

# MEMORANDUM [DRAFT]

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**Date:** December 8, 2020  
**To:** Andrea McNamara-Doyle, Office of Chehalis Basin  
**From:** Ken Ghalambor, Shelby Thomas, and Jenn Tice (Ross Strategic)  
**Cc:** Chrissy Bailey, Office of Chehalis Basin  
**Re:** Summary of Initial Research on Property Acquisition and Relocation Programs

This memorandum summarizes initial research conducted by the Office of Chehalis Basin (OCB) consultant staff team on programs that provide funding and technical assistance for property retrofits, acquisition, and/or relocation to mitigate or prevent future flood damage. It previews the discussion questions for the December 16 Implementation Advisory Group meeting, provides a snapshot of similar efforts researched to date, and outlines the questions proposed for further research.

The Chehalis Basin Board has provided guidance for how they will evaluate a Local Actions Program and what the potential elements of the program may be, including (1) identifying opportunities to protect high value residential, commercial, industrial, and agricultural structures through floodproofing or elevation, and (2) identifying opportunities for relocation of structures and people outside of flood and erosion or channel migration hazard areas. The Chehalis Basin Board has also agreed upon several outcome measures for a Local Actions Program, with the following being the most directly relevant to acquisition, retrofit, and relocation efforts:

- 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.

## Implementation Advisory Group December 16 Discussion

The Implementation Advisory Group (IAG) will have its first discussion about buyout and relocation programs at the December 16 meeting. The purpose of this session is to provide a grounding in these programs and allow IAG members to inform the direction of additional research.

## Questions for the Technical Advisory Group

As you prepare for the meeting, consider these questions:

- Which of the communities and buyout/relocation programs below most interest you as being potentially relevant to conditions in the Chehalis Basin (or subareas of the basin)? 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 communities or efforts (e.g., what kind of qualitative information should we look for in interviews that would be useful)?
- Where in the basin might buyout and/or relocation approaches best apply?

## Summary of Communities or Efforts Researched

The following table includes a brief characterization of buyout and relocation programs that we have researched to-date, based on published materials. A *buyout program* is one in which funding is provided to property owners for them to use to resettle, while a *relocation program* offers payments to property owners but also supports reestablishing the properties in another, defined location (e.g., deliberately moving a community away from a coastal area threatened by sea level rise). These programs are voluntary, interjurisdictional, and involve multiple funding sources. The programs researched to-date include:

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

OCB anticipates inviting individuals from approximately three of the regions above to participate in a panel discussion at one of the January 2021 Implementation Advisory Group meetings to share their experience, insights, and lessons learned from their respective efforts and answer questions from advisory group members. Preliminary, we anticipate inviting individuals involved in the programs in Hamilton and Taholah, Washington, and Tulsa, Oklahoma.

**Table 1: Snapshot of Buyout and Relocation Programs Researched<sup>1</sup>**

	<b>Charlotte-Mecklenburg Co., NC</b>	<b>Hamilton, WA</b>	<b>Harris Co., TX</b>	<b>Johnson Creek, OR</b>	<b>Tulsa, OK</b>	<b>Valmeyer, IL</b>
<b>Jurisdiction size</b>	Metro area and county; county population ~1.1 million	300-person rural town	Large county (Houston); population ~4.7 million	Part of Portland metro area	Metro area population ~1 million	900-person village
<b>Program type</b>	Buyout	Buyout/Relocation	Buyout	Buyout	Buyout	Buyout/Relocation
<b>Number of properties bought/relocated to date</b>	Over 400 properties (homes and businesses) acquired since beginning of program	Zero; 48-acre site for new town was purchased in 2018	Over 3,100 properties acquired since beginning of program	As of 2001 (~4 years into the program), 56 properties were purchased	Over 1,000 properties/buildings removed from floodplain	300 homes and 25 businesses were purchased and relocated to new town (500-acre farm tract on bluff above old town)
<b>Timeframe and phase of project</b>	1999 - present; program is well established and largely self-funded through a joint county-municipal stormwater utility	Beginning	1985 - present; program is well established	1997 - 2001 (ended because funding ran out and majority of most vulnerable structures were removed)	1984 - 2004; completed	1993 - 1996; relocation completed
<b>Cause/extent of damage</b>	Proactive program: buyouts are one of six strategies to overhaul the floodplain management program	Chronic flooding over the last century; 90% of the town's residential area is in a SFHA with 100% chance of reoccurring flooding	Regular flooding events over time; major flooding with Hurricane Harvey in 2017; the watershed is tidally driven so subject to storm surge	Buyouts are part of a larger comprehensive restoration plan; chronic flooding in past	Chronic flooding over the past century and a devastating flash flood in 1984 (14 dead; hundreds injured; \$292 million in damage)	Massive 1993 flood broke the town's levee system; 90% of properties in the floodplain were destroyed

<sup>1</sup> OCB staff is in the process of working with Quinault Indian Nation staff to learn more about their work to prepare for and begin taking aggressive action to relocate substantial parts of Taholah in the face of rising sea levels.



## Questions for Further Exploration

The OCB support team plans to conduct targeted interviews with several jurisdictions and experts familiar with buyout/relocation programs to better understand their potential applicability to areas of the Chehalis Basin, success factors, and key implementation considerations. Our initial guiding questions for the research are in the box below.

### **Buyout/Relocation Research Guiding Questions (for IAG Feedback/Input)**

1. What was the magnitude of the problem? What is the program trying to accomplish? What is the suite of actions and how were those determined? Were the actions voluntary or not?
2. What has been the success, or lack of success of the program in meeting the objectives so far, and why? What did the success depend on and what scale was able to be achieved in implementation?
3. What were their assumptions going in, and how did those change over time?
4. What is/was the timeline of program (10-, 30-, 100-year)?
5. What are the estimated costs for implementing elevating/floodproofing, relocating, acquiring structures, and other non-structural flood damage reduction measures/projects?
6. How was the program funded?
7. What was the landowner willingness, and how does that translate into assumptions that we should be using?
8. Were there land use policy changes or other legislative changes at the state/local level that helped facilitate or create requirements for the program to be implemented?
9. What is/was the governance structure, if any?

## Next Steps

At the December 16 Implementation Advisory Group meeting, we will provide a short presentation on the information introduced in this memo and have interactive discussions around the following questions:

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