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Using a design charrette and state of the art coastal modeling to support local government adaptation to sea level rise

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LA CONNER DESIGN
CHARRETTE

Using an Architect’s Project Tool to Guide Public Policy on Adapting to Sea Level Rise

John Doyle
WHY LA CONNER?

- An early DOE Climate Change Report identifies Skagit River Delta and Willapa Bay in southwest Washington likely to be first impacted by sea level rise.
- 2006 Event started evaluation and risk assessment with Town and Swinomish Planning Office.
- Events that happened in the Town 1-2 times every 4-5 years began happening 4-5 times a year.
EVENT FREQUENCY

- The Blue dotted lines: Town experiences minor flooding
- The Yellow dotted: Significant flooding
- The Red dotted lines: Devastating flooding

[Note: 1 foot of SLR will likely result in an annual “red line” flood event and 2 feet of SLR will result in multiple “red line” flood events annually. SLR projections for 2050-2100 is between .5 and 6 feet.]
WHY DESIGN CHARRETTE?

- Small Jurisdiction with limited resources
- Complex technical issues
- Controversial topic
- Unknown solutions
CHARRETTE PROVIDES STRUCTURAL GUIDANCE

- Ground Rules for Public Officials in workshop
- Common technical understanding of problem
- Looking for achievable objectives
- Need to sort complex details into manageable divisions
- Identify next steps
THE LA CONNER CHARRETTE EXPERIENCE

- Participants – Target of no more than 30
  - Scientists and Technical Staff
  - Councilmembers
  - Planning Commissioners
  - Waterfront Business Owners
  - Town Citizens
CHARRETTE EXPERIENCE

Town staff, Skagit Climate Science Consortium and Steve Moddemeyer met for more than a year to understand Town needs, develop science, and craft design charrette.
PARTICIPANTS TOURED TOWN FACILITIES

[Note: Councilmembers and Commissioners had not previously toured Town facilities together.]
SCIENTISTS & TECHNICAL EXPERTS PROVIDE CURRENT DATA
THE CHARRETTE STEPS

- Lessons learned in other parts of the world
- How do we recognize success?
- Idea generation based
- Refinement and sorting of ideas
- Deliberation on idea by groups
PRESENTATION OF DELIBERATIONS
CHARRETTE RESULTS

- Update Planning Documents with relation to Climate Change
  - Comprehensive Goals and Objectives added
  - Capital Facilities Plan
  - Stormwater Management Plan
- Creative ideas for more resilient infrastructures
- Installation of a tide gage
- Improved local decision-maker understanding of locally specific climate risk
- Local needs and knowledge provided to USGS as they continue their coastal modeling work in Puget Sound
Creative Ideas Table Three:
Raise buildings along First & Morris

Current Situation at 12.8-ft above MLLW

SWINOMISH CHANNEL

FIRST STREET
(looking north)

Water into building subfloors
Water into street

Elevate existing buildings above expected high water

SWINOMISH CHANNEL

Elevate buildings allowing surge to pass under
Retain street & west sidewalk elevations
Consider changes to east sidewalk & curb to prevent water incursion into buildings
Redirect flows to Morris & Caledonia Streets?
THANKS TO ALL THOSE WHO PARTICIPATED:

 Special thanks to Carol McIlroy of the Skagit Climate Science Consortium for coordinating the planning of the event
 Steve Moddemeyer of Collins Woerman for his inspired use of the Charrette Process
 Eric Grossman from the USGS
 Guillaume Mauger of the UW Climate Impacts Group
 Ed Knight, Planning Director for the Swinomish Indian Tribal Community
 La Conner Planning Commission members; Carol Hedlin, Marna Hannaman, Bruce Bradburn and Linda Talman
 La Conner Councilmembers; Marylee Chamberlain and John Leaver
 Western Washington University
 John Doyle, Town of La Conner for his leadership and vision (Carol snuck this one in!)