



The Policymaker's Challenge

“Turning Science into Action”

October 27, 2005



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IMM04

The Policymaker's Challenge

“Turning Science into Action”



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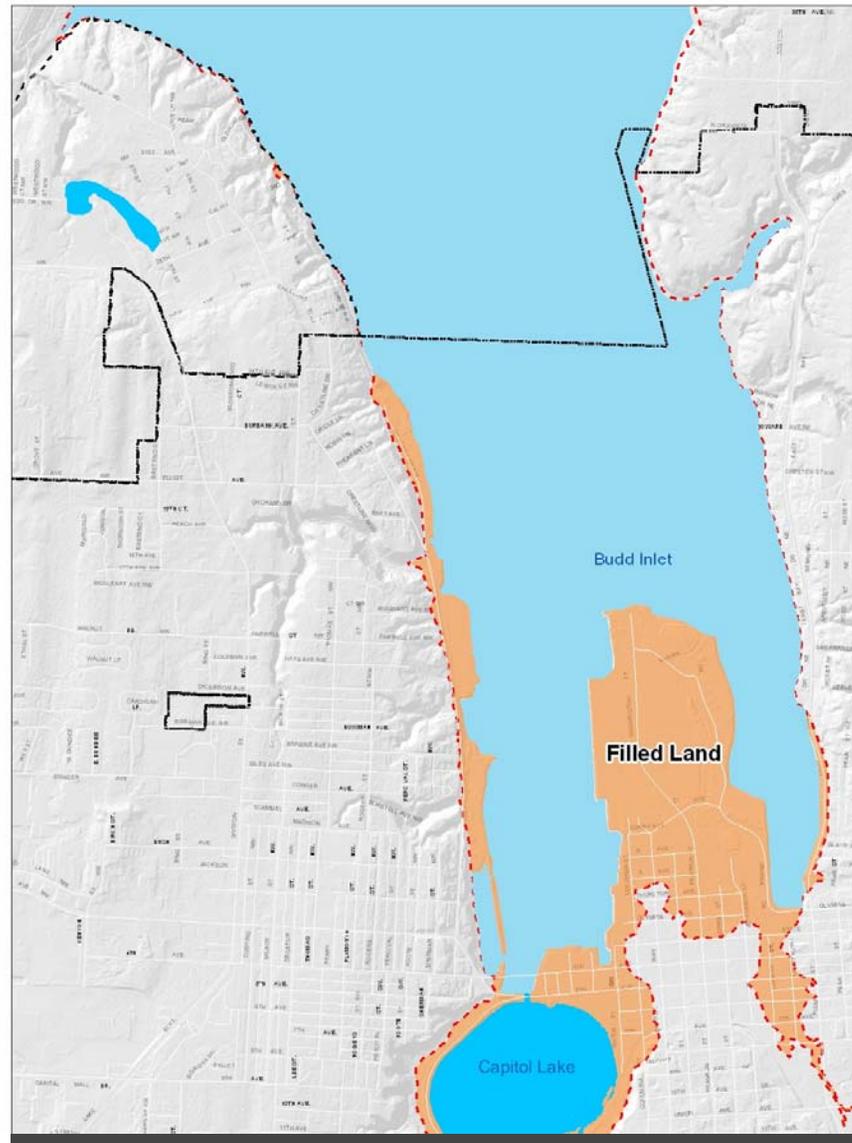
Lessons Learned from the City of Olympia

Mayor Mark Foutch

Olympia: “It’s the Water”



Olympia's Historic Shoreline and Fill



Vulnerable infrastructure

Buildings

Storm Pipes

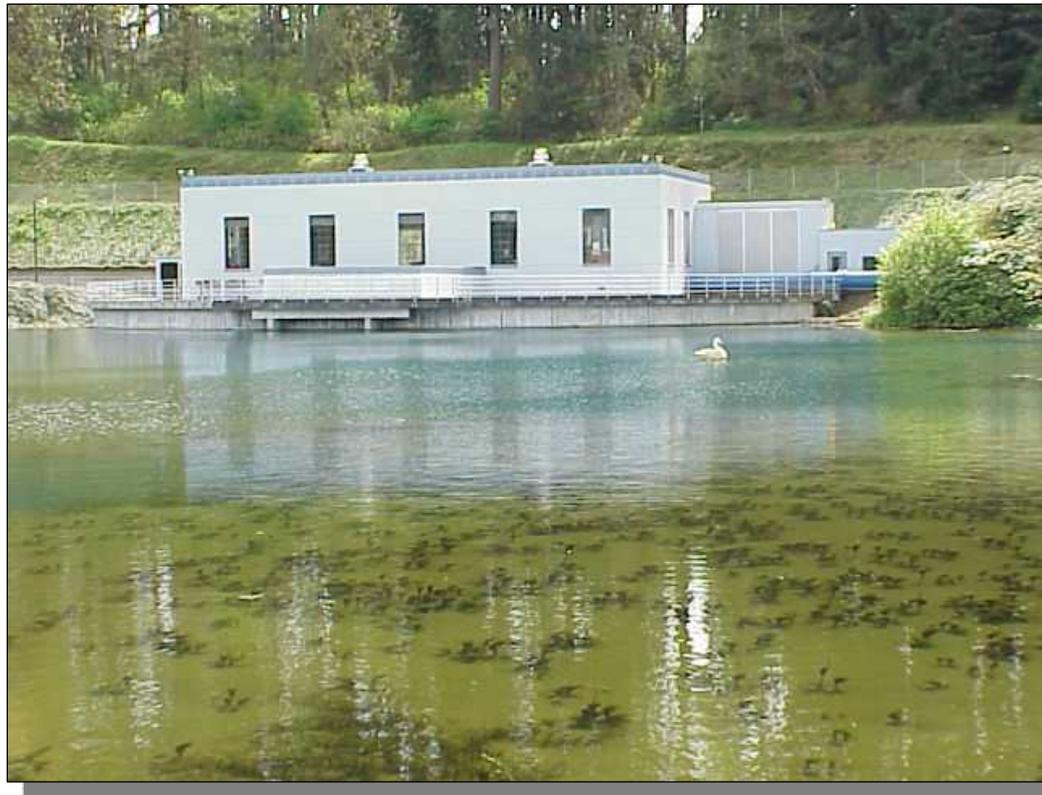
Sewer Pipes



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Vulnerable infrastructure

Olympia's main water source: McAllister Springs



Only 3 feet above current salinity levels



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Early Awareness; Methodical Response

1990:

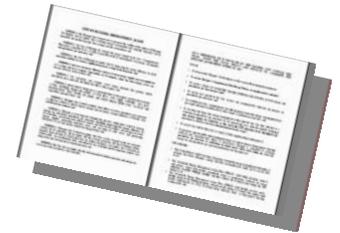
Council registered concern over Olympia's potential vulnerability to sea level rise.

1991:

Global Warming Task Force appointed. Policy issue assigned to Public Works .

1992:

Council approved six year plan for response to global climate change
Council initiates study to determine risks from climate change.



1993:

Study identifies likely local impacts of sea level rise and predicts rate of 1.6-6.6 feet per century, without any "earthquake assistance"

1994:

The City's comprehensive plan published including land use, environmental and energy conservation sections.

Olympia was one of the first and smallest members of the Cities for Climate Protection (CCP/ICLEI) program.

1996:

Flooding in parts of downtown Olympia accelerated stormwater control programs



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Key Policy Questions

How big is the problem ?

How much time do we have ?

What can we do for ourselves ?

What help do we need ?



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How big is the problem ?

SEA LEVEL RISE RANGES PREDICTIONS **PER CENTURY.**

Scientific literature suggests widely varying scenarios

Olympia's Initial study in 1993 estimated: **8 inches - 6 feet**

Based on tide gauge data, the global average:
1.0 to 2.5 mm/yr. (Canning) **10 inches**

International Panel on Climate Change (UNEP):
110 to 880 mm per Century by 2100 **2.6 feet**

Add in vertical land subsidence 2 mm/year : **8 inches**

Without any change or major catastrophes;
We are probably looking at around :

10 inches to 1 ½ feet per Century



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How much time do we have?

One foot per century seems “doable” locally

However.....this is an average figure

Storms and tidal surges

Earthquakes and Tsunamis

Catastrophic climate events elsewhere

Could bring rapid sea level rise onset

Question:

What is “RAPID” in policy terms ?



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What can we do for ourselves ?

Prevention:

Reduce Olympia's contribution to
Global Warming

Land Use Regulations

Infrastructure Preparedness



What can we do for ourselves ?continued

Remediation

- Massive public works projects
- Forced relocation of private assets
- Environmental repair

Very large costs are beyond local capability

State and National assistance likely inadequate if sea level rise is a national catastrophe.

The Bottom Line:

“Prevention is better than a cure.”



What help do we need ?

Prevention Requires

Credible data

Political leadership

Community commitment

Legal authority

Money



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Reduce Olympia's Impact on Global Warming

City Operations

Fleet Management Strategies

- Reducing fleet size by 50 vehicles
- Introducing fuel efficient vehicles
- Bio-diesel currently in use

Reducing Energy Demand

- Water Conservation projects
- LED traffic light installation
- City building retrofits
- Promote energy efficient buildings

Limit Olympia's "Footprint"

- Adopt a formal plan:
- "No net increase" in energy use per capita



Planning to reduce risk to the City

Control sprawl and reduce growth (GMA)

- Zoning to increase densities
- Supports transportation alternatives
- Low impact zones in place at 'Green Cove'

Waterfront Zoning

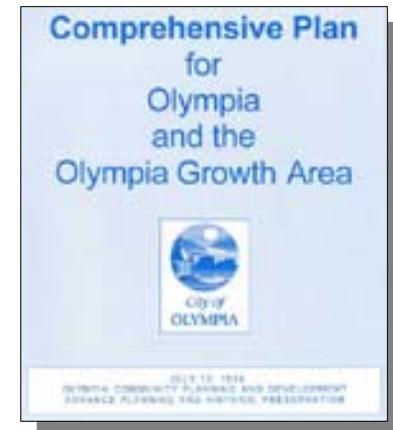
- Urban Waterfront zoning in place with height restrictions
- National Flood Insurance levels recalculated.
- Flood level raised, 1 foot in 2005 increasing building standards
- Shoreline Management Act protects against misuse

Protect Critical Areas

- Critical Areas Ordinance strengthened in 2005
- "Steep slope" building restrictions in place
- Recently expanded variable buffer widths on wetlands

State and Other Jurisdiction Partnerships

- Examining returning Capital Lake to an estuary (CLAMP)



Reducing Community Impacts

Public Awareness and Education

Olympia's "Stream Team"

Environmental protection and promote stormwater education
Financial disincentives for creation of impervious surfaces.

Alternative energy demonstrations

Olympia installed three demonstration sites called "Solar Pioneers" at
Farmers Market
Energy Outreach Center
Batdorf and Bronson coffee roasters

Urban Forestry Program

10,000 trees planted

Partnerships with "Not-for-Profit" organizations

Partnering and supporting Climate Solutions Public Educations and Energy Courses



Solar panel demonstration site at Farmers Market

Infrastructure Preparedness

Create Coastal Land Buffers by Acquisition

Acquiring West Bay Park lands.
East Bay and Priest Point Park shoreline already owned
Port of Olympia in single public ownership

Stormwater and Flood controls

Active stormwater utility projects educate and manage runoff.
NPEDS II Compliance underway
Flood sensitive land and wetland acquisition program in place

Infrastructure Protection Examples

Move McAllister water source up gradient.
East Bay Drive sewer line relocation
New bridge designed to accommodate higher water levels



Emergency Management

“All Risks” Approach

Professional staff
Regional cooperation
Political commitment
Neighborhoods engaged



Still to do.....

- **Working on a “Green” fleet and purchasing policies**
- **Incorporate long range risk from climate change into projects and plans.**
- **Implement Olympia Council Resolution M-1550:**
 - Develop GHG targets and an action plan by 2006
 - Adopt plan to reduce energy use per capita in City operations

Olympia is responding with a comprehensive responsible and methodical program.

Is that enough?



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A Policymaker's Challenge

Translate imprecise scientific evidence into policy that can be supported politically and financially.

SCALE	Individuals & Businesses	Local	National and State	Global
Short term <=4 years Political half-life	Emergency planning Support City initiatives	Building Codes Zoning Policies Public Education	Support for credible data	Promote International Cooperation
Mid term 4-12 years Senators half life	Reduce "footprint" Adaptive facilities design	Create buffers + Move and Protect infrastructure	Private property loss policies Establish local planning standards	Gain International Commitment
Long range >12 years	Significant shifts in strategies	Restoration and remediation as needed	Help finance remediation as needed	Unidentified factors



Support Needed:

State/Federal legislative and fiscal support

Fine tune climate change impact predictions

Political validation for local measures through State standards

e.g. “GMA”

State Government is the Key



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New Orleans

The costs of inertia

- Lives
- Property
- Environment
- Opportunity
- Economic
- National



Contact information

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