Managed Retreat:
Case Studies & Lessons Learned

Anne Siders
Managed Retreat is Already Happening

Building Restrictions & Setbacks

Buyouts / Land Acquisition

Evictions
Maine Sand Dune Rules 1979

- No more than 40% of lot may be developed

- Projects not permitted if ‘reasonably expected’ that erosion and 2 foot SLR could lead to severe damage in 100 years
  - Reliance on sea walls not sufficient evidence of site stability
  - No new seawall construction

- A building in V-zone may only be reconstructed once

- If beach nourishment uses state funds, the State owns the beach

- If wetlands extend to structure for 6 months, it must be removed
Buyouts: Grand Forks, ND
Red River Flood
April 18, 1997

- Red River tops the dikes (54 feet)
- 90% of the town evacuated (largest evacuation in U.S. since Atlanta in Civil War)
- 83% of homes damaged – some swept away in the current
- 4.5 million acres flooded
- $3.5 billion damage (8th most expensive at the time)
- Fire downtown destroyed buildings and all downtown businesses affected
retreat

• Steve Gander, President of the East Grand Forks planning-and-zoning commission:

"The river had been our friend for all these years. It had been like an old dog, sleeping comfortably at our feet, and then one day it jumped up and bit us. We had to decide: Do we put it to sleep or try to make amends?"

• Clinton assures 100% FEMA funding (instead of usual 75%), requests $5.5 billion from Congress

• $171 million in Community Development Block Grants from Department of Housing and Urban Development (HUD)

• Purchased 802 lots: physically relocated salvageable homes and destroyed the rest
natural buffer

Greater Grand Forks Greenway

2,200 acres (more than twice the size of Central Park)

20 miles of trails, 2 golf courses, boat ramps, campgrounds, ice rinks, basketball and tennis courts, soccer, baseball, and football fields
• Used CDBG funds to help finance construction of 180 new homes

• Prices ranged $105,000 to $147,000
  • most homes that were lost ranged $50-80k
  • average price in Grand Forks in 1999 was $94,000

• Isolated from the main city; no local schools

• Feb 1999, only 12 homes sold

• Eventually reduced prices by $17,500 and properties sold
Buyouts: Iowa Floods
April – Oct 1993

- Greatest annual rainfall in Iowa history
- Rained 117 of 130 days between mid-April and September
- Damages $3-7 billion in Iowa
  - $30 billion throughout Midwest
  - Over $2 billion in crops lost
    - Agricultural yields dropped 62%
- All 99 counties were declared federal disaster areas
- 10,000 residents evacuated
- 17 people died
- 23,000 homes damaged
Congressional Actions

- **Emergency Wetlands Reserve Program 1993**
  - Authorized by Congress specifically for this disaster as one time offer to purchase conservation easements to return land to wetlands

- **Hazard Mitigation Relocation Assistance Act of 1993**
  - Raised FEMA contribution from 50% to 75% for mitigation efforts
  - Amended Stafford Act to allow funds to be used for buyout and relocation efforts
    - Requires no future building on purchased location
    - No future relief funds available for purchased lands
Housing Recovery Zones

“In Iowa, we must never lose a healthy respect for the force and rhythms of nature. We can work with nature but we can never fully control it. Our closeness to the land gives us a sensitivity to the environment.”

-- Governor Terry Branstad
January 11, 1994
### Do’s and Don’ts

<table>
<thead>
<tr>
<th>Des Moines and Louisa County</th>
<th>Cherokee and Ames</th>
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</thead>
<tbody>
<tr>
<td>• Paid residents full pre-flood market value of home</td>
<td>• Paid residents full pre-flood market value of home + incentives</td>
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<tr>
<td>• No further assistance for homeowners</td>
<td>• Ames: paid 10% above value + $8,500 if relocated in Ames</td>
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<td>Result:</td>
<td>• Cherokee: provide relocation assistance:</td>
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<tr>
<td>• Checkerboard purchases with no natural buffer or parkland</td>
<td>• Paid up to $22,000 for down payment on home for low income residents</td>
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<tr>
<td>• Population shifts</td>
<td>• Designed new subdivisions in safe locations</td>
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<tr>
<td>Result:</td>
<td>Result:</td>
</tr>
<tr>
<td></td>
<td>• Large tracts of land to become natural buffers</td>
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<td></td>
<td>• Retain population base</td>
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Wapello, IA

Problem:
• Would have cost $3.1 million to repair the levees
  • Floods generally were a 500-year occurrence, but in this location were a 50- to 100-year event
  • Repeat failure of the levees meant repeat floods on these lands

• Needed to purchase the entire levee and drainage district so would not have to repair or maintain the levee system

• Landowners did not like the Emergency Wetlands Reserve Program (EWRP)
  • Did not want to pay real estate taxes or maintenance on conserved land
  • Wanted in-kind land trades
Wapello, IA

Solution:

• Natural Resources Conservation Service (administering EWRP), Fish and Wildlife Service (FWS), FEMA, and Iowa Natural Heritage Foundation (INHF) coalition

• Landowners received EWRP easement, then IHNP purchased land, using $500,000 from FWS to pay for the remaining value of the land, then IHNP transferred the land to FWS

• Purchased 2,700 acres

• Mark Twain National Wildlife Refuge as a restored river flood plain
  • In 2008, the land held 6-15 feet of water during the floods
Wapello, IA

- Quick work:
  - 16 months from start to finish

- Broad publicity:
  - Natural Resources Conservation Service provided aerials of the area to show the extent of the damage
  - Coalition held public working groups to discuss the options

- Used formula to set price to be paid per acre and used same formula for all landowners
  - No need to negotiate with each landowner
  - Landowners have no incentive to hold out for a better offer
Isla Vista, CA
Evictions - Uninhabitable

- September 2004
- Santa Barbara County Building Officials delivered 9 eviction notices
  - 5 apartment buildings worth $20 million
- 90 tenants evicted
  - Mainly college students
- Cited erosion of structural supports as the basis for deeming the properties uninhabitable

Photo: New York Times
Isla Vista Evictions

- Scientific determination of safety and stability of the buildings
- Public awareness
  - Educate renters and landlords on the risks and potential for eviction
  - Public policy
  - Communication during the process

“It’s one thing that’s never even spoken about. We’re all kids, we’re all oblivious. Our biggest issue here is ‘am I going to go to 65 block or 66 block?’ No one thinks about that [erosion].” -- Student, quoted in The Channels

Photo: USGS
Best Practices

✓ Have a plan
  • Learn from what’s been done before

✓ Do NOT Bluff

✓ Be creative
  • Consider using NGOs and forming coalitions to pool resources
  • Find creative ways to meet landowner needs

✓ Act quickly when opportunities arise

✓ Provide incentives
  • But be fair
    • Use set prices or formulaic prices to ensure equity

✓ Provide relocation assistance
  • Build subdivisions for homes, Provide trade-in-kind for agricultural lands
  • Provide assistance for low income homeowners

✓ Use as an opportunity to restore wetlands and build amenities

✓ Involve the public at all stages
  • Education and awareness are cheap, important tools
LEGAL ISSUES IN COASTAL MANAGED RETREAT

March 28, 2013
Columbia Law School
Iowa Funding

- Stafford Act Section 404
- Community Development Block Grant
- HOME Investment Partnership Program
- Economic Development Administration
- Department of Agriculture’s Emergency Wetlands Reserve Program
- State sources: e.g., City of Davenport funded acquisition program via sales tax