Theme VI – Design – Session B3
Integrating Public Access & Habitat into the Design of Working Waterfronts

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Outline

Introduction – Shannon & Jim

Design Details, Solutions & Project Examples
- Coordination & Conflict Reduction – Shannon Kinsella
  • Interactive discussion – 5 minutes
- Public Access & Education – Jim Brennan
  • Interactive discussion – 5 minutes
- Safety, Security, & Codes – Willy Ahn
  • Interactive discussion – 5 minutes
- Habitat & Environment – Joe Callaghan
  • Interactive discussion – 5 minutes

Summary

Questions
Introduction – *Why*

*Why* provide public access and improved habitat in working waterfront locations?

- Regulatory Framework
  - Permit & Mitigation Requirements
  - Shoreline Master Program Guidance
- Offsite access and mitigation areas may permit larger contiguous working areas
- Good Neighbor
- Economic & Other Benefits
- Incentives & Planning Tools
Introduction - How

*How* can we provide public access and passage through working waterfront areas?

*How* do we strive for better results?
Introduction - Benefits

Working Waterfront Benefits

- Support Maritime Industrial Businesses
- Provide Community & Political Support
- Maintain and/or Enhance Functional Access
Considerations in Providing Public Access & Habitat at Facilities

- Scale & Type of Facilities
  - Large Industrial
  - Medium Size
  - Small Ports
  - Municipalities
  - Private

- Regional Differences
  - Regulations
  - Habitat
  - Economics
  - Industries
Introduction – Key Factors

Key planning and design factors

- Safety
- Costs
- Use Conflicts
- Security
- Functionality
- Minimize Impact to Operations
- Long Term Impacts (i.e. limit expansion)
- Long Term Maintenance
- Experiential Quality
- Aesthetics
- Opportunities for Education
Introduction - Considerations

Consider site conditions and context
Understand shoreline processes
Integrate fish and wildlife habitat needs and resources
Consider access and transportation needs
Team: multi-disciplinary approach with science guided design
Introduction - Stakeholders

Work with owners

Work with partners (Ports, Utilities, Parks Dept., USACE, Non-profits)

Early agency input

Tribes

Public involvement

Environmental groups
Introduction – Planning Process

Planning Process
- Comprehensive Planning Approach
- Incremental approach
- Overall plan versus project specific facilities and actions
Introduction – Access Benefits

Benefits

- Shoreline Access & Recreation Features
  - Develop common acceptance for legally required shoreline access sites
  - Enhance public access on existing public land
  - Consider land purchases or easements for access
  - Select land not well suited to development
Introduction – Environmental Benefits

Benefits

- Improved Environmental Function
  - Enhance environmental conditions
  - Create a framework for off-site mitigation
  - On site mitigation
  - Connectivity
  - Education
  - Minimize over-water structures
  - Science guided design

- Add image
Benefits

- Public Appreciation & Education
  - Provide educational opportunities
  - Passive recreation
  - Improve aesthetic quality
  - Improve visibility
  - Provide wayfinding signage
  - Consider community
Introduction – End Products

Working Waterfronts
- Multi-beneficial solutions
- Functional commercial and industrial development
- Habitat AND public access
- Public relation benefits
- Permits & Entitlement
Coordination & Conflict Reduction
– Project Examples

Port Townsend Heavy Haulout & Scott Memorial Trail

Port of Everett Marine Terminals & Union Slough Mitigation Bank

Fairhaven Industrial & Marine Beach Park & Fairhaven Shipyard

Port of Seattle Fishermen’s Terminal
Coordination & Conflict Reduction
– Project Examples

Port Townsend Heavy Haulout & Scott Memorial Trail
– Overview

• 300-ton haulout and shipyard facility with a major waterfront trail (Larry Scott Memorial Trail) through the site
• Six mile long non-motorized trail available for pedestrian, bike, horseback use
• Shipyard with 300 ton Haulout
Coordination & Conflict Reduction – Project Examples

Port Townsend Heavy Haulout & Scott Memorial Trail

  - Coordination
    - Alternatives to route upland around shipyard were reviewed but not selected
    - Fencing at non-crossing locations provide separation between shipyard activities and trail use
    - Signage, safety gates, bollards, etc provide warning and separation at crossings
Port of Everett Marine Terminals & Union Slough Mitigation Bank

- Marine Terminals – Pacific Terminal, Pier 1, Pier 3, Shipyards
- 20 Acre intertidal mitigation bank and public access trails
- Separate major mitigation and public access from specific marine terminal site
Coordination & Conflict Reduction
– Project Examples

Port of Everett Marine Terminals & Union Slough Mitigation Bank
– Design Details
– Public access at marine terminal
– Mitigation and trail design
– Other design elements
– Puget Sound Partnership stewardship
– Photo of volunteers maintaining union slough
Coordination & Conflict Reduction
– Project Examples

Fairhaven Industrial – Bellingham
  – Marine Terminals – Fairhaven Shipyard, Intermodal, USCG, Marine Beach Park, Public Boat Launch
Coordination & Conflict Reduction  
– Project Examples

Fairhaven Industrial – Bellingham  
– Marine Beach Park
Coordination & Conflict Reduction
– Project Examples

Fishermen’s Terminal – Seattle
– Commercial fishing, off the dock sales, as well as recreational, small cruise, sporting event shuttles, and restaurants
Case Study – Greater Salmon Bay, Seattle
Case Study – Greater Salmon Bay, Seattle

Community driven process (Groundswell N.W.)
17 sites considered
Focus on street ends and public land
Improving access and ecological value
Conceptual ideas from design workshops
Early wins: Street end overlook implemented by Seattle Public Utilities
Trail conflicts: Trucks/Trains/Bicycles/Pedestrians
Work with industrial land use representatives
Case Study – Greater Salmon Bay, Seattle
Goals of Project – Greater Salmon Bay, Seattle

Maintain and/or improve access to businesses
Enhance business visibility
Define load and unload zones
Connectivity along the waterfront
Employee and visitor parking
Ecological value of shoreline
Education opportunities
Case Study – Greater Salmon Bay, Seattle

Provide view points
Develop water access sites
Increase hand carry boat launches
Develop water trails
Add/remove/improve floating docks
Add/remove/improve piers
Case Study – Greater Salmon Bay, Seattle
Case Study – Greater Salmon Bay, Seattle

Fish & Wildlife Enhancement & Mitigation Opportunities:
- Increase light-penetrating grating
- Share docks & gangways
- Reduce of over-water structures (predator habitat)
- Improve saltwater / freshwater transition (salinity gradient)
- Increase riparian vegetation
- Reduce water temperature
Case Study – Duwamish River, Seattle
Case Study – Duwamish River, Seattle
Case Study – Duwamish River, Seattle
Case Study – Duwamish River, Seattle
Case Study – Duwamish River, Seattle
Case Study – Herring’s House Park
Case Study – Herring’s House Park
Case Study – Duwamish River, Seattle
Case Study – Duwamish River, Seattle
Case Study – Juneau Waterfront
Case Study – Juneau Waterfront

INTEGRATING PUBLIC ACCESS AND HABITAT INTO THE DESIGN OF WORKING WATERFRONTS
Shannon Kinsella, Willy Ahn, Jim Brennan, Joe Callaghan
Case Study – Juneau Waterfront
Case Study – Elliott Bay Seawall, Seattle
Case Study – Elliott Bay Seawall, Seattle
Case Study – Elliott Bay Seawall, Seattle
Case Study – Eureka Fisherman’s Terminal
Case Study – Eureka Fisherman’s Terminal
Case Study – Eureka Fisherman’s Terminal
Case Study – Eureka Fisherman’s Terminal
Safety, Security, & Codes

Rules, Regulations, & Codes

Safety
- ADA (Americans with Disabilities Act)
- OSHA (Occupational Safety & Health Act)
- IBC (International Building Code)
- ANSI (American National Standards)
- Illuminating Engineers Society (IES)

Security
- Coast Guard
- US Customs and Border Protection
- Dept. of Homeland Security
- Local Law Enforcement Agencies & the FBI
- SAFE Port (Security and Accountability For Every Port Act)
Safety – ADA

ADA Modular Wheelchair Ramp Specifications
- ADA Requires a Minimum Platform size is 5’ x 5’
- ADA Requires a 1:12 slope ratio

ADA Requirement for Grating

Image of a modular wheelchair ramp with specifications and a diagram of grating requirements.
Safety
– ADA and IBC Requirement for Guardrails

MAX 4" (100mm) OPENINGS TO 34" (865mm) HEIGHT

12-INCH DECK EXTENSION WITHOUT EDGE PROTECTION
Surfaces along accessible routes and in accessible spaces including walks, ramps, stairs, and curb ramps, shall be stable, firm, slip-resistant.

Static Coefficient of Friction > 0.5
CPTED (Crime Prevention Through Environmental Design)

Visibility, Safety, & Security

- Lighting, fencing, etc
- Security gate
- Security level of lighting, versus OSHA versus lower levels requested by environmental agencies
- Maintenance and life span of working area versus public access
Safety, Security, & Codes

Separation Public Access Area From Busy Working Area

Signs

Lighting (General)
- Pedestrian walkways: 0.2 to 1.0 foot-candles (fc)
- Working dock: 2 to 5 fc
- Modern LED fixtures with 0-100% dimming with wireless control

Security lighting (tailored to the owners) recommended illuminance values
- for large open areas – 5 to 20 fc.
- Site entrances – up to 100 fc.
- Perimeter fences – 5 fc.
Safety, Security, & Codes

Project Examples

- Westport Marina
Safety, Security, & Codes

Project Examples
- Bremerton
  - Different access, gateways, ADA, fall protection
Safety, Security, & Codes

Project Examples
- Bremerton
  - Different access, gateways, ADA, fall protection
Safety, Security, & Codes

Project Examples

- San Francisco Exploratorium
- Separation of public area from tug boat and navy vessel berths
Designing Around Habitat
– Planning Stage / Habitat Inventory

Identify/Map habitat types
- Eelgrass
- Macroalgae
- Intertidal – spawning and foraging
- Subtidal – refuge and nursery
- Migratory
- Backshore

Project Scale
Planning Scale
Project Scale Inventory

Project Scale
- Narrow focus
- Specific to project location
- Limited options
- Potential conflict with future development
Planning Scale Inventory

Planning Scale
- Identify mitigation areas
- Identify preservation areas
- Identify advanced mitigation opportunities
- Maximize development
Identify Impacts – Project Scale

Mitigation Sequencing
- Avoid high quality habitat
- Minimize habitat impacts through design
- Mitigate impacts to habitat functions
- ESA and regulatory drivers
Identify Impacts – Planning Scale

Identify long-term build out

Identify conflicts with habitat and development

Identify opportunities to avoid, minimize and mitigate impacts
Identify Mitigation Options – Onsite
– Port of South Whidbey Langley Boat Harbor Expansion
Identify Mitigation Options – Onsite
– Port of South Whidbey Langley Boat Harbor Expansion

Onsite Mitigation
- Driven by ownership
- May not be enough
- May conflict with future expansion
Identify Mitigation Options – Offsite
– Port of Bremerton Marina Expansion
Identify Mitigation Options – Offsite
– Port of Bremerton Marina Expansion

Offsite mitigation
– Onsite mitigation not possible
– Within the same basin
– Maximize onsite development
– Property acquisition expensive
Offsite mitigation

- Identify areas of multiple functions
- Reduce conflict with future development
- Increase habitat mitigation value
Identify Mitigation Options – Advanced Mitigation
– Port of Tacoma Advanced Mitigation Planning
Summary

It is feasible to preserve working waterfronts and provide public access and habitat enhancements.

Must identify scale for planning and implementation.

Work closely with stakeholders.

Look for project site, adjacent, or offsite opportunities.

Meet safety and code requirements which may differ between working area and public areas.

Highlight benefits to business, community, and environment.