Chehalis Basin Strategy Local Actions Program Implementation Advisory Group Meeting #2

December 16, 2020

Meeting Agenda and Purpose

- Review Implementation Advisory Group work plan and schedule
- Discuss sufficiency of land use recommendations to achieve Board outcomes
- Discuss implications of future floodplain land use management
- Introduce research on regional/national programs using structure relocation, acquisition, and retrofits for flood damage reduction

November 16 Meeting Summary/Feedback

Board Planning Assumptions:

- 30-year implementation timeframe
- Use of the 100-year floodplain in 2080
- Any projects must be designed, implemented, and mitigated so they do not make flood damage worse in other areas

Previewed future floodplain and previous recommended land use management actions

Group members support for more interactive approaches to meetings

Introductions

- Breakout rooms of three members
- Introduce yourself (one minute each)
- Name and affiliation
- If you have been involved in basin flood issues
- Fun fact about yourself

Implementation Advisory Group Schedule

Meeting #3: January 11, 2021

- Continue to discuss research on national/regional acquisition and buyout programs, including panel discussion
- Continue to discuss future floodplain / land use implications / assumptions about feasibility of land use management actions
- Preview information from Technical Advisory Group to-date on priority areas/projects – including structural approaches and implications

Implementation Advisory Group Schedule

Meeting #4: January 13, 2021

- Discussion and follow-up from meetings #1-3 plus bank protection criteria/implications

Meeting #5: January 21, 2021

- Discussion and follow-up from meetings #1-4 plus implications and feasibility for potential structural (e.g., levees, floodwalls, etc.)

Meeting #6: February 11, 2021

- Discussion and follow-up from meetings #1-5

Meeting #7: February 22, 2021

- Discussion and follow-up from meetings #1-6

Floodplain Management Recommendations / Land Use Implications

Board Outcome: Preventing Future At-Risk Development

No new structures would have been developed that are vulnerable to channel erosion or mainstem or tributary flooding from 2080 predicted 100-year flood levels:

- Adopted model floodplain management ordinances that exceed the State and NFIP minimum requirements;
- All local government construction and building code standards support flood damage risk reduction (e.g. subdivision set-asides, filling restrictions, freeboard height of new buildings, critical facility placement)
- Incentives direct future development out of harm's way.

Previous "Build Out Analysis"

- 2,073 undeveloped parcels in the modeled mainstem floodplain
- 1,841 could not be further subdivided and 232 could be further subdivided. The parcels that could be further subdivided
- 477 of the 3,059 developed parcels in the modeled 100-year floodplain could be further subdivided
- Over 5,000 potential new lots plus existing undeveloped lots
- Previous growth projections could be met with no new lots

Questions for Group

- Are the existing recommendations to manage development in potentially flood-prone areas sufficient to achieve the Board outcome regarding preventing future at-risk development?
- Do you agree with the land use recommendations identified as being most important and relevant to the Board outcome regarding preventing future at-risk development?
- Are there additional land use and floodplain management recommendations that should be considered?
- Are there other measures or actions that should be considered to accomplish the Board outcome regarding preventing future at-risk development?

Previous Floodplain Management Recommendations

Data, Planning & General

- Flood of record adopted
- Best available data required when no FIRM base flood elevation (BFE)
- Determination of BFE required when no available flood data
- Community Rating System (CRS) participation

Previous Floodplain Management Recommendations

Building/Development Requirements

- Commercial/industrial freeboard requirement
- Foundation requirement
- Non-conversion agreements (limits on enclosures below BFE)
- Lower threshold for substantial improvements
- Substantial improvement tracking over time
- Compensatory storage for fill
- Zero rise policy
- Street elevation

Previous Floodplain Management Recommendations

Zoning / Permitting

- Critical facilities
- Subdivision/large development regulations
- Low density zoning
- Floodplain development restrictions (e.g., require special use permit)

Previous Floodplain Management Recommendations

Water Quality / Critical Areas

- Stormwater manual adoption
- Floodplain protection in Critical Areas Ordinance
- Wetland and stream buffers
- Impervious surface limits
- Shoreline Master Program updates
- Associated wetlands in shoreline management zone
- Hazardous materials

Potentially Most Important and Relevant Recommendations

- Flood of record
- Critical facilities
- Subdivision set asides
- Low density zoning
- Zero-rise policy
- Design of wastewater and water supply infrastructure *(not in original survey)*

Survey and Outreach with Local Jurisdictions

- Survey of local governments and Chehalis Tribe - implementation status of floodplain management recommendations from:
  - 2010 Chehalis River Basin Comp Flood Plan
  - Chehalis River Basin Flood Authority in 2016
- A total of 11 of 15 jurisdictions responded to-date
- OCB team follow-up with local staff to better understand responses and relative importance of recommendations
- Survey sent to Advisory Group to identify most important recommendations

Meeting surveys

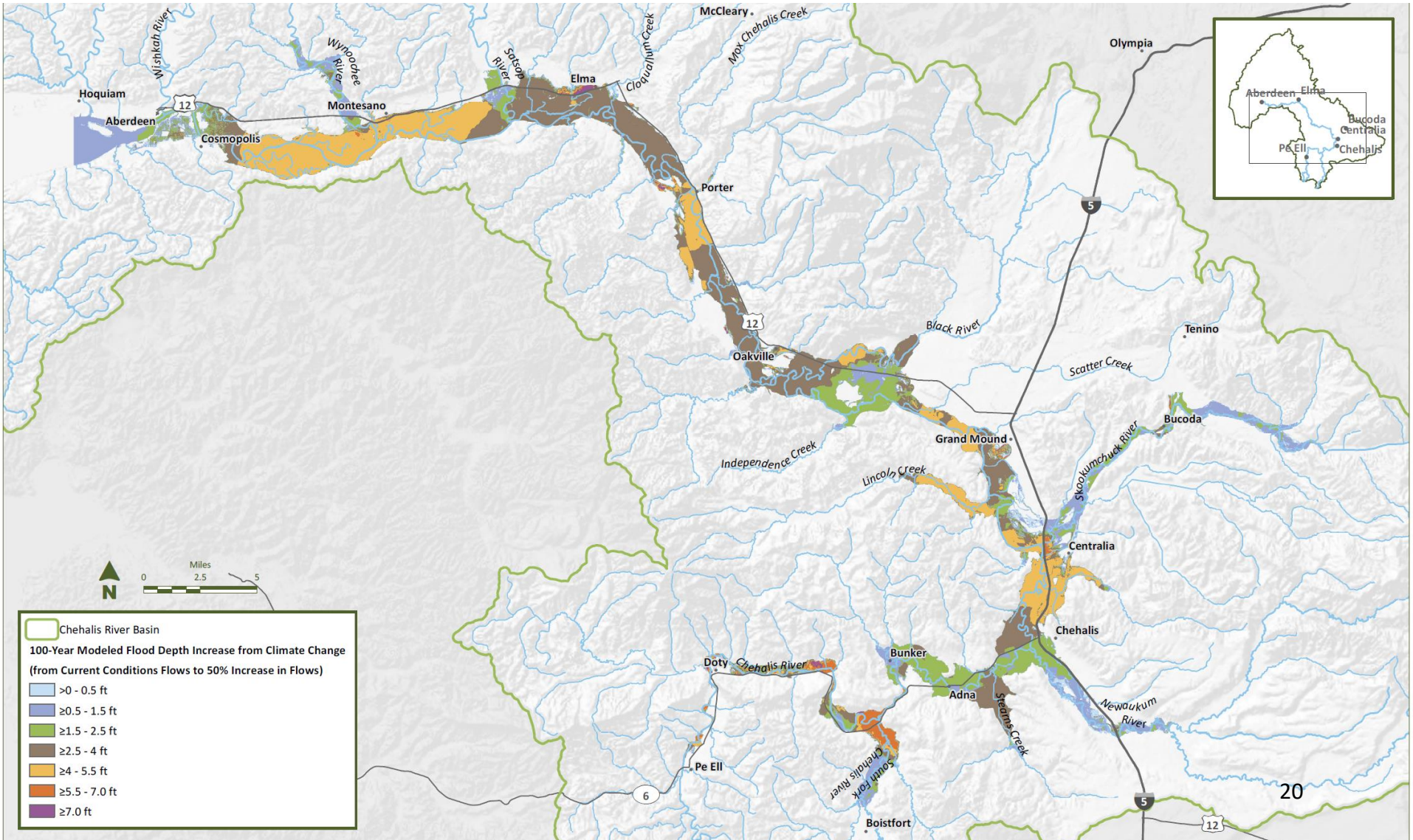
- Are the existing recommendations to manage development in potentially flood-prone areas sufficient to achieve the Board outcome regarding preventing future at-risk development?
- Do you agree with the land use recommendations identified as being most important and relevant to the Board outcome regarding preventing future at-risk development?

Breakout Room Discussion

- Discuss why you voted the way you did on the survey
- Are there additional land use and floodplain management recommendations that should be considered?
- Are there other measures or actions that should be considered to achieving the Board outcome regarding preventing future at-risk development?

Current and Future (100-year flood in 2080) Floodplain Estimates

Modeled 100-year, 2080 Floodplain (depth comparison)



Question for Group (Jamboard)

- What are the potential implications of managing to the future 100-year, 2080 floodplain?

Buyout/Relocation Research Plan

December 16, 2020

Outline

- Overview
- Research Plan and Community Snapshots
- Discussion

Relevant Board Outcomes

- Ensuring all structures in each county that could be flooded by the 2080 predicted 100-year flood levels in the basin would no longer be vulnerable to flood damage, because they are protected by localized infrastructure, flood-proofed/elevated, or the structure has been removed.
- Ensuring all critical facilities that could be flooded by 2080 predicted 100-year flood levels would no longer be vulnerable to flood damage, because they are protected by localized infrastructure, elevated/flood-proofed, or relocated.
- Communities with environmental justice concerns would suffer less hardship and damage from flooding, would not be economically disadvantaged by displacement or otherwise disproportionately adversely affected by actions to reduce flood damage, and would be improved by flood solutions.

Research Plan

- December 16 preliminary research and discussion
- Continued research and interviews between Dec 16 and Jan 11 IAG meeting
- Panel discussion and continued research findings at Jan 11 IAG meeting
- Continued IAG discussions at future meetings on buyout/relocation program feasibility in the basin

Discussion Questions

- Which of the communities and buyout/relocation programs most interest you as being potentially relevant to the Chehalis Basin (or subareas)?
- Are there other communities or efforts that would be valuable to research between now and January?
- What else would you like to know about those efforts (e.g., qualitative information to ask in interviews)?
- Where in the basin might buyout and/or relocation approaches best apply?

Terms

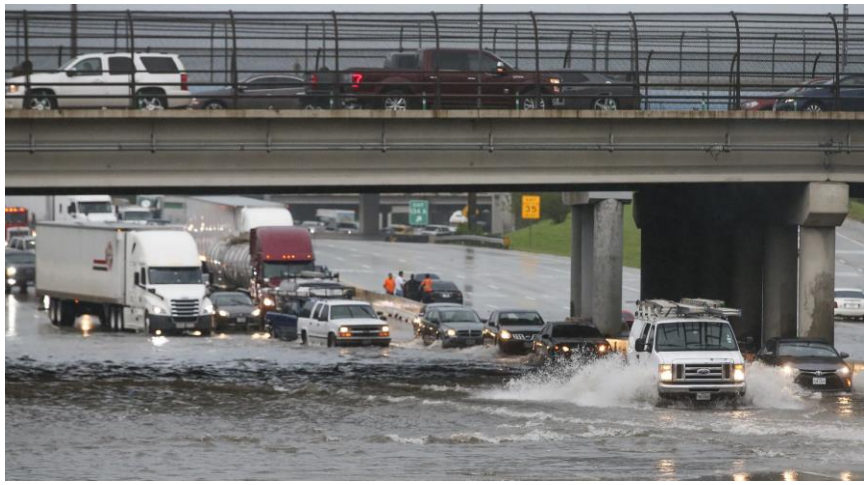
- Buyout
  - Home or business is purchased from owner; owner moves to where they want
  - Cheaper for purchaser
  - Breaks up community members
- Relocation
  - Multiple homes and/ or businesses relocated to a new site with the residents moving to new site
  - More expensive option
  - Keeps part or all of community intact

Note: Messaging around these terms (and related terms like "managed retreat") is sensitive

These programs establish specific branding (e.g., "willing seller")

Buyout/Relocation Programs Considered So Far

- Charlotte-Mecklenberg County, North Carolina
- Hamilton, Washington
- Harris County, Texas
- Johnson Creek, Oregon
- Tulsa, Oklahoma
- Valmeyer, Illinois



Any others that we should research?

Initial Guiding Research Topics

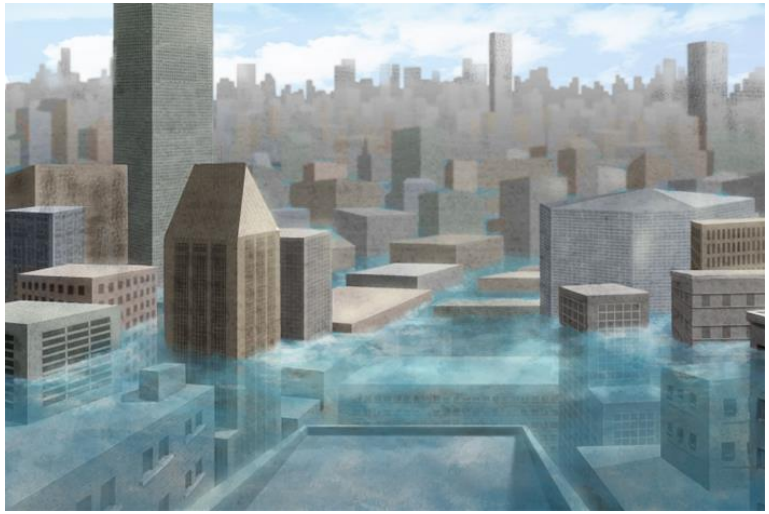
Program Characteristics:

- Magnitude of flood problem & acquisition/relocation program
- Program timeline
- Estimated costs

Implementation Challenges & Approaches:

- Landowner willingness
- Communication/outreach
- Policy or legislative changes
- Funding strategies/approaches
- Success factors/lessons learned
- Useful resources/tools

What else should we consider?



Common Aspects Among Programs

- Landowner engagement is voluntary (no eminent domain examples)
- Community engagement is a critical component

Common Aspects Among Programs

- Multiple funding sources across all levels of government are needed
  - Stable state and local funding sources are imperative given competition and pace at federal level
- Legal considerations for any buyout/relocation program include takings limitations, negligence claims, and cross-jurisdictional governance structures

Common Aspects Among Programs

- Challenges
  - Landowner/homeowner/community interest
  - Long timeframe (2+ years) to receive federal funds
  - Engineered solutions are more popular
  - Program formation requires resources to properly assess eligibility and interest in participating
  - Shifts in tax bases

Charlotte-Mecklenburg, NC

Buyout Program

- At risk from:
  - Catawaba River floodplain
- Results 1999-present:
  - Purchased over 400 flood-prone homes and businesses
  - Relocated over 700 families and businesses
- Self-funded through a joint county-municipal stormwater utility

Hamilton, WA
Buyout/Relocation Program

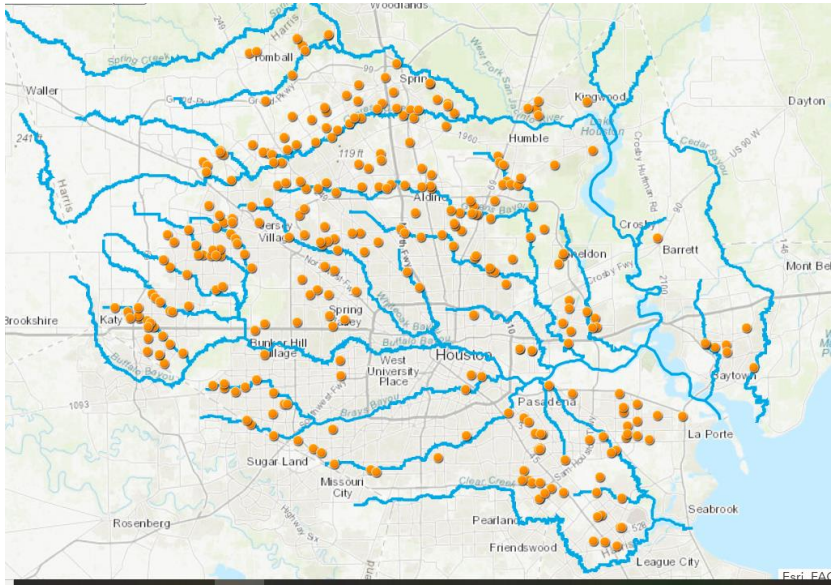
- At risk from:
  - Skagit River flooding
- Results to date:
  - New site for 300-resident town purchased in 2018
  - Zero homes or buildings have been purchased at this point
- Funding:
  - Land purchased by Forterra
  - Other funding will come from private philanthropy, FEMA, private investment, other government

Depiction of new Hamilton Town Center (Forterra)

Harris County, TX (Houston)

Buyout Program

- At risk from:
  - Regular flooding from San Jacinto watershed
  - Tidally-driven storm surge
  - Major flooding after Hurricane Harvey in 2017
- Results since 1985:
  - 3,100 buyouts
- Funded through USHUD and FEMA



Harris County Maintenance Projects

Johnson Creek, OR (Portland area)

Buyout Program

- At risk from:
  - Recurring flooding of creek
- Results 1997-2001:
  - 56 properties purchased in Willing Seller program
  - Program ended because of lack of funding and majority of needed buyouts occurred
- Funding from Portland Parks and Rec and Metro, FEMA

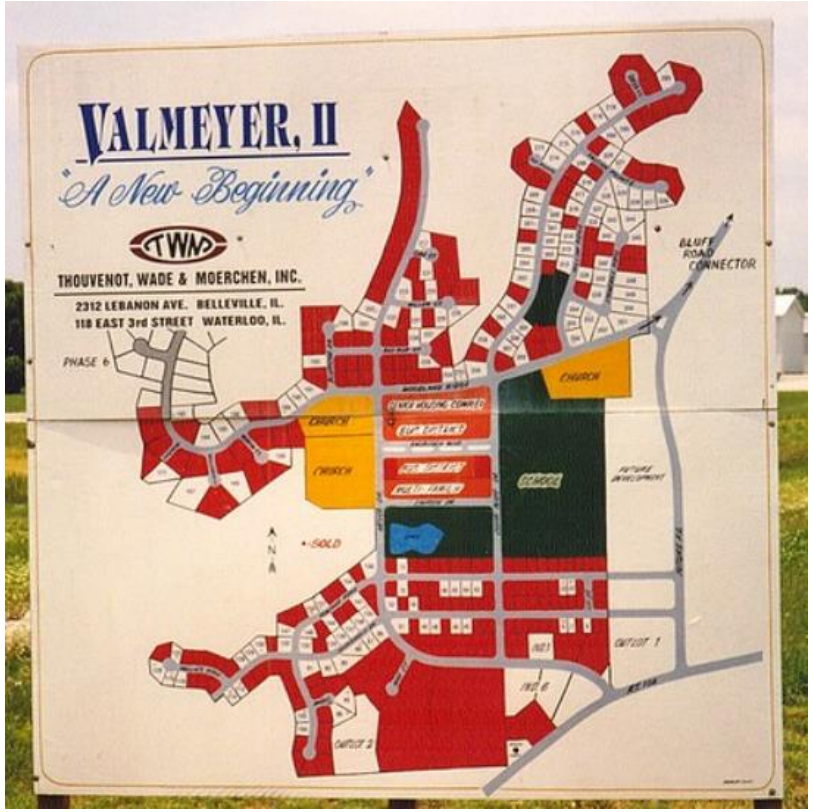
Tulsa, OK
Buyout Program

- At risk from:
  - On the banks of a large, wide river in Tornado Alley
- Results since 1984:
  - > 1,000 properties/ buildings moved
  - Residents enjoy one of the lowest flood insurance risk categories
- Funded mostly from local capital sources, flood insurance claim checks, and federal funds

Creative mitigation strategies: Using sports fields as stormwater detention basins

Valmeyer, IL
Buyout/Relocation Program

- At risk from:
  - Recurring, major Mississippi River flooding
- Results from 1993 and 1996:
  - Relocated town 2 miles east onto higher ground, including 300 homes and 25 businesses
  - ~60% of residents participated initially
  - Community is now back to its previous population count
- Used FEMA funding



Next Steps

- Interviews for more in-depth information
- Research update and panel discussion at next IAG meeting
- Continued IAG discussions at future meetings on buyout/relocation program feasibility in the basin

Breakout Room Discussion

- What else would you like to know about these efforts and others (e.g., qualitative information to ask in interviews)?
- What are your initial thoughts on how and where buyout and/or relocation approaches best apply in the Basin?