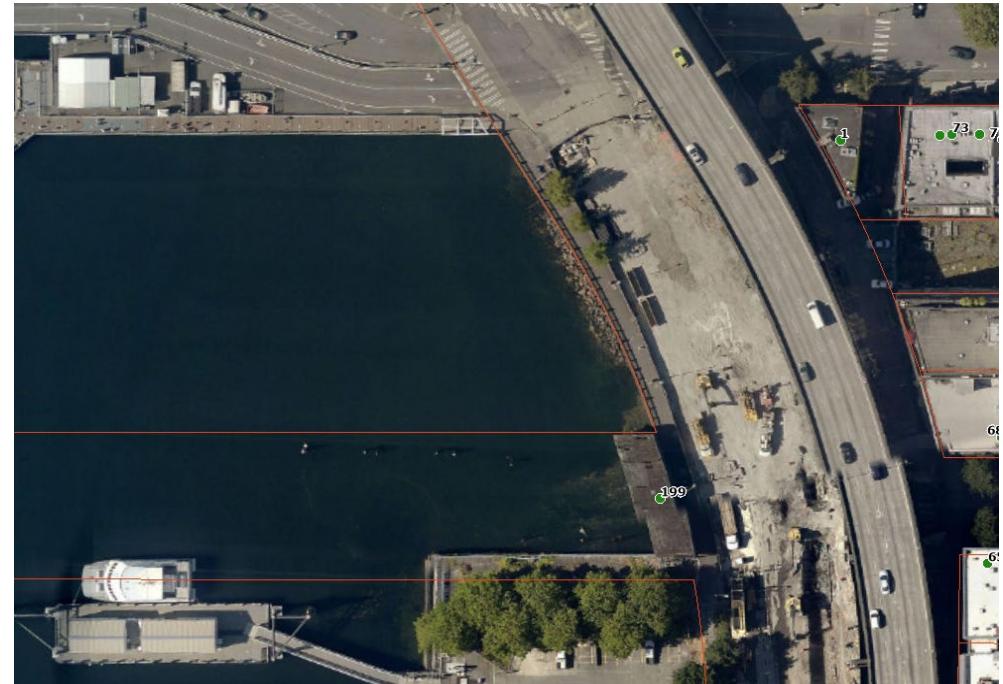


# PROJECT ANALOGS

- Habitat Beach – Seattle Waterfront



2023 Aerial



2013 Aerial



ParametriX

An aerial photograph showing a large, shallow, gravel-filled area, possibly a construction site or a large-scale landscaping project. The gravel area is bordered by a concrete curb on the right side. To the right of the curb is a paved road with white markings, including an upward-pointing arrow and the words "ONLY EXIT" and "EXIT" with a rightward-pointing arrow. A white ladder-like structure is painted on the road surface. In the background, there is a green lawn, a paved walkway, and a dense line of trees. A small red building is visible in the distance. The word "QUESTIONS?" is overlaid in large, bold, black letters across the center of the image.

**QUESTIONS?**