

EQUITABLE FLOOD NAVIGATION IN THE CHEHALIS BASIN

UNIVERSITY OF WASHINGTON
GRAND CHALLENGES IMPACT LAB

A PROPOSAL FOR INCREASED REPRESENTATION AND
ADVOCACY FOR LOW-INCOME RESIDENTS OF THE
CHEHALIS BASIN

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Executive Summary

The "Grand Challenge" that we tackled this quarter is perhaps the greatest current threat known to humankind. Understanding and combating climate change starts with learning how the evolving climate is impacting local communities differently. Working with Brian Stewart, Cascades to Olympics Program manager at Conservation Northwest and Local Actions Non-Dam Alternative Steering group member with the Chehalis Basin Strategy, we have spent the last 9 weeks getting to learn about the geography of the Chehalis Basin and how residents living in its floodplain are impacted by seasonal flooding. Lately, the development of climate change has resulted in a longer and more severe flooding season in the Basin, and residents, community planners, local officials, and workers at the Strategy are fighting to find the most equitable solutions.

The Problem

What Problem Are We Working On?

Over the past 10 weeks, we have had the privilege of interviewing several different people who are involved with the Chehalis Basin Strategy. We quickly learned from them that seasonal flooding has been a long-lasting natural feature of the Basin that is now being severely exacerbated by global climate change and increased land use and development. Now more than ever, the Basin is seeing a longer and more severe flooding season — a problem deeply felt by the region's most vulnerable residents. Centrally located between Portland and Seattle, the Chehalis Basin has recently become a popular spot for Oregonians and Washingtonians hoping to escape the city life to relocate. This migration influx has driven the development of housing in the floodplain — housing that is most commonly targeted toward and occupied by low-income tenants.

It has become clear, however, that the flood relief isn't being felt equally by all residents. Low-income individuals and families living in the floodplain are particularly vulnerable to and disproportionately impacted by the Basin's increased flooding. For many of these residents, attending community meetings to discuss flood mitigation is not an option. On top of frequently coping with language barriers, many folks hold essential or frontline jobs that require long hours outside of the common nine-to-five. Others first and foremost need to prioritize child care and/or elder care when living in multigenerational housing. Low-income tenants are frequently subject to the terms of an unforgiving lease and landlord who, upon request for greater flood protection, may threaten to increase rent. To put it simply, these residents do not have the time and resources to easily participate in community discussions about flood mitigation in the way more affluent residents do.

What evidence do you have that this problem exists?

We have conducted many interviews with people who work in the Chehalis Basin who have confirmed all our assumptions. In addition, our mentor from Conservation NW is a resident of the Chehalis Basin and has guided us throughout this process. Finally, the average household income for Chehalis City was \$45,195, compared to the US average being \$64,994, showing that residents in the Chehalis area are poorer than an average US citizen (Bureau, U.S. Census).

Who faces this problem and why does the problem exist?

Everyone who lives in the Chehalis Basin faces the problem of flooding, but our major focus is on low-income residents whom many traditional flood mitigation practices do not apply to. Climate change has intensified flooding in many American Rivers, the Chehalis River

being no exception. Many of the houses in the basin were built on a floodplain that has a wide, flat topography. 100-year floods are happening with increasing frequency throughout the basin, exposing even more homes along the Chehalis River to the risk of flooding. Just in the last 30 years, the basin experienced five of its largest historical floods, showing that over the past decades, peak season flood levels have been rising. In 1996, 2007, and 2009, the cities of Chehalis and Centralia experienced major flooding that caused millions of dollars in property damage and closed the U.S. Interstate 5 (I-5), area highways, and rail lines for several days (Chehalis Basin Long-Term Strategy).

The Customer

Who is your customer/beneficiary?

Lower-income Chehalis Basin residents who are affected by the floods are the beneficiaries of our proposed solution. Our solution is to provide flood mitigation strategies that offer equitable support and advocacy for vulnerable populations. Floods have disastrous consequences, especially for marginalized communities, and these communities lack the resources and time to advocate for themselves. The inequitable distribution of help and policy makes it harder for those residents to go about seeking help.

The Community Flood Assistance and Resilience Program (CFAR) is part of the Chehalis Basin Strategy that helps fund small-scale projects focused on preventing future flood-related damage to individual homes, businesses, and community assets, and addressing or resolving existing risks on an individualized basis. They do direct outreach to homeowners, meet with people and talk about reducing flood risk and reducing flood insurance premiums (“Chehalis Basin...”).

CFAR provides financial assistance for approved projects, given funds availability and priorities. However, there are some equity concerns when it comes to CFAR specifically in economically disadvantaged counties in the Chehalis Basin. The application process is on a first come first serve basis, time-consuming, tedious, and requires extensive paperwork, active follow-up, and the ability to document and submit everything to the Federal Emergency Management Agency (FEMA). Part of FEMA is the Community Rating System (CRS) which is a voluntary incentive program that identifies and promotes floodplain management practices in communities that exceed the minimum requirements of the National Flood Insurance Program (NFIP). In CRS communities, flood insurance premium rates are discounted to reflect the reduced flood risk resulting from the community's efforts to address the three goals of the program. These goals are reducing and avoiding flood damage to insurable property, strengthening and supporting the insurance aspects of the NFIP, and comprehensive floodplain management ("Community Rating System"). CFAR can help residents meet those goals and qualify for this program. However, there is a vast need, and small cities may qualify for CRS but not be eligible due to limited funds and staff to provide the help needed to reach everyone in the Chehalis Basin, especially those with low incomes.

Why do they face this problem?

The Chehalis Basin has always experienced flooding because of its geographic location ("Chehalis Basin..."). As climate change worsens, catastrophic floods are no longer isolated incidents, as 100-year floods are happening with increasing frequency throughout the basin. Flood insurance rate maps determine the likelihood of flooding in a particular area. Therefore, the 100-year floodplain was created.

Many of these flood maps were developed in the 1970s and 1980s when the program was first introduced. Due to climate change projections, these maps have been updated by many communities. Lewis county, however, has not updated its maps since 1982 and has been operating under 40-year-old conditions ("Floodplain management ..."). Developers are building and selling properties outside the drawn floodplain but with current analysis, many of those newly developed areas are prone to flooding and it'll only get worse with climate change. People are working under outdated planning and zoning information and their assumption of risk is totally skewed. There are a lot of low-income communities living in areas with outdated maps, therefore, making it harder for them to be informed and seek help.

What evidence do you have that they consider this to be an issue?

The Chehalis River has flooded more than 18 times in the last 20 years. Major floods occurred in 1990, 1996, 2007, 2009, and 2022. Since 1978, flood insurance has paid out \$93 million in claims throughout the basin (Brown, 2018). In the aftermath of a storm, flood insurance can help cover the costs of damage and help repair, replace, and rebuild. Part of the problem facing low-income residents is the difficulty they have in obtaining flood insurance. According to a consultant that worked with the Chehalis River Basin Flood Authority, thirteen surveyed communities saw a 26 percent decrease in flood insurance policies between 2014 and 2018. The drop is a result of legislation passed in 2012 to phase out FEMA subsidies in high-risk areas, resulting from the NFIA's financial troubles. As a result, premiums have spiked despite a 2014 law to slow the increases. The loss of subsidies applies to homes built before the issuance of Flood Insurance Rate Maps, indicating areas inside the 100-year flood zone. The subsidized rate only affects about 30 percent of all properties, but in low-income areas with lots of older buildings, it can be much higher (Brown, 2018).

When the next major flood hits, many homes will have to abandon their residence because of the high price and inaccessibility of flood insurance which makes people drop those insurance policies. Currently, flood insurance costs in the Chehalis Basin range from around \$850 to \$1588 in Lewis county annually, which is much higher than the average for Washington state ("Average cost...").

Why haven't they solved this problem themselves?

Our beneficiaries lack the time and ability to advocate and solve this problem for themselves. While there is a lot of funding, there isn't a lot of direction to put that funding toward helping those low-income communities. The need is so vast and there are currently many homes in direct danger of flooding. The office of the Chehalis Basin doesn't have enough people to provide flood damage mitigation help to the people who need it. Moreover, reaching out to people who already have so much on their plates is more complicated. Getting to work, paying bills, dealing with medical issues, and taking care of their children are more pressing issues than flood mitigation. Because floods occur less frequently, it is not always regarded as an immediate issue.

It is also often difficult for low-income residents to obtain flood insurance. In addition, rental properties aren't eligible to get help from CFAR. According to one of our interviews, the office of the Chehalis Basin is currently working on a new policy that will ensure the program will include rental properties to ensure broader benefit. Typically, fixing rental property projects may increase the value of the rental property which may result in displacement of the residents. The office of the Chehalis basin is working on passing a policy that allows rental

properties to receive flood mitigation help from CFAR. However, the policy will put conditions on the funding requiring the landlord to agree not to sell the property within a number of years after the property gains value from being flood retrofitted. In addition, the policy requires the landlord that they won't increase the rent by more than a certain amount.

The Solution

What is our solution?

The inequitable ramifications of flooding in the Chehalis Basin is, at its roots, an issue regarding **representation**. What we've learned is that even if the sturdiest of flood barriers are built or the strongest dam is constructed, residents in the Basin will truly benefit only if they are willing — or rather able — to advocate for themselves. As said during an interview with a LAND-steering group member who wishes to remain anonymous, "Solutions will be found only when we stop trying to control the water, and instead start learning how to live equitably with it."

To effectively address the clear lack of representation for low-income residents living in the Chehalis Basin, our team proposes the formation of a brand **new committee**. This committee, made up of four individuals, will be the newest addition to the Chehalis Basin Strategy and will be tasked to serve as **the main representatives** for low-income people living in the Basin. This will be a **paid position** supported by CBS' federal fund and will be open to any individual who currently lives in the Basin, qualifies as low income, and shows an interest in a non-dam alternative and the promotion of equitable flood mitigation. It is also preferred that at least one of the committee members (if not all) speak

both Spanish and English to accommodate current language barriers ("Watershed Facts").

This committee, otherwise known as the **Equitable Flood Navigation Group (EFNG)**, will be in charge of engaging low-income families in community discussions about flood mitigation by organizing local meetings and events. According to several sources we spoke with who work directly in the Chehalis Basin, one of the greatest challenges to broad and diverse participation in community discussions around flood mitigation is the current lack of accessibility and feasibility. Many residents, for instance, are essential or frontline workers who work long or late hours, are working parents who must prioritize child care, and/or are generally more focused on fulfilling their present needs over future flooding risks. These events will therefore be **specifically targeted** at this demographic by accommodating people who work outside of the nine-to-five workday, providing options for child care, including a variety of meal options, and being located in relatively accessible and familiar spaces. To accommodate COVID-19 precautions, each meeting and event will be live-streamed on the Chehalis Basin Strategy website so that individuals with online devices may watch and participate from the safety of their homes.

How Will The Solution Help The Problem?

Our initial problem statement, created by our mentor Brian Stewart, is as follows: **How do officials and planners ensure equitable outcomes for flood mitigation programs within the Chehalis Basin?** This is, undoubtedly, a huge question! And it's a task that can only be effectively tackled by being broken down into several approachable and manageable steps. Creating the EFNG is the first of these steps. By forming this committee, we anticipate that participation among low-

income individuals and households in community meetings will increase. With more voices being heard (and not just those of the affluent), the Chehalis Basin Strategy can work to create more equitable non-dam flood mitigation methods that are designed to serve all residents equitably. The EFNG will be a team of people who experience these flooding issues and **environmental injustice first-hand**. With any assistance needed from other Chehalis Basin Strategy experts, they will spearhead the formation of fair and just flooding accommodations for this demographic that has been historically underrepresented.

What Evidence Do We Have That This Solution Will Help The Problem?

Based on research of other communities facing similar issues regarding environmental injustice, our group saw that the key to nearly every progress or success story was improved and equitable representation. For example, in Flint, Michigan, a city predominantly lived in by people of color, a water crisis became national news in 2014 when residents consumed lead- and legionella-contaminated water after the town switched its water source in a series of budget cuts (Kennedy, 2016). While the key solution to this problem was to replace the corroding pipes that distributed the city's water, it wasn't until Flint's residents gained state- and nation-wide opportunities to share their stories and concerns about the deadly water crisis that change actually started to be enacted ("Taking Action..."). While the Chehalis Basin flooding may not have pulled the countrywide attention that Flint, Michigan did, we've had the opportunity to give our concentration and dedication to facilitating more representation for our under-heard beneficiaries.

Have We Received Outside Feedback On Our Solution?

Throughout the capstone process, our group worked diligently to apply design thinking, incorporate a diverse variety of voices and CBS advisors, and coordinate with our mentor Brian Stewart to create the most realistic and adequate solution. It was not an easy process – to say the least.

Tackling a such a grand challenge as climate change, even on a smaller community-based scale, was daunting. It truly wasn't until perhaps half way through the quarter that our group fully began to comprehend the vast scale of flooding in the Chehalis Basin and how its residents are impacted by it. Thankfully, throughout the process we had the opportunity to speak with many educated interviewees, including Jess Helsley, Andrea McNamara Doyle, Brandon Parsons, and Faisal Hossain, who helped us critique and shape the viability and feasibility of the EFNG. Brian, in particular, helped us navigate the community sensitivity and ethnical understanding we needed to effectively design our committee and its future implementation. We learned from him that in order to create the strongest foundation for the EFNG, we needed to present a strong financial and emotional incentive for applicants, make participating in committee formation and development simple and approachable, and provide as much accommodation as possible for our beneficiaries. Outside guidance was a critical part of the success of our capstone project and we are grateful for each and every person's contribution to our work.

Next Steps

What Is Our Plan For Collecting Primary Data On The Effectiveness Of Our Solution?

The EFNG has goals to advocate for and engage low-income communities

and individuals in flood damage mitigation solutions, strategies, and information sharing. To measure the success of the committee and the involvement of these historically oppressed individuals we can look at process and quantitative based measures. The process based success of the solution will be based on the engagement of low-income individuals and collaboration between socioeconomic groups. Some primary data we will collect to measure process based success may include: attendance rates, demographic data over time for community meetings, surveying attendee satisfaction, and tracking speaker minutes.

Another way to measure the success of our project will be through quantitative measures already implemented by the Office of the Chehalis Basin which tracks: projects implemented, construction, money invested, acres of land protected, etc. Our tracking will follow the same pattern of measures as the OCB, but be based on flood mitigation solutions and strategies accomplished by the EFNG. Our data collection will also be inclusive of OCB data on overall flood mitigation project metrics so we can reference the proportion of this overall success for low-income communities, households, and individuals. The success of the EFNG can then be measured by closing the gap between the number of projects based in areas of differing socioeconomic status.

What Is Our Plan for Financial Sustainability Of Our Solution?

Based on interviews and research, there are resources and funding available to support implementation of a steering committee to advocate for low-income individuals as an equitable flood damage mitigation solution in the Chehalis Basin. The Chehalis Basin Board, the entity in charge of the Chehalis Basin strategy and under which our solution will be administered, was approved \$70 million in funding by the

Washington State Legislature for the 2021-2023 biennium. Our solution aims to provide direction and framework in a space and organization with available funding and resources.

What are the next steps for implementing the solution within the organization? What members are needed for each implementation step?

As a prototype, and to provide a framework to our final solution, our group has decided to create a job description and communicable flyer that outline the responsibilities, benefits, and details of our proposed committee member position. Our comprehensive job description which will be made available via job sites, the Chehalis Basin Strategy website, as well as social media associated with the Strategy and the Office of Chehalis Basin. The job description includes a description of the position, background on the OCB, EFNG, and Chehalis Basin Strategy, job responsibilities, qualifications and necessary skills, benefits, and details on how to submit an application. Copies of the full job listing and available flyer are made available within this report for reference in the Appendix . Outside of these strategies, our group also plans to collaborate with the OCB to include an additional tab managed by the EFNG within the Chehalis Basin Strategy website (<https://chehalisbasinstrategy.com/>) that will provide updates about projects, information, and meetings handled by the EFNG. This will also serve as an additional location where interested parties can apply for a position within the EFNG. Our group intends to establish the committee within the context of the OCB and the Chehalis Basin Strategy such that it has security among an already reputable organization and will thus be set up to have long-term positive impact through sustained advocacy and action for the low-income

communities within the basin.

In order to run and maintain a job advertisement, including vetting applicants, holding interviews, and completing the hiring and onboarding process, our solution will need current members of the Office of Chehalis Basin to take on these responsibilities as the parent organization of the EFNG. This responsibility can be taken on by some form of hiring director, or another applicable administrative official within the OCB. Distributing flyers and the detailed job listing can be done via social media and online advertising as mentioned previously, while additionally providing printed copies through local newspapers, outside advertisers, local and commercial businesses, the post office, etc. Once properly advertised and hired, the EFNG will then need to report to Office of Chehalis Basin directors and administrative officials to ensure they are effective and productive in ensuring equitable flood damage mitigation within the Chehalis Basin. These officials and organization members can then document and track the actions of the EFNG, as well as approve planning, communication, and decisions taken by the committee. This chain of command between the OCB and the EFNG completes the logistical and professional needs of the committee. Funding for the EFNG, including committee member salary, will be allotted by the Office of the Chehalis Basin through funding provided by Washington State Legislature.

Example of Hypothetical Action by the EFNG on a Flood Mitigation Project by the Chehalis Basin Strategy

The following table demonstrates hypothetical actions the EFNG could have taken during a recently active project by the Chehalis Basin Strategy. The purpose of the project was flood damage management planning for Grays Harbor County, located in the Chehalis Basin, where CBS officials gathered to build a comprehensive plan for project

implementation and budgeting, build a study of residents, and estimate the replacement value of assets that will need to be protected or restored from flooding damage. 52,000 of the county's 76,000 residents were covered by the project's study, and replacement value of total assets to be protected in Grays Harbor was determined to be \$10,000,000, which was granted to the project. The hypothetical actions taken by the EFNG would aim to bring more equitable and inclusive planning for flood damage mitigation in the Chehalis Basin.

Flood Hazard Management Planning in Grays Harbor County

Statistic	EFNG Strategy
9% of population live in household where the spoken language is not english	<ul style="list-style-type: none">• Ensure translators are provided for community and during surveying to ensure inclusive communication between residents and planners• Provide translations for announcements and informative material such as the project information and goals
15% of households without computer and internet access	<ul style="list-style-type: none">• Print out flyers and informational documents so those without internet have access to the planning process
14% of the under 65 population live with a disability	<ul style="list-style-type: none">• As a vulnerable group to the impacts of climate change, it is imperative the EFNG ensures the disabled community is specially considered and protected under the flood management hazard planning• Communicate with these communities and individuals about their personal struggles with living in a floodplain and relay these problems to the planning team
32% of population live in some form of rental unit	<ul style="list-style-type: none">• Push for policy changes that restrict the ability of planners to protect families who reside in rental units<ul style="list-style-type: none">◦ Policy that prevents landlords from raising rent on tenants once their structures are retrofitted for flood protection

<p>15% of population is under the national poverty line</p>	<ul style="list-style-type: none"> • Since many of the individuals living under the poverty line reside in rental units, pushing for the policies described above will indirectly benefit people who are impoverished • Push for flood insurance equality through rates adjusted for income <ul style="list-style-type: none"> ○ Flood insurance coverage currently only sees decreased rates for communities with the ability to demonstrate planning and construction towards flood damage mitigation strategies ○ Communities without the revenue or staffing to demonstrably plan for flooding consequences are punished with higher insurance rates, reinforcing inequity in the system
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Table 1. EFNG strategies for dealing with inequalities during flood hazard management planning project for Grays Harbor County in the Chehalis Basin

What additional feedback do you need on your solution and what is your plan for how to get it?

To determine the effectiveness of the EFNG as an advocacy group for low-income communities in the Chehalis Basin, our group will need to document feedback on EFNG as an organization from both an administrative standpoint and from the perspective of the target demographic. Integrating the EFNG into a structured organization will help to understand the progress of the committee from a professional perspective, through documenting actions and performance reviews.

Determining how the target demographic, low-income communities in the Chehalis Basin, view the committee's progress can be accomplished by surveying the community as well as looking at changes in investment, engagement, and accessibility for low-income individuals in terms of flood damage mitigation strategies. Without a quality, comprehensive hiring approach, the EFNG will not come to fruition to bring equitable change to the Chehalis Basin. Quality and success of our prototype job listing and flyer and the progress of the hiring process will be something our group must monitor to ensure the EFNG gets on its feet. Because the hiring process has been handed off to the Office of Chehalis basin, communication with the administrative officials handling the hiring and onboarding of committee members will be key for determining the success of our prototype and EFNG. Finally, once the EFNG has gained traction within the Chehalis Basin strategy, our group would communicate with the committee concerning whether funding and resources are available for the committee to take meaningful action in the Chehalis Basin.

Limitations & Recommendations

Given the 10-week time frame and the distance between Seattle and the Chehalis Basin region, we inevitably ran into a few limitations and barriers. Given the opportunity to work on this project full-time, for a longer period, and on-site, we would:

- Get to know and converse with residents in the Basin personally, and work to develop long-lasting partnerships to create more specific flood resilience programs and methods
- Attend Chehalis Basin Strategy meetings in-person and have the opportunity to contribute to their agenda
- Witness the wide range of flood damage first-hand
- Potentially participate in the hiring process of EFNG members and personally track the committee's progress over time
- Be guided by people with more authority over this issue and first-hand experiences of flooding in the Basin

Conclusion

The Equitable Flood Navigation Group is the first step of many toward creating equitable flood mitigation and resilience programs in the Chehalis Basin. It is designed to provide the representation that has been historically absent for low-income residents for them to live and rent safely and confidently in the Basin. Improved representation and the amplification of the voices of this underserved demographic will help to reduce flood-related stress, drive policy changes, lead to the creation of more stable and affordable housing, and promote equitable non-dam flood solutions for the Basin.

Special Thanks To:

We'd like to thank Brian Stewart for his valuable guidance and consistent confidence in our work and efforts. It's been a true pleasure to be his mentees and to learn all about the dedicated work he's doing with the Chehalis Basin and Conservation Northwest. We'd also like to thank LAND Steering Group members Jess Helsley and Brandon Parsons for their support and constructive feedback, as well as Andrea McNamara Doyle at the Office of the Chehalis Basin and Nat Kale Planner at the Community Flood Assistance and Resilience Program. Lastly, we'd like to thank Dr. Renee Heffron, Deborah Havens, Coco Alarcon, and Yasmine Farhat for their facilitation of this project and for providing us with a quarter of constant learning.

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Appendix

A Paid Position with the Equitable Flood Navigation Group
at the Chehalis Basin Strategy

JOIN THE EFNG

Equitable Flood Navigation Group (EFNG) is a new committee at the Office of Chehalis Basin as part of the Chehalis Basin Strategy. The EFNG serves as the main representative for low-income residents of the Basin. It is in charge of engaging residents in community discussions about equitable flood mitigation by organizing local family- and work-friendly meetings and events. EFNG members will also be expected to attend and engage in community meetings representing low-income individuals when applicable. Advocacy, policy reform, communicating information, and public outreach are just some of the steps EFNG members will take to ensure equitable flood damage mitigation in the Basin.



The EFNG is seeking applicants who:

- 1** Currently live in the Chehalis Basin and qualifies as a low-income resident
- 2** Are passionate about equitable flood management
- 3** Are excited about community outreach and environmental justice
- 4** Are comfortable using Microsoft Word, Powerpoint, Excel, and Outlook
- 5** Have a Bachelor's or Associate's degree in a related field; OR at least 1 year of relevant work or volunteer experience

For more information, please visit:

<https://chehalisbasinstrategy.com/get-involved/>

This position is part-time, has flexible hours, options to work from home, and has opportunities for fieldwork

Figure 1 - EFNG Job Advertisement



Figure 2 - Chehalis Basin Map (Washington Dept. of Ecology)

STORY IN 7 SENTENCES

Once upon a time, a woman named Brenda lived with her mother and four young children in a rented home in the Chehalis Basin.

And every day, Brenda woke up before the sun rose to make her children's meals, tend to her aging mother, and get ready for work.

Until one day, the first heavy rainfall of the season passed through the basin, causing waters to rise and flood her basement, destroying many of her valuables and inciting chaos among her panicked children.

And because of this, Brenda, along with her mother and children, struggled and continued to live in their damaged home, despite reaching out to the local Community Flood Assistance and Resilience Program (CFAR), which is a first-come-first-serve service that required more paperwork than Brenda had time to complete.

And because of that, Brenda was forced to pick up extra shifts at work to make money to recover from the flood damage, and received no assistance from her unforgiving landlord who believes it's more work than it's worth to effectively fix the house.

Until finally, a new committee called the Equitable Flood Navigation Group working with the Chehalis Basin Strategy began holding family-friendly advocacy meetings where Brenda and people like her attended and advocated for policy changes that pushed for low-income residents to have affordable flood insurance and be able to retrofit their rental homes without the fear of increased rent.

And ever since that day Brenda continued to live her life, raise her kids, and care for her mother in a flood resilient home where she felt safe and advocated for.

Figure 3 - A Story in Seven Sentences

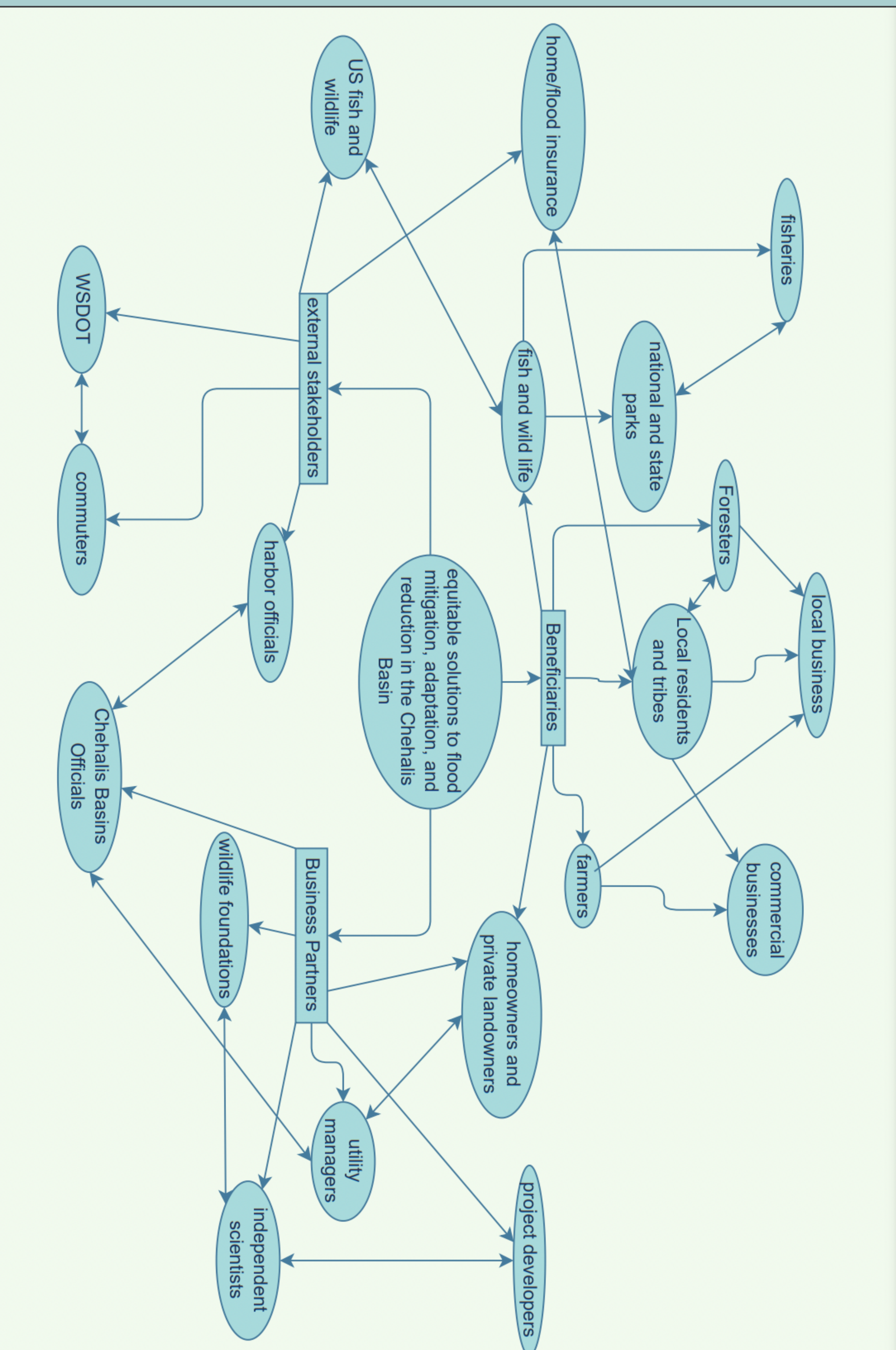


Figure 4 - Systems Map

I want to clarify my priorities
by defining my goals and the path to reach them

THEORY OF CHANGE

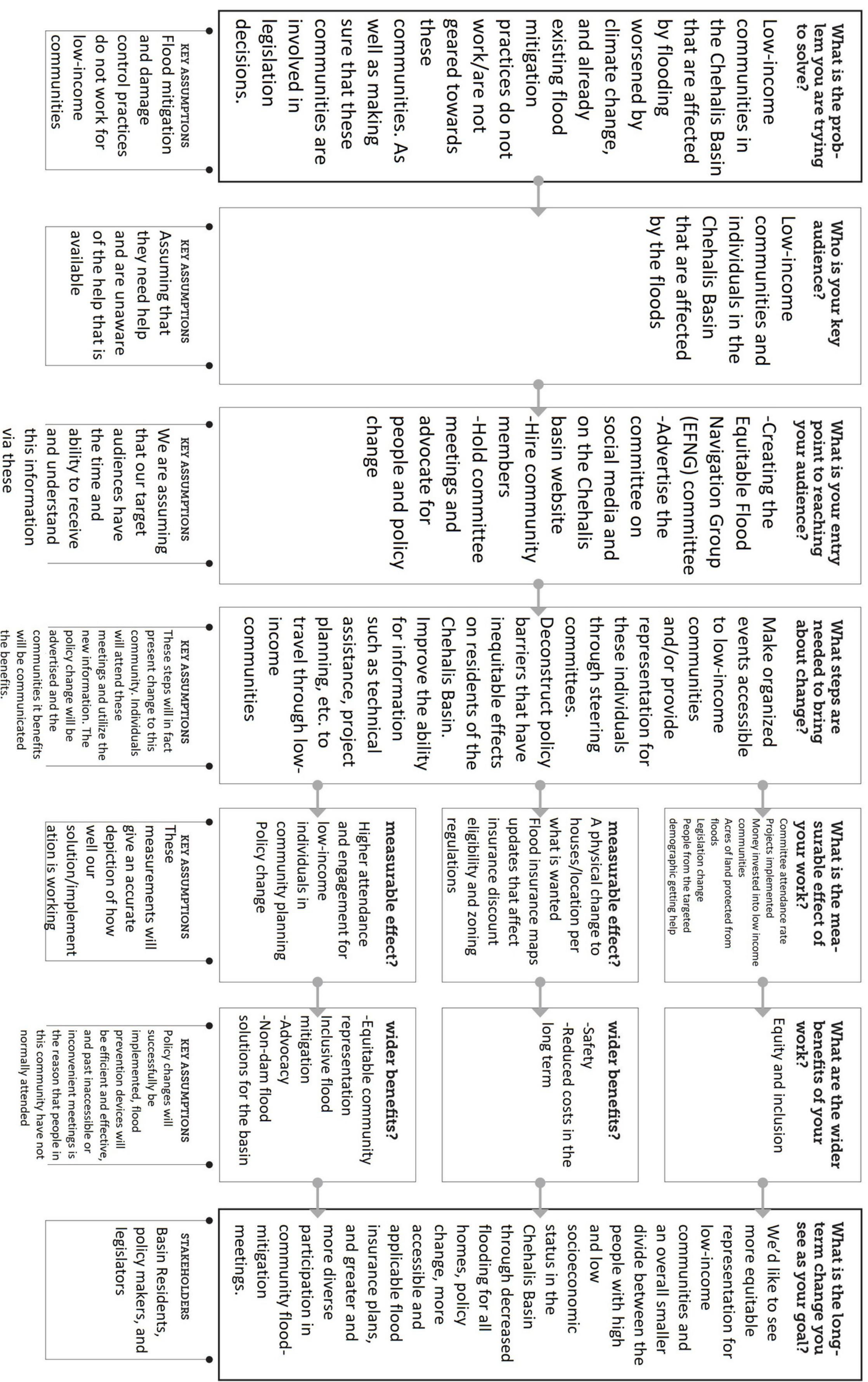
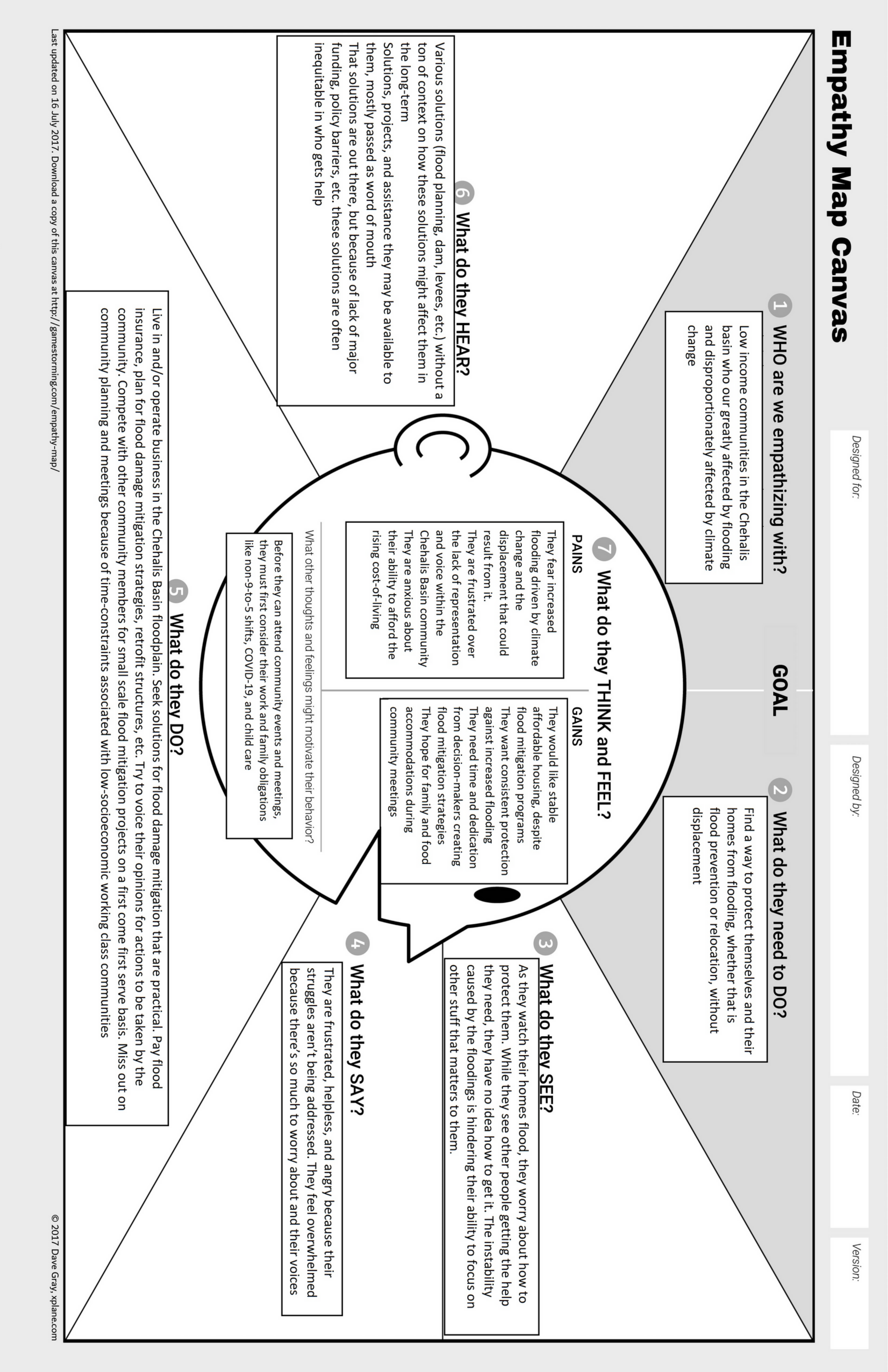


Figure 5 - Theory of Change Model



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14% of the under 65 population live with a disability	<ul style="list-style-type: none"> • As a vulnerable group to the impacts of climate change, it is imperative the EFNG ensures the disabled community is specially considered and protected under the flood management hazard planning • Communicate with these communities and individuals about their personal struggles with living in a floodplain and relay these problems to the planning team
32% of population live in some form of rental unit	<ul style="list-style-type: none"> • Push for policy changes that restrict the ability of planners to protect families who reside in rental units <ul style="list-style-type: none"> ◦ Policy that prevents landlords from raising rent on tenants once their structures are retrofitted for flood protection
15% of population is under the national poverty line	<ul style="list-style-type: none"> • Since many of the individuals living under the poverty line reside in rental units, pushing for the policies described above will indirectly benefit people who are impoverished • Push for flood insurance equality through rates adjusted for income <ul style="list-style-type: none"> ◦ Flood insurance coverage currently only sees decreased rates for communities with the ability to demonstrate planning and construction towards flood damage mitigation strategies ◦ Communities without the revenue or staffing to demonstrably plan for flooding consequences are punished with higher insurance rates, reinforcing inequity in the system

Table 1. EFNG strategies for dealing with inequalities during flood hazard management planning project for Grays Harbor County in the Chehalis Basin

EFNG Committee Member Job Listing

Position Description

The Office of Chehalis Basin (OCB) and Chehalis Basin Strategy is seeking **up to four (4)** qualified individuals to serve in the Equitable Flood Navigation Group (EFNG), a committee aimed to serve as the main representative and advocate for low-income residents of the Chehalis Basin. The EFNG will be implemented as part of the Chehalis Basin Strategy, whose primary function is to reduce major flood-related damage and restore important aquatic species habitat in the Chehalis River Basin. As part of the OCB, this position will be within the Washington State Department of Ecology. Members will report to Office of Chehalis Basin directors and administrative officials.

Who We Are

Equitable Flood Navigation Group (EFNG) is a committee that is working directly with the Office Of Chehalis basin as part of the Chehalis basin strategy. The Committee serves as the main representative for low-income people living in the Basin. This committee is in charge of engaging low-income families in community discussions about flood mitigation by organizing local meetings and events. These events will therefore be specifically targeted at this demographic by accommodating people who work outside of the 9-5 workday, providing options for child care, including a variety of meal options, and being located in relatively accessible and familiar spaces. To accommodate COVID-19 precautions, each meeting and event will be live-streamed on the Chehalis Basin Strategy website so that individuals with online devices may watch and participate from the safety of their homes

If you are passionate about your work and would like to work in a positive, energized, and fulfilling environment, then you'll find a home with us!

Who You Are

The EFNG community planner position is intended to provide an opportunity for a person with a passion and working knowledge of community engagement and advocacy.

This position is full-time, has flexible hours, has work from home option, with potential for fieldwork as part of the job requirements.

Primary Responsibilities

- This position will create then implement outreach and engagement strategies targeting the low income and underserved communities of the Chehalis Basin

- Develop and implement strategic plans for outreach to the local community to engage in flood mitigation strategies.
- Organize in person and online event
- Advocate for policy change and funding for the flood mitigation strategies and resources for lower income communities.
- Communicate information from community meetings, online updates, etc. to low-income groups
- Engage in project planning to ensure equitable outcomes for all residents of the Chehalis Basin

Required Skills/Qualifications

- A current resident of the Chehalis Basin that qualifies as a low-income resident
- Knowledge of Word, Excel, PowerPoint, Outlook
- Attending, participating, and/or leading meetings on Microsoft Teams and Zoom
- Bachelor's or Associate's Degree or related field experience; OR an equivalent combination of 1-year experience

Recommended skills/Qualifications

- Fluent in spoken and written Spanish and/or indigenous language of the Chehalis Basin
- Demonstrated ability to collaborate and communicate effectively with group members and others outside of the organization
- Knowledge and understanding of demographic and geographic details of the Chehalis Basin
- Drivers license and/or access to transportation to visit project sites, community meetings, etc.

About the Office of Chehalis Basin Strategy

The Chehalis Basin Strategy is a collaborative, science-based process that was created to address the dual challenges of extreme flooding and degraded aquatic species habitat.

The Chehalis Basin Strategy was launched shortly after the devastating floods of 2007 and 2009 that shut down parts of I-5 and destroyed property, put communities and public health and safety at risk, cost hundreds of millions of dollars in economic damages and lost revenue, and overwhelmed fish and wildlife habitat. Learn more about how the Strategy was created.

The Strategy isn't waiting to complete its recommendations before acting. Important local-scale flood protection and habitat restoration actions have already been implemented, and new projects are underway this year.

By the end of 2020, a Basin-wide suite of interlocking local- and large-scale flood prevention and habitat recovery actions, which are currently under scientific review and policy-level consideration, will be presented to the Governor and Legislature of Washington state.

Benefits

- Competitive salary of \$20-\$23 hourly
- Paid sick and safe leave
- Professional development while building a stronger community
- Access to state government sponsored training and professional development modules
- Diverse array of work experiences, responsibilities, and opportunities
- Flexible hours and scheduling

How to Apply

- **Cover letter** indicating your interest in this position applying for the **EFNG Committee Representative**
- **Resume** clearly identifying how you meet the qualifications and requirements
- **Submit** application by sending the aforementioned information to hiringofficial@ecy.wa.gov via email

Figure 7 - Comprehensive Job Listing for Office of Chehalis Basin to advertise EFNG committee position