From River to Root:

Native Traditional Food Plants, Salmon, and the Work of Living Sovereignty –

Restoring Salmon Habitat & Revitalizing Traditional Foodways Through Tribal Leadership

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Abstract

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Chair of the Supervisory Committee:

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This management plan preface aims to introduce a community-guided management plan for a traditional food forest and salmon habitat restoration site at Chief Leschi Schools (CLS) in Puyallup, Washington. Developed in partnership with educators, students, and project partners, the management plan centers place-based, community-led action in response to intersecting environmental and social crises. Specifically focusing on, the ongoing impacts of settler colonial land management and societal structures, the systematic dismantling of traditional food systems, and the urgent need for climate adaptation strategies (Gilio-Whitaker, 2019; Coté, 2022). This project approaches restoration as a relational, action-based process rooted in centering Tribal sovereignty and leadership while also critically engaging with and seeking to disrupt ongoing

settler-colonial discourses and impacts that are deeply intertwined and embedded in environmental spaces. This aligns with growing efforts to build co-management frameworks that uphold Indigenous knowledge systems and Indigenous community-defined priorities, demonstrating how meaningful partnerships can support both ecological recovery and cultural revitalization when tribal leadership is respected and prioritized in habitat restoration (Donatuto et. al., 2014; Dent et. al., 2023).

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ACKNOWLEDGEMENTS

This work would not have been possible without the relationships, trust, and guidance extended to me throughout this project.

First and foremost, I want to express my deepest gratitude to the educators, students, and staff at Chief Leschi Schools. Thank you for welcoming me into your school, your classrooms, and your restoration work. This food forest and habitat restoration project is rooted in your vision, care, and leadership, and I am honored to have had the opportunity to learn alongside you. To my thesis advisor, Patrick Christie, thank you for your mentorship, encouragement, and thoughtful guidance. Your commitment to justice-based, community-centered work pushed me to think more deeply and act with greater care. Thank you also to Dr. Jonathan Warren and the project partners who helped shape this project.

To my family, especially my daughter, thank you for your patience, love, and steady belief in me. You've grounded me through long hours of writing, planting, and reflection. Finally, to the land and waters of Puyallup territory, Lake Leschi, Clear Creek, and the native plants and beings who have lived here since time immemorial, thank you for your teachings. This project is as much about listening as it is about doing.

This thesis is not a final product, but a reflection of a shared process. My deepest hope is that it honors the work that came before it and contributes, in a small way, to the ongoing restoration of relationships, ecosystems, and sustainable, just, resource management.

Preface

Introduction: Purpose of the Preface and Vision for the Project

This project centers on the creation and restoration of a traditional food forest in collaboration with a salmon habitat restoration at Chief Leschi Schools. It is about more than planting, it's about restoring and uplifting systems of care, food, and governance structures that have long sustained both people and ecosystems in this region since time immemorial.

This work is based on a partnership between CLS educators and students and UW educators and students, with ongoing support from Puyallup Tribal Council and the CLS School Board. It draws from technical support from WA State institutions such as the WA Department of Natural Resources. and reflects a deep commitment to uplifting tribal sovereignty, cultural continuity, ecosystem restoration, and climate resilience. Through fostering food sovereignty, intergenerational learning, collaboration, and overall human wellness, the project aims to create space for students and community partners to not only engage in ecological restoration, but also to participate in rebuilding relationships to land and to one another.

Importantly, this project is not strictly driven by institutional timelines or external metrics, but also aims to respond to urgent ecological and cultural needs, but it does so through community vision, relational accountability, and seasonal conditions. Although there are deadlines needing to be met and schedules to follow, we hope to work with the people and land as we work with this site to respond to the needs of all involved.

Positionality Statement

I approach this work as a non-Indigenous researcher, practitioner, and learner, someone invited into an ongoing collaboration co-led by Indigenous teachers, students and community members at Chief Leschi Schools and UW professors and students. Earlier collaborations focused on participatory videography through which CLS students told their stories about the importance of Indigenous curricula, language learning, canoe journey and dance (Hiserman et al 2024). This trust-building, multi-year collaboration led naturally to this collaboration focused on the creation of an outdoor learning area and food forest. My role in this process has been to listen, support, and help co-create a framework for long-term restoration rooted in the values and priorities of the school and the Puyallup Tribe. I do not speak for the Tribe or CLS, nor do I claim to represent cultural knowledge that is not mine to hold. Instead, I view this management plan that is the main component of a thesis, as the result of relationships built through shared care for land, youth, and community.

Throughout this process, I have tried to remain mindful of the risks of speaking about or representing Indigenous knowledge as a non-indigenous collaborator. As Whyte (2018) and Herman (2016) argue, meaningful environmental justice work requires deep accountability, not only to ecological outcomes, but to the people, histories, and sovereignties embedded in place. I have leaned on the work of Indigenous scholars, practitioners, and community members, especially Armstrong et al. (2021, 2024), Frank Jr. (2012), Segrest (2023), and the Nisqually Food Sovereignty Assessment (2017), to guide my understanding of food forests as spaces of both ecological repair and cultural continuity.

I see this project not as a model of "helping," but of co-collaboration. Following the guidance of frameworks like participatory action research (Voinov et al., 2018; Community Tool Box, 2023), I believe that restoration must be done with communities, not for them, and that the success of

any project related to this work is measured in relationships, reciprocity, and reflection, not control or ownership. I recognize that these values and concepts, like reciprocity, relational accountability, and community-rooted care, are grounded in Indigenous ways of knowing. As a non-Indigenous person, I understand that these are not terms I can claim, but rather principles I can learn from and aspire to by actively unlearning colonial frameworks, questioning dominant narratives, and remaining in a continual process of reflection and responsibility. My hope is that this work supports students, staff, and future stewards at Chief Leschi Schools in continuing to shape and define the food forest as a space of wellness, sovereignty, and belonging. I remain open to critique, correction, and growth as this relationship and this work continue to evolve.

Origins of the Project

This project began before I arrived, rooted in an existing partnership between Chief Leschi Schools (CLS) and the University of Washington (UW). Faculty and students had already been collaborating with CLS on a series of digital storytelling projects when I was invited to join the partnership to develop a thesis project through my graduate program with the University of Washington's School of Marine and Environmental Affairs. With a background in American Indian Studies and environmental habitat restoration, I was interested in exploring how habitat restoration could meaningfully incorporate traditional food systems and community priorities. As conversations unfolded and relationships deepened, the focus began to shift toward the land itself. A shared vision emerged to co-create a traditional food forest that could support salmon habitat, cultural revitalization, and student-led stewardship. The idea didn't come from any one person, it was a reflection of many voices, relationships, and long-standing commitments already in motion long before I was a part of this project.

My connection to this work began years earlier, shaped by experiences that taught me to ask deeper questions about restoration and justice. As an undergraduate intern at the University of Washington, with the Washington Department of Natural Resources, I completed a literature review focused on ways state agencies could increase tribal access to traditional foods on state-managed lands. Though I was not always working directly with Indigenous mentors, I intentionally centered Indigenous authors and scholarship throughout the research process. Their work emphasized that restoration is not just an ecological endeavor but also legal, historical, and deeply relational. I came to understand that food systems are not separate from habitat, they are habitat right outside our doors, and that efforts to restore ecosystems must also support the cultural and political sovereignty of the communities they affect.

During that internship and during my undergrad, I also became more aware of the structural limitations state agencies often face in responding to Tribal needs. Even with genuine intentions, bureaucratic barriers, funding constraints, and a lack of cultural grounding often slow progress (Coté, C. (2016), Whyte, 2019). At the same time, many Tribal communities continue to assert food sovereignty and environmental stewardship, often in collaboration with state and county agencies and organizations. These tensions raised important questions that stayed with me. How can habitat restoration meaningfully include traditional food systems? What would it look like for state and tribal entities to work in true alignment, not just through consultation, but through justice-based collaboration?

These questions deepened during my graduate studies. I kept returning to the Boldt Decision and the Culverts case, not only as a legal turning point for salmon co-management, but as a foundation for present-day restoration efforts. The Boldt Decision affirmed tribal treaty rights to fish and manage salmon, recognizing tribal nations as co-managers of shared resources (Frank

Jr., 2010). Even with this recognition, implementation has still remained unequal. Tribes continue to bear the burden of restoring salmon habitat, advocating for culvert removals, and reviving relationships with traditional foods, all while navigating settler colonial narratives and education systems and compounding climate impacts (Frank Jr., 2012; Whyte, 2018).

When I began spending time at Chief Leschi Schools, walking the site, listening to students, talking with teachers, it became clear that this traditional food forest project could be an answer to those initial questions. Here was a site that needed both ecological healing and space for cultural reconnection. A place where salmon habitat restoration could happen alongside the creation of a traditional food forest. A place where students could actively be a part of a project that focuses on land-based education and relationship building with not only people but with the land and water itself. This project was never meant to be a model, it's a response. A response to the need for place-based restoration efforts that center sovereignty, recognize capacity constraints, and prioritize the return of traditional foods. As a collaboration between Indigenous and non-Indigenous peoples, it aspires to center the principle that food sovereignty is a form of climate resilience (Coté, 2016; Kimmerer, 2002), that cultural and ecological restoration must go hand in hand, and that youth deserve to inherit land that reflects their histories, relationships, and futures (Donatuto et al., 2014; Frank, 2018, Whyte, 2018) .

Restoration Experience and Grounded Practice

I've spent the last six years doing habitat restoration, pulling blackberries, planting native trees, hauling buckets, and working alongside community members who care deeply about their environment. I've led salmon habitat restoration projects through Green River College, Free The Green, and the Green River Coalition, mostly along the Green-Duwamish watershed. These

projects have always been about more than just planting, it's about building relationships, restoring salmon runs, and reconnecting people to place. Through this work, I also became a board member with Orca Conservancy. That connection helped me better understand how restoration on land ties directly to the survival of Southern Resident killer whales. SRKWs rely on Chinook salmon, just like many tribal communities do, and their decline is not just an ecological issue, it's cultural as well. Supporting their recovery means restoring salmon habitat, but also rethinking how we manage land and water across entire ecosystems.

A big part of my work has been leading college, high school, and middle school students in summer restoration internships, many through Free The Green. I've worked with teens who are new to this work and others who come back season after season. We remove invasives, plant native species, learn about stream health, and talk a lot about why it all matters. These students bring curiosity, honesty, and new perspectives every time. They remind me that this work isn't just about what we do, it's about who we do it with. Spending time with students at Chief Leschi Schools has been especially powerful. We've shared stories while planting traditional foods, laughed while hauling wheelbarrows, and had quiet moments walking and working on the site. This work blends restoration with healing, identity, and learning. When we pull invasive species like blackberries, we're not just clearing space, we're making room for traditional foods, native species, and relationships to return. We're creating openings for connectionto place and people.

Invasive species removal has become something I understand differently now. It's not just about controlling plants, it's about making space. Literally, for native ecosystems to recover, and figuratively, for people to reconnect with the land. For me as a non-Indigenous person, it was thought-provoking to think about the significance of being a settler, in all my discourses I inherently carry, having the opportunity to remove invasive species (introduced by settlers) to

free up already established, fighting for light, natives, like sword fern and elderberry, while also making room for baby native traditional food plants to grow into a traditional food forest. Restoration doesn't always look clean or organized. It's messy, seasonal, slow, and often interrupted by rain, school schedules, and life, but that's what makes it real. It's how I've learned to listen to land, to people, and to what's possible when we create space for something to grow and build relationships. This project didn't always go as planned. Even as we push back on colonial timelines and discourses of control, there's also the reality of trying to get things done within academic, funding, and institutional timelines. I'm earning a degree, we had a grant timeline, and some things just had to happen. One can only plant at certain times of the year. There were days when students didn't want to engage, when no one showed up, or when it felt like nothing was working. There are probably students who disliked this project or didn't want to be outside at all. It's not always transformative or beautiful, sometimes it's frustrating, slow, or uncertain, but that's part of the work too. Restoration, like relationships, doesn't always look how we imagined it, and that's okay. The point is that we keep returning, keep listening, and keep trying to show up in ways that make space for care, for change, and for whatever might grow next.

The Power of Traditional Food Forests

Traditional food forests, also known as forest gardens, are powerful examples of how Indigenous stewardship can shape landscapes that are both ecologically resilient and culturally meaningful. In British Columbia, Chelsea Armstrong and her colleagues found that forest gardens at former Indigenous village sites contained significantly higher biodiversity and more culturally important species than nearby unmanaged forests (Armstrong et al., 2021; Armstrong et al., 2024). What's especially powerful is that many of these sites haven't been actively cultivated in over a century,

yet they continue to function as thriving ecosystems. As Armstrong puts it, “People don’t always overturn or exhaust the diversity of the landscapes they live in. This is an example of how to use land so that when you’re gone 100 years later, you’ve enhanced the ecosystem.” These findings challenge the dominant idea in Western conservation that restoration always starts from a blank slate or non-human landscape. Instead, they highlight the long-term regenerative power of Indigenous land practices and their ability to build systems that are both productive and enduring.

In the context of salmon recovery and riparian restoration in the Pacific Northwest, traditional food forests can offer a deeply place-based, relational model. These are not just gardens, they are layered, intentional ecosystems that bring together native food plants, pollinator habitat, wetland species, and culturally significant medicines. In riparian zones, food forests provide shade to cool streams, improve water retention, stabilize riverbanks, build healthier soils, and create rearing habitat for juvenile salmon. They support essential ecological functions while also reconnecting people to plants, stories, and practices tied to place (Beller et al., 2019, USDA Climate Hubs, 2024). Unlike conventional planting designs, which may focus primarily on erosion control or canopy cover, food forests reflect deeper connections and relationships with the land.

These spaces also invite people, especially youth, into the restoration process in more meaningful ways. At Chief Leschi Schools, the food forest project has become a space where students learn about salmon, language, traditional foods, and their own role in caring for the land, also just a space to be outside. Restoration becomes not just work, but learning, relationship-building, and healing. As Kimmerer (2002) teaches us, restoration must include the restoration of our roles as participants in the system. Food forests create the conditions for that reconnection, to land, to each other, and to future generations. Food forests are also critical tools

for climate resilience. Their structural diversity, trees, shrubs, and herbaceous plants help buffer temperature swings, absorb water, hold soil, and stabilize ecosystems (Armstrong et al., 2024; USDA Climate Hubs, 2024). Cultural resilience is equally important. As Kyle Whyte (2018) emphasizes, Indigenous climate adaptation depends on the continuity of knowledge, governance, and place-based practices. Traditional food forests are not passive climate strategies, they are active systems of renewal.

At Chief Leschi Schools, the food forest has grown beyond a planting plan. It has become a hub for dreaming, learning, and organizing. It has opened conversations with Tribal Council, school leadership, and outside partners about what long-term stewardship and sovereignty-centered restoration could look like. As Coté (2016) notes, food sovereignty isn't just about harvesting traditional foods, it's about restoring the cultural and ecological systems that make those foods possible. In a time of deep ecological loss and intentional settler colonial narratives infecting every turn in the climate crisis, traditional food forests offer something grounded, practical, and visionary. They support biodiversity and salmon recovery. They bring back pollinators, birds, and berries, but they also create space for belonging, for community wellness, and for youth to have access to a space that is theirs to build a relationship with. These are not just ecological interventions, they are commitments to memory, responsibility, and the futures we want to grow and the systems we want to change.

Food Sovereignty as Climate Strategy

We're living in a time of overlapping ecological and cultural crises, and food systems are at the center of both. Industrial agriculture has been designed around extraction, monocultures, and fossil fuels and is one of the largest drivers of climate change and biodiversity loss

(Holt-Giménez, 2018). These systems are fragile by design. They depend on global supply chains, are vulnerable to drought, floods, and fire, and often break down right when communities need them most. For many Indigenous communities, the risks are even deeper and layered with centuries of forced removal, land theft, boarding schools, and disruption of traditional foodways (Dunbar-Ortiz, 2014; Gilio-Whitaker, 2019; Hurwitz & Bourque, 2014). In this context, food sovereignty isn't just about nutrition or access. It's about repair. It's a way to respond to climate change that's rooted in culture, healing, and future generations (Coté, 2016, Whyte, 2018).

Using a food systems approach to restoration changes the conversation. It pushes us to look beyond checklists of native species or streamside planting ratios. It asks, Who's eating? Who's learning? Who gets to steward the land? This approach treats food as infrastructure, just like shade, water, and soil. Traditional food forests aren't just habitat; they help cool streams, stabilize banks, feed salmon, support pollinators, and re-establish relationships between people and place (Beller et al., 2019; Frank, 2013; Northwest Treaty Tribes, 202, USDA Climate Hubs, n.d.). Species like camas, wapato, and salmonberry are ecological powerhouses and cultural ones. They hold stories, medicine, and teachings that are tied to place, time, and responsibility (Segrest, 2023). At Chief Leschi Schools, this framing has grounded the food forest project from the beginning. Students aren't just restoring plants, they're restoring connection to land and people. They're learning to tend culturally important native plant foods, build healthy soils, notice patterns, and step into stewardship roles. This work follows Indigenous definitions of food sovereignty that emphasize community control, culturally grounded diets, and the right to define food systems on your own terms (Coté, 2016; Native Knowledge 360, 2018; Segrest, 2025). Like Segrest says, "This is a moment where we can collectively reclaim our connection to the land and heal a colonized food system. By embracing sustainable food practices inspired by ancestral

skill, we subsequently embrace a vision for the health of future generations. Our call to action echoes through the ages, urging us to tend to the Earth with care and appreciation (Segrest, 2025).” That’s exactly what’s happening here.

Unlearning to Restore: Interrupting Colonial Discourses in Environmental Work

Ecological habitat restoration work does not exist outside of history. The landscapes we aim to restore are shaped by colonization, and so are the systems, policies, and institutions that define how that restoration happens. Colonialism doesn’t just take land, it also takes food systems, governance, and the authority to decide what counts as science, stewardship, and expertise (Coté, 2016, Dunbar-Ortiz, 2014). Today, even well-intended climate work often still carries the logic of extraction, framing Indigenous knowledge as a resource to be used; Indigenous lands as empty canvases, and collaboration as something to be managed rather than based on reciprocation. Food and land were stolen together. They must be restored together. Yet many restoration and climate adaptation programs continue to overlook the foundational role of tribal sovereignty, self-determination, and place-based governance (Gilio-Whitaker, 2019, Whyte, 2018).

As a non-Indigenous person in this work, I’ve had to unlearn a lot. I’ve learned that the act of showing up is not neutral. My presence, my body, my voice, my narrative, carries weight and power, especially in these spaces that deal with restoration or “conservation”, which also hold colonial discourses. Even students like myself, arriving with good intentions and academic training, can unintentionally replicate harmful patterns, assuming space, speaking over others, claiming knowledge, or rushing timelines. Real restoration asks us to slow down, to listen, and to follow, not always lead. Not every student connected with the food forest. Some days it was hard to get participation, and other times, it felt like things just weren’t working. That’s part of what

makes this real, it wasn't a perfectly executed plan, but rather a reflection of real school rhythms, real weather, and real people with diverse experiences and interests.

True climate resilience can't be engineered from the top down. It must emerge from the values, priorities, and governance systems of Indigenous communities themselves. It means funding tribal visions, not just inviting tribes to participate. It means returning land, honoring treaty rights, and making space for relational approaches that often fall outside Western science frameworks. The solutions cannot come from the same structures that caused the harm. In this moment of climate urgency, the most effective strategy we have is one rooted in justice (Whyte, 2018) . If we ignore that, we risk repeating the very logic that got us here through extraction, control, and disconnection. Habitat restoration, at its best, is not about fixing broken ecosystems. It's about rebuilding relationships. That requires unlearning, humility, and a deep commitment to shifting power and discourses that continue to perpetuate the issues we see with environmental work today.

Demonstration Sites as Teaching Tools

Traditional food forests like the one at Chief Leschi Schools are more than restoration sites, they're living outdoor classrooms. These are places where students have the opportunity to learn not only how to care for land, but also how to care for each other. They're spaces for building relationships, supporting wellness, and engaging with climate work in ways that feel grounded and hopeful (Coté, 2016; Donatuto et al., 2014). This is restoration that heals both people and the environment. Through this project, we've seen how traditional food forests function as powerful demonstration sites for partners and other entities to learn and even be involved with such a hands-on project. It is an example of what land-based education can look like when it centers

sovereignty, justice, and relationship (Native Knowledge 360°, 2018; Segrest, 2023). Students have been part of plantings, monitoring site changes, learning about traditional foods, and reflecting on what it means to be responsible to place. As other schools, organizations, and agencies begin to explore action-based projects, the integration of traditional food forests and ecological restoration offers a strong option forward. This project can provide a valuable example of how to do that work in a sustainable and honorable way. It's not just about planting native species, it's also about building trust, showing up with humility, and following the lead of the community. For state and non-tribal entities, this means learning to support Indigenous leadership without extracting knowledge, controlling timelines, or taking credit (Whyte, 2018; Gilio-Whitaker, 2019). The food forest at Chief Leschi was developed through partnership, not oversight, and that distinction matters.

This can also show that restoration doesn't need to be abstract or technical to be meaningful. It can be hands-on, youth-centered, and rooted in local priorities. Research confirms that food forests, especially those shaped by Indigenous stewardship, create lasting ecological and cultural benefits, including high biodiversity, soil health, pollinator support, and intergenerational learning (Armstrong et al., 2021; Armstrong et al., 2024; Grenz & Armstrong, 2023). When these spaces are supported and resourced over time, they become anchors for long-term stewardship and cultural revitalization. It shows what's possible when restoration is about more than just repairing ecosystems and how a major shift can happen when it becomes a way to grow and uplift tribal sovereignty and justice. This project will continue to evolve, but it has already invited me to rethink how we teach, how we restore, and how we relate to place. It's a space not just for habitat, but for true community building, with the land, water, and all beings included in the work.

Closing Reflections

This project has taught me that restoration is not about control, it's about relationships. It's not about fixing a place or fulfilling a checklist. It's about listening, showing up, and staying committed even when things are messy or uncertain. Working alongside students, teachers, community partners, and the land itself constantly reminds me that restoration is a long-term commitment. It asks for patience, trust, reciprocity, and the willingness to let go of timelines that don't match the rhythm of the place or the people. Throughout this process, I've had to slow down and reflect deeply on my role. I've unlearned the instinct to lead and instead leaned into listening, asking permission, and letting the land and the community guide the process. I've come to understand that my contribution isn't just in showing up to plant or organize, it's in supporting the systems that allow others to keep showing up, too.

That's why I chose to create this management plan. I considered writing a more conventional, scientific article, but it didn't feel right. It didn't feel useful for the people and the place this is meant to support. Instead, I wanted to create something that could actually be used by teachers, students, partners, and future collaborators at Chief Leschi Schools and the University of Washington. A document that could support continuity, anchor the food forest vision, and help navigate the realities of limited time and capacity by all parties involved. This plan was my way of offering something grounded and usable as a resource. This management plan is not a final product. It's a starting point to care for this land with love and intention. It's meant to be adapted, challenged, and added to by the people who know this place best. More than anything, I hope it continues to support the opportunity for students to have a space outside where they can connect with the land and water, be heard, and have the opportunity to be part of restoring traditional foods and practices in ways that strengthen both relationships and ecosystems.

From River to Root:

Native Traditional Food Plants, Salmon,

and Centering Tribal Sovereignty

Restoring Salmon Habitat & Revitalizing Traditional Foodways

While Centering Tribal Sovereignty

Management Plan

1. Introduction

Located in Puyallup, Washington, on the ancestral lands of the Puyallup Tribe, this multi phased, co-collaborative project centers around Chief Leschi Schools and Lake Leschi, adjacent to Clear Creek, which is a tributary off of the Puyallup River. It brings together salmon habitat restoration, place-based learning, traditional food revitalization, and supports the outdoor classroom learning space rooted in tribal leadership, cultural education, and climate resilience.

This is not just a restoration project, it is a living system, intentionally designed to reflect the connections between water, land, food, culture, and people. At its core is a traditional food forest, placed within the riparian landscape on Chief Leschi School grounds, to restore ecosystem function while also supporting overall wellness, food sovereignty, and to experience the interconnectedness of it all. This space is providing students, teachers, partners, and visitors direct access to culturally important native plants, while also modeling how food sovereignty can be integrated into habitat restoration (Armstrong et al., 2021; Grenz & Armstrong, 2023).

Over time, the project aims to restore ecological function throughout the Lake Leschi wetland and riparian area on school grounds and, long-term, potentially reconnecting Clear Creek to Lake Leschi and the wetlands. This reconnection could support salmon habitat, improve water quality, climate adaptation, and help mitigate flooding. It also reflects the treaty-protected rights and tribal leadership in ongoing habitat recovery efforts.

This site has the opportunity to offer opportunities for tribal departments, university researchers, nonprofits, and other partners to contribute and learn from this co-collaborative effort. The management plan aims to be grounded in the values of respect, relationship, reciprocity, and support:

- Restoration of riparian habitat using native and culturally significant plant species
- Integration of Clear Creek watershed restoration into school curriculum and stewardship
- Reconnection of land and water to support ecological resilience, food sovereignty, and to enhance the efforts of salmon recovery
- Creation of a traditional food forest that nourishes, teaches, and sustains cultural continuity
- Leadership opportunities, science, and cultural education for both UW and CLS students, partners, and community members as active stewards
- The intentionality of installing traditional food forest as a form of climate mitigation and tribal sovereignty that pushes back against extractive colonial discourses.

This document serves as a flexible, evolving blueprint, aligned with community priorities, seasonal rhythms, and long-term visions for a thriving watershed. It is grounded in participatory planning, and therefore, will change as partner interests and capacities change (Armstrong et al.,

2021; Community Tool Box, 2023; Kimmerer, 2002; Voinov et al., 2018; Williams et al., 2009). As partnerships grow and conditions shift, this plan is meant to adapt alongside them. This management plan is intended to support Chief Leschi students, staff, tribal partners, project partners, university collaborators, and community members engaged in long-term care of the food forest and surrounding restoration site. It provides a flexible framework to guide restoration actions, educational integration, and co-collaborative decision-making over time.

This plan is the result of a collaborative effort rooted in community guidance, youth participation, and respect for multiple knowledge systems, including Traditional Ecological Knowledge, Western science, and place-based, action-based learning. This management plan was inspired by elements from existing documents, including Tribal food sovereignty and community garden plans, habitat management plans, and school-based stewardship programs. It reflects on the evolving partnership between Chief Leschi Schools, the University of Washington, and other partners that bring their own insights and relationships to the project. Above all, this plan is a document intended to support long-term care of Lake Leschi and its surrounding ecosystem, Chief Leschi Students and Staff, as well as the community and partners involved in this collaboration. Grounded in the belief that ecological restoration must also be socio-cultural. It is carried forward through co-collaboration between Chief Leschi Schools, the Puyallup Tribe, the University of Washington and community partners, with an emphasis on reciprocal relationships and shared leadership. The restoration of land, food systems, and salmon habitat is inseparable from the revitalization of language, cultural practices, and place-based education. By centering Indigenous values, student engagement, and adaptive, seasonal care, this project offers a model for restoration that is relational, rooted in justice and sustainability, and responsive.

1.1 Area/Location

Chief Leschi Schools is located in Puyallup, Washington, on the ancestral lands of the Puyallup Tribe, near Lake Leschi and Clear Creek, a tributary of the Puyallup River. The restoration takes place in a zone that includes riparian edges, wetland areas, and upland ground surrounding Lake Leschi. Clear Creek flows along the western edge of the site and property and connects hydrologically to the lake and wetland areas. This landscape historically supported wetland plant species and salmon habitat (ScienceDirect, 2024; U.S. EPA, 2023; Washington State Department of Ecology, 1993). Vegetation in the area is currently a mix of native and invasive species, which will be discussed later in the plan. The site is directly accessible from the school building and is used by students and staff throughout the year as part of a developing outdoor classroom and now traditional food forest. The accessibility of the site combined with the ecological, educational, and cultural opportunities it can offer, makes it an ideal location for a long-term, community-guided, collaborative restoration project.

1.2 Climate

Located in the Puget Sound Lowlands of western Washington, a region that has a temperate marine climate with mild winters and warm, dry summers. Average annual precipitation is approximately 38-50 inches, with the majority of rainfall occurring between October and April (Washington State Department of Ecology, 2020). This climate historically supported rich wetland systems and riparian forests, but seasonal shifts in patterns are altering hydrological and ecological systems across the region to warmer and drier summers (Climate Impacts Group, 2015). The local climate is projected to continue warming in the coming decades with more frequent, extreme weather events, increased flood and drought risk, and unpredictability in the seasons (USDA Climate Hubs. 2024). This project integrates seasonal cycles, Indigenous

Ecological Knowledge, and climate adaptation into both the restoration design and educational use of the site. By rooting this work in co-collaborative land care and cultural knowledge, the site models a grounded approach to responding to the climate crisis with climate adaptation measures centered in tribal sovereignty at a local and relational scale (Whyte, 2018).

1.3 Environment

Ecological assessments conducted during site visits have revealed several degraded habitat conditions affecting both the terrestrial and aquatic systems. The Riparian corridor is impacted by dense stands of invasive Reed Canary Grass (*Phalaris arundinacea*), Himalayan Blackberry (*Rubus armeniacus*), and Scotch Broom (*Cytisus scoparius*), which crowd out native plants and interfere with native plant recruitment, biodiversity, disrupt wetland function, and elevate water temperatures (EPA, 2023; WSDA, 2013). This plan uses an Integrated Pest Management (IPM) approach that combines mechanical removal, strategic replanting, and seasonal monitoring based on state guidelines (EPA, 2023; WSDA, 2013). Hydrologically, Clear Creek has been disconnected from its historical floodplain, limiting salmon access and habitat quality. Long-term planning efforts, including the Pierce County Clear Creek Habitat Restoration Plan, will focus on the importance of restoring floodplain connectivity, native revegetation, and natural stream processes (Pierce County Planning & Public Works, n.d, 2025). Despite there being habitat degradation, there are still important native species present and established, like Willow, Red Osier Dogwood, Sword Fern, and Elderberry. These species are central to both ecological resilience and tribal food sovereignty goals and will guide species selection and spatial layout throughout restoration (Armstrong et al., 2021; Kimmerer, 2002; USDA Climate Hubs, 2024). The environmental challenges at this site give opportunities to reconnect people to traditional knowledge systems, diverse forms of knowledge, to support stewardship, salmon recovery, and

to create an educational space rooted in land care and reciprocal relationships (Frank Jr. B., 2012; Herman, R.D.K., 2016; Holt-Giménez, E., 2018; Kimmerer, 2022; Native Knowledge 360, 2018; Whyte, 2018).

2. Design Overview

This site is designed as an interwoven system- water, land, food, language, and education are not treated as separate pieces, but as connected components of a healthy and resilient ecosystem. The layout supports restoration, cultural learning, and student stewardship simultaneously, with each zone shaped by both ecological function and cultural value.

Specific areas across the site include:

- Riparian Restoration Areas: Streambanks and lake edges planted with native trees and shrubs to increase shade, stabilize soil, and improve salmon habitat.
- Traditional Food Forest Areas: Native food and medicine plants (e.g., wapato, camas, huckleberry, crabapple) integrated for both ecological function and cultural access.
- Hydrological Reconnection Areas: Long-term goal of reconnecting Clear Creek with wetlands and the lake to restore natural flow and fish habitat.
- Student Stewardship Areas: Living labs for seasonal plantings, monitoring, and field-based learning.
- Cultural Learning Areas: Areas to host ceremonies, plant walks, and interpretive signage in Southern Lushootseed and English.

These will evolve with time and may overlap, shaped by student leadership, seasonal rhythms, and community priorities.

3. Guiding Goals and Core Objectives

This section outlines the guiding goals and objectives that shape the restoration and stewardship efforts at Chief Leschi Schools. These goals are to aid in reflecting the project's overall commitment to cultural revitalization, ecological restoration, youth and student empowerment, tribal/food sovereignty, and climate resilience. Each objective is centered in socio-cultural and ecological co-collaborative processes that focuses on sovereignty and the long-term wellbeing of the land and community. While presented here as distinct goals, they are deeply interconnected and meant to evolve in response to seasonal conditions, student and partner leadership and capacity, and relational care.

Reestablish Traditional Food Systems

Restore access to culturally significant foods and medicines by planting site-appropriate native species selected through community guidance. The food forest will serve as a teaching tool and a source of nourishment, supporting tribal food sovereignty and reconnecting youth to traditional knowledge systems (Armstrong et al., 2021; Grenz & Armstrong, 2023; Kimmerer, 2002). This objective reflects the belief that food is medicine and that land stewardship is a form of cultural continuity (Gilio-Whitaker, 2019).

Restore Salmon Habitat and Riparian Health

Enhance the ecological resilience and biodiversity of the Clear Creek watershed by removing invasive species, restoring native vegetation, and improving stream shading, increasing biodiversity, bank stability, and water quality. These actions support treaty-protected salmon

populations and embody the responsibility to restore relationships with the land, water, and all living and nonliving beings (Frank Jr., 2012; Coté, 2016; USDA Climate Hubs, 2024).

Center Tribal Sovereignty and Indigenous Knowledge

Ensuring that tribal sovereignty is at the heart of all the project decisions revolving around the restoration and that they are guided by the values, priorities, and vision of Chief Leschi Schools. University students and professors, and project partners, participate through a co-collaborative model that emphasizes accountability, respect, and reciprocity, not authority (Community Tool Box, 2023; Kimmerer, 2002; Whyte, 2018;). CLS student and staff involvement along the way and the inclusion of place-based learning reinforce Indigenous leadership and place-based relationships. This approach affirms that sovereignty is not just symbolic; it is central to how restoration, education, and stewardship are carried forward in this project.

Build Youth Leadership and Outdoor Learning Opportunities

The traditional food forest acts as a dynamic outdoor classroom where students take part in seasonal planting, ecological monitoring, and hands-on stewardship. By grounding learning in the land, the project fosters a sense of identity, responsibility, and connection to place. This place-based approach supports a health and wellness mindset and encourages students to see themselves as active participants in the care of their environment. Through experiential learning and leadership opportunities, youth are empowered as stewards of their community and the watershed (Donatuto et al., 2014; Native Knowledge 360, 2018).

Adapt to Climate Change through Indigenous Land Care

Select species and restoration strategies that enhance the site's resilience to drought, flooding, and ecological disruption. This includes prioritizing biodiverse, culturally important, and climate-adaptive plants, while also fostering long-term monitoring and stewardship. The project models how Indigenous land stewardship can serve as a local strategy for climate adaptation and relational repair (Dunn, 2018; USDA Climate Hubs, 2024; Whyte, 2018).

4. Food Forest Design and Function

The traditional food forest at CLS was developed as a co-collaborative effort between students at the University of Washington's School of Marine and Environmental Affairs and Chief Leschi Schools, professors, teachers, community partners, and collaborators. It intends to support restoration efforts that are grounded in uplifting tribal sovereignty, wellness, and outdoor learning by reintroducing native food and medicine plants in a way that reflects

The traditional food forest is not formally designated as a ceremonial or sacred space, but the first planting day there was a blessing and ground breaking ceremony led by Puyallup Tribal Council members, CLS students, CLS teachers and staff, and UW partners. It was a day of intentional care and community recognition. The design itself was shaped through input from Chief Leschi staff, lived habitat restoration experience from UW thesis students and professors, and draws from Indigenous and Western scholarship that emphasizes reciprocal, place-based relationships and Indigenous food systems as acts of stewardship and sovereignty (Armstrong et al., 2021; Grenz & Armstrong, 2023; Whyte, 2018).

Plant species such as wapato, camas, elderberry, huckleberry, crabapple, and salmonberry were selected through collaborative planning sessions, reflecting both ecological suitability and their cultural relevance as documented in published sources and local community food assessments (, Bryant, 2024; Frank Jr., 2012; Nisqually Food Sovereignty Assessment, 2017). Throughout the planning process and this management plan, we consulted project partner experts and Indigenous scholarship that articulates core tenets of Indigenous stewardship, including the importance of reciprocity, seasonal timing, and plant-person relationships (Armstrong et al., 2024; Herman, 2016, Frank Jr., 2012; Kimmerer, 2002).

Rather than make broad claims about cultural revitalization, this plan and project hope to support spaces where CLS students and staff can reconnect deeply with traditional foods, land care practices, place-based education, and climate adaptation through habitat restoration. It is understood that cultural knowledge is held within communities, and this plan is not attempting to replicate or define those practices. Instead, the traditional food forest project provides a framework for school-based restoration that is open to continued guidance from Educators (CLS and UW), students (UW and CLS), project partners, and community leaders. Interpretive signage, curriculum integration, and land-based learning will evolve with input from the school and Tribal community, and any ceremonial or spiritual use of the space will be led largely by CLS.

As the forest matures, and expands, a harvest protocol is recommended to be developed collaboratively with CLS staff and students. The protocol will address practical considerations, such as plant maturity, regeneration, and sustainability, as well as cultural timing and use, as determined by CLS. There is transformative power in traditional food forests, not only as living sources of food and medicine, but as place-based models for how habitat restoration can honor

sovereignty, cultural knowledge, and ecological relationships between different agencies, organizations and audiences. Integrating traditional food systems into restoration should not be treated as an exception; it should be recognized as a vital and ongoing practice, the new norm. The food forest at CLS offers one example of how this integration can take root within a public learning space. Through their involvement, the aspiration and hope is that students are not only restoring the land, they are learning how to lead in collaborative processes across knowledge systems, governance, engage with Indigenous led visions, and carry those experiences into future work in restoration, food systems, and community resilience (Armstrong et al., 2021; Bryant, 2024).

4.1. Traditional Food Forest Species and Uses

The plant species selected for food forest reflect both ecological function and deep cultural meaning. Each species was chosen through collaborative planning with school staff, and guided by Indigenous food sovereignty literature, traditional knowledge documentation, videos, community members, and community assessments (Armstrong et al., 2021; Burke, 2013; Frank Jr., 2012, 2010; Nisqually Food Sovereignty Assessment, 2017). This process also came from UW's master students' passions and ecological restoration background, as well as prior work and education focused on traditional food systems, salmon recovery, tribal sovereignty and environmental justice. They are not just native plants, they are relational, tied to teachings, seasonal cycles, and practices that have sustained communities for generations.

Plants like Plants like wapato (*Sagittaria latifolia*), camas (*Camassia quamash*), and Pacific crabapple (*Malus fusca*) have long histories as staple foods in Coast Salish territories. Wapato, for example, is a traditional wetland root food once managed through sophisticated hydrological

systems. Camas bulbs were harvested in seasonal cycles and pit-roasted to create a sweet, nutrient-dense staple, while crabapple fruits were harvested and preserved as part of ceremonial and subsistence use (Armstrong et al., 2024; Frank Jr., 2010). These foods, when reintroduced into school-based restoration spaces, support not only biodiversity but cultural continuity and resilience (Armstrong CG, Odonne G. (eds) 2024; Frank Jr., B., 2010; Kimmerer, R., 2002; Whyte, K.,2018).

Armstrong et al. (2021) highlights how in her ongoing work in food sovereignty that integrating these culturally important plants into restoration projects transforms how habitat recovery is approached. Instead of separating ecological recovery from cultural revitalization, this food forest brings them together in practice. Students learn a food systems approach to habitat restoration that prioritizes holistic landscape perspectives, interdisciplinary knowledge integration, community health focus, and equity and long term vision (Grenz J and Armstrong CG, 2023).

This initial phase of planting represents a starting point for ongoing co-creation. As the foreste grows, additional species may be introduced through community input, student research, and seasonal observation. Future signage and curriculum will deepen knowledge about plant uses, language connections, and harvesting protocols, grounded in guidance from tribal staff and Indigenous food knowledge holders. The table below provides an overview of the species planted during the first phase of the project, including their cultural uses and ecological roles. These plants are not listed to “define” Indigenous knowledge but to help contextualize their presence within this particular restoration effort and support student learning rooted in respect and responsibility.

Species information compiled with collaborative planning sessions with Chief Leschi Schools staff and project partners, as well as published sources documenting the cultural and ecological roles of native plants in Coast Salish territories. Key references include Armstrong et al. (2021), Burke (2013), Frank Jr. (2010, 2012), Grenz & Armstrong (2023), Nisqually Food Sovereignty Assessment (2017), and, USDA Climate Hubs (2024).

Common Name	Scientific Name	Traditional Uses	Ecological Role
Black Hawthorn	*Crataegus douglasii*	Berries eaten fresh/dried; wood used for tools	Wildlife habitat, spring blooms, pollinator support
Oceanspray	*Holodiscus discolor*	Digging tools; ceremonial use of flowers	Erosion control, dry buffer plant
Garry Oak	*Quercus garryana*	Acorns leached and ground as staple flour	Deep root system, canopy development
Red Flowering Currant	*Ribes sanguineum*	Berries eaten fresh; trade and dye use	Early nectar source for pollinators
Salmonberry	*Rubus spectabilis*	First spring fruit; eaten fresh, used in ceremony, sprouts	Erosion control, pollinator early bloomer

Evergreen Huckleberry	*Vaccinium ovatum*	Berries eaten raw, dried, or cooked	Understory food source, evergreen cover
Black Huckleberry	*Vaccinium membranaceum*	Mountain berry, eaten fresh or dried	Forest edge species, pollinator attractor
Thimbleberry	*Rubus parviflorus*	Fresh fruit; young shoots occasionally eaten	Moist shade understory plant
Trailing Blackberry	*Rubus ursinus*	Berries used for food, juice, jam	Native groundcover, erosion control
Wapato	*Sagittaria latifolia*	Root vegetable roasted or boiled; vital wetland food	Wetland stabilizer and filtration
Taper-tip Onion	*Allium acuminatum*	Bulbs roasted, added to dishes; traditional seasoning	Drought-tolerant, rocky slope plant
Nodding Onion	*Allium cernuum*	Edible bulbs and greens; medicinal uses	Pollinator plant, moist meadow edge
Woodland Strawberry	*Fragaria vesca*	Berries eaten fresh; leaves made into tea	Groundcover, early season pollinator plant
Wild Mint	*Mentha arvensis*	Tea; medicine for digestion and calming	Moist soil stabilizer, aromatic indicator

Self Heal	*Prunella vulgaris*	Topical wound care; medicine for sore throats and inflammation	Low-growing, pollinator attractor
Osoberry	*Oemleria cerasiformis*	First spring fruit; bark and twigs used medicinally	Early bloomer, wildlife forage
Pacific Crabapple	*Malus fusca*	Fruit eaten raw or preserved; used ceremonially	Riparian tree, bird food, buffer planting
Blue Elderberry	*Sambucus nigra ssp. caerulea*	Cooked into syrups and cordials; medicinal flowers	Wildlife attractor, erosion control
Red Elderberry	*Sambucus racemosa*	Cooked berries only; ceremonial and medicinal use	Moist riparian shrub, pollinator support
Twinberry	*Lonicera involucrata*	Bark used medicinally; berries rarely eaten	Moist zone shrub, pollinator plant
Tall Oregon Grape	*Mahonia aquifolium*	Berries for jams; bark and roots for medicine	Evergreen understory, drought-tolerant
Pea Fruit Rose	*Rosa pisocarpa*	Rose hips for tea, food, and ceremony	Riparian buffer, pollinator support

Douglas Spirea	*Spiraea douglasii*	Used as shade and habitat; not typically a food source	Rapid spreader, stream edge buffer/shader

5. Teaching, Engagement & Food Access

This food forest and outdoor classroom serve as more than environmental learning spaces. They are living classrooms where students can engage directly with the land through activities that are grounded in stewardship, responsibility, respect, and care. This site supports place-based education that integrates science, cultura and wellness into student learning, offering opportunities for connection and healing (Armstrong et al., 2021; Kimmerer, 2002; Native Knowledge 360, 2018).

Throughout the school year the site supports learning cycles that are tied to plant life, climate, water quality, biodiversity, and community. Spring planting, fall harvesting and planting, seasonal monitoring and maintenance all offer structured opportunities for students to learn about ecological systems and cultural traditions side by side. Science classes may analyze soil composition and biodiversity, while math classes track growth data and seasonal changes. Art and language classes can engage in visual storytelling. Southern Lushootseed language integration, and wellness lessons from plants in health classes. These approaches align with Indigenous pedagogies that emphasize learning through experience, story, and relationship with land (Donatuto et al., 2014; Herman, 2016; Whyte, 2018).

The integration of food and wellness is central to this learning model alongside ecological considerations. Plants harvested from the food forest will be used in the culinary program to prepare teas, medicines and meals, offering them the chance to engage with ancestral knowledge through practice, taste, and smell. These activities deepen the understanding of food as both nourishment and cultural expression, reinforcing that link between health, identity, and food sovereignty (Burke Museum, 2021; Frank-Buckner et al., 2021; Holt-Giménez, 2018). An article published by the Puyallup Tribe named “Decolonizing Your Diet” states that reclaiming traditional foodways is not only about what is eaten, it is about revitalizing relationships, honoring community knowledge, and asserting tribal sovereignty in the face of colonial disruption (Bryant, 2024). The food forest offers students a tangible way to participate in this work while also learning how to engage in respectful co-collaboration and community centered restoration.

By blending food access, environmental justice, and student leadership, this section of the restoration project reflects a broader vision where traditional food forests become core components of school campuses, community health, and climate resilience education. As emphasized by the Puyallup Tribe’s Climate Emergency Resolution, these efforts are not optional, they are necessary for preparing students and communities for the social and ecological realities of the future (Puyallup Tribe, 2020).

6. Restoration and Stewardship Actions

While this management plan provides structured guidance, it also recognizes that restoration is inherently dynamic. Seasonal conditions, community needs, and educational rhythms will shift over time. Therefore, many actions are intentionally designed to be responsive rather than rigid.

This approach reflects best practices in community-centered restoration and school-based land care, where adaptability is essential for ecological and cultural integrity (Armstrong et al., 2024; Grenz & Armstrong, 2023). By combining a clear set of core priorities with flexible implementation, this plan supports both consistency and responsiveness as the site continues. These actions are meant to be implemented with consistency and care, but are also adaptable based on seasonal conditions, cultural guidance, and feedback from students and staff.

Ecological Stewardship

Ecological restoration efforts focus on supporting biodiversity, water quality, and salmon habitat recovery. Invasive species, including Reed Canary Grass (*Phalaris arundinacea*), Himalayan blackberry (*Rubus armeniacus*), Scotch broom (*Cytisus scoparius*), and others, will continue to be managed using an Integrated Pest Management (IPM) strategy that combines mechanical removal, seasonal timing, and native species replanting (EPA, 2023; WSDA, 2013). These efforts are used not only to suppress invasives, but to allow traditional food and medicine plants to thrive in their place, restoring both ecological function and cultural access (Armstrong et al., 2021; USDA Climate Hubs, 2024).

Planting efforts so far have already established native trees, shrubs, and livestakes, including willow, red osier dogwood, elderberry, cottonwood, salmonberry, spirea, and more around the lake and riparian areas on CLS property. These species were selected for their ability to support erosion control, improve water quality, provide shade for salmon-bearing waters, and contribute to pollinator and wildlife habitat. As the site continues to evolve, successional planting will be necessary to increase species diversity, fill gaps where plant mortality occurs, and reflect changing priorities in cultural or ecological planting goals. Future replanting will also take place

in expanded zones of the restoration site as they are prepared. These efforts will continue to be guided by Chief Leschi staff and community advisors, reinforcing the forest's dual function as both an ecological and cultural space.

UW and CLS student-led monitoring will include visual surveys, photopoint documentation, supported by classroom-based data collection such as macroinvertebrate sampling, water quality testing, and biodiversity counts. Additional site features such as native mason bee houses, habitat brush piles, bullfrog removal, and wildlife cameras may be installed to support ecosystem education and sustainable, long term observations. The inclusion of fungi-based soil enrichment or mushroom cultivation may also be explored as part of student-led inquiry into soil health and food systems resilience (Grenz & Armstrong, 2023).

Cultural and Educational Activities

Restoration practices will remain closely tied to cultural learning and curriculum. Southern Lushootseed will be integrated across the site through plant labels, trail signage, and student-designed interpretive materials, supporting language revitalization through daily interactions with the land (Native Knowledge 360, 2018). Seasonal cultural activities, such as plant walks, traditional cooking demonstrations, and community planting events, will be guided by staff and knowledge holders when appropriate, with clear boundaries around cultural authority and ownership.

Curriculum will continue to align restoration with classroom subjects like plant propagation and data collection in science, modeling ecological change in math, and cultural interpretation through art, language, and journaling. These interdisciplinary connections are grounded in Indigenous education frameworks that emphasize holistic healing and student wellbeing (Bryant,

2024; Donatuto et al., 2014; Herman, 2016). Over time, a dedicated restoration or food forest/habitat restoration elective may be developed to support deeper student engagement in place-based environmental and cultural education.

Student and Community Involvement

Ongoing CLS student involvement is key to every phase of this work. Alumni and returning students, both UW and CLS, can take on mentorship roles to lead tours, co-facilitate workdays, or assist in data collection, creating opportunities for shared peer learning and leadership development as well as sustainable stewardship of the site. Events such as public work parties, site tours that invite families, Tribal Council Members, Elders, and community partners into the process is key. These engagements help build shared responsibility and foster intergenerational learning that supports both cultural revitalization, long term stewards, successful co-collaboration and ecological care (Frank Jr., 2010; Holt-Giménez, 2018). Future planning includes co-developing a formal harvest protocol in collaboration with tribal departments, staff, and community members. This protocol will address culturally appropriate harvesting, seasonal rhythms, and species-specific guidelines, while reinforcing treaty rights and the ethical responsibilities of caretaking traditional foods (Nisqually Food Sovereignty Assessment, 2017; USDA Climate Hubs, 2024).

Together, these actions reflect a model of restoration that is not only about ecological recovery, but about relationship renewal, between students and land, culture and curriculum, food systems and futures. The practices of teaching, engagement, and food access outlined above are not separate from restoration, they are deeply entwined. At Chief Leschi Schools, the work of land care and learning happens simultaneously, guided by both ecological need and cultural relevance.

The following section outlines the core ecological and stewardship actions that sustain the food forest and surrounding riparian habitat over time. These actions are designed to evolve with the site and its community, offering students and staff continued opportunities to learn through care, observe seasonal change, and participate in the long-term restoration of place.

7. Phased Restoration and Expansion Timeline

Restoration and stewardship at Chief Leschi Schools follow an adaptive, co-created rhythm shaped not only by ecological seasons, but by the social and cultural relationships that sustain the project. While this plan provides a phased outline for ecological work, its implementation is intentionally flexible, responsive to the readiness of students, the capacity of staff, the vision of Tribal Council and partners, and seasonal and cultural calendars. As emphasized in community-based restoration literature, all management is social, and the success of a project depends not only on ecological actions, but on how decisions are made, who participates, and whether the work aligns with community goals (Community Tool Box, 2023; Voinov et al., 2018; Williams et al., 2009).

Each phase includes not only physical site work but also cultural, educational, and institutional milestones, such as Lushootseed signage, ceremony, youth reflection, and the development of student and staff roles. As Armstrong et al. (2024) and Whyte (2018) emphasize, Indigenous-led ecological restoration requires reciprocal relationships and shared authority, with clear pathways for local leadership to shape and carry forward long-term stewardship. While early labor and coordination were supported by university collaborators, this plan reflects a shift toward long-term leadership by Chief Leschi Schools, with UW and outside partners serving in support roles over time.

We are currently completing **Phase One** of this ongoing project.

Phase 1: Fall 2024 – Summer 2025 - *Initial Site Prep and Food Forest Establishment*

- Manual removal of Himalayan blackberry and Scotch broom
- Sheet mulching and suppression of Reed Canary Grass
- Planting of first food forest zone (south/southwest of Lake Leschi)
- Installation of Lushootseed signage and use of space as outdoor classroom
- Student journal launch, photo monitoring, and baseline water quality sampling

This phase also marked the ceremonial beginning of the food forest, initiated with a blessing by Tribal Council. It established the site as a cultural learning space, where student reflection, and early stewardship practices became visible. UW partners provided initial labor and coordination support, while CLS staff helped integrate students into the site preparation and planting, engagement and integration of curriculum, and stewardship work. This phase laid the foundation for future shifts in site ownership and decision-making.

Phase 2: Fall 2025 – Summer 2026 - *Food Forest Expansion & Streambank Stabilization*

- Food forest expansion toward south and the southwestern property boundary
- Additional traditional food species planted (e.g., camas, wapato, huckleberry)
- Live-staking riparian edges with willow, cottonwood, and dogwood
- Installation of wildlife features (native mason bee houses, habitat piles)
- CLS Student-led macroinvertebrates surveys and plant mapping
- Integration of Southern Lushootseed signage and interpretive educational signage

This phase will prioritize classroom integration, working with teachers to align food forest expansion and maintenance with curriculum. Student mapping and science engagement will increase, while food system themes are woven into culinary and wellness programming. Tribal departments and UW collaborators may offer technical guidance, but decision-making will be led by CLS staff and school board-approved processes. Interpretive signage, co-developed by students, Sway-la Duenas, and language/cultural staff, will offer Lushootseed names, stories, and species roles

Phase 3: Fall 2026 – Summer 2027 - *Invasive Regrowth & Pollinator Corridors*

- Targeted invasive suppression in Phases 1 & 2
- Creation of pollinator wildflower zones and mushroom beds
- Student stewardship of microhabitats and expanded journaling
- Mid-project evaluation and mapping update with youth input

This phase deepens student-led monitoring and care, positioning youth as active evaluators of the site's health. Journal prompts, data tracking, and collaborative mapping projects will reflect both ecological conditions and student observations. These reflective tools help build a sense of ownership and identity in land-based learning, a core principle of Indigenous education (Donatuto et al., 2014; Kimmerer, 2002). Community workdays will incorporate storytelling and seasonal knowledge sharing to emphasize how even "maintenance" phases carry cultural significance. Conversations with the Tribal Council and School Board will help assess progress and inform any needed adjustments in project scope or governance.

Phase 4: Fall 2027 – Summer 2028 - *Education Zones and Wildlife Access*

- Targeted invasive suppression in previous phases
- Trail and outdoor classroom, full lake trail development
- Trail planting with native shrubs and erosion-resistant species
- CLS returning student interns step into mentor roles

This phase formalizes the food forest's role as an educational space. Trail and classroom design will reflect cultural values, Indigenous language use, and student-centered learning. Returning student interns may mentor younger students, modeling intergenerational stewardship and cultural continuity. This phase strengthens the transition of site responsibility to CLS educators and student leaders, with university collaborators stepping back into mentorship and technical support roles as appropriate (Armstrong et al., 2021; Community Tool Box, 2023).

Phase 5: Fall 2028 – Summer 2031 - *Creek Reconnection and Culvert Replacement*

- Targeted invasive suppression in previous phases
- Begin planning for possible reconnection of Clear Creek to Lake Leschi and wetlands (Pierce County, 2025)
- Partner with Puyallup Tribe, DNR, and, Pierce Conservation District, Pierce County, for culvert and stream restoration
- Riparian restoration and long-term water monitoring
- Community and student engagement in fish passage and sediment tracking

This final restoration phase is deeply tied to treaty rights, salmon recovery, and the assertion of tribal sovereignty over watershed health. It provides students with opportunities to explore environmental justice, policy, and river restoration through hands-on learning and inter-agency collaboration (Frank Jr., 2012; USDA Climate Hubs, 2024). Engagement with the Tribal

Council, DNR, and other institutional partners will reinforce the need for regional partnerships that are rooted in Indigenous leadership and Tribal sovereignty. Student involvement in this phase, through site stewardship, ownership, and data gathering, will build capacity for future careers in restoration, science, and policy, while affirming the central role of tribal stewardship in shaping the future of Clear Creek.

Ongoing Care & Maintenance for Previous Phases

The work of restoration does not end with the completion of each phase. All zones planted or stewarded through this plan require ongoing care, season by season, year after year. Stewardship of the food forest and surrounding habitat must be sustained through an adaptive process that includes ecological tending, cultural engagement, and student involvement. This section outlines the foundational practices that will guide the maintenance of previously restored areas, ensuring that native species continue to thrive and that the site remains a healthy, accessible learning and cultural space (Armstrong et al., 2021; Voinov et al., 2018).

Each spring and fall, site walkthroughs will be conducted by students, staff, and partners to assess plant health, identify invasive regrowth, and document ecological change. Invasive species such as Himalayan blackberry, Scotch broom, and Reed Canary Grass will require regular monitoring and manual removal to prevent recolonization (USDA Climate Hubs, 2024). These efforts will be supported through seasonal sheet mulching and strategic replanting, particularly in zones where plant mortality has occurred or where increased species diversity is desired. Plants selected for replanting will continue to reflect both cultural relevance and ecological appropriateness, reinforcing the food forest's role as a space for traditional foods,

medicines, and habitat restoration (Armstrong et al., 2024; Frank Jr., 2012; Nisqually Food Sovereignty Assessment, 2017).

Watering during the dry season (May through September) will remain essential for the survival of young plants, especially in years with extreme heat or drought. Supplemental watering will be incorporated into student learning wherever possible, offering opportunities to connect care with climate adaptation strategies (Herman, 2016; USDA Climate Hubs, 2024). Shade will be gradually increased through the planting of fast-growing native trees and shrubs, which also serve to suppress invasive grasses like Reed Canary Grass through natural competition and ground shading and cool down water temperatures.

Ongoing monitoring activities, such as student journaling, photo-point documentation, and plant survivorship tracking, will continue to support a culture of observation and reflection. These practices not only build ecological awareness, but reinforce student ownership of the site and provide valuable data to inform future planting decisions (Donatuto et al., 2014; Native Knowledge 360, 2018). Lushootseed signage, educational installations, and learning stations will be maintained regularly to ensure continued accessibility and cultural visibility. These features help sustain the food forest as a living classroom where land, language, and identity are interconnected (Bryant, 2024).

As site care transitions more fully to Chief Leschi Schools over time, these maintenance practices will also serve as tools for long-term leadership development. Through seasonal rhythms of tending, observation, and reflection, students and staff can shape the next iteration of this work, rooted in the understanding that restoration is not a singular act, but an ongoing relationship with land and community (Community Tool Box, 2023; Whyte, 2018).

Integrated Pest Management (IPM) for Invasive Species

Effective management of invasive species is a long-term commitment at Chief Leschi Schools, rooted in principles of ecological restoration, student learning, and cultural safety. Integrated Pest Management (IPM) offers an adaptable, low-impact strategy for addressing non-native species while fostering student engagement and understanding of ecological relationships. Rather than relying on chemical control, the site uses hands-on removal, ecological competition, seasonal observation, and community monitoring to manage five primary invasive species: Reed Canary Grass, Himalayan Blackberry, Scotch Broom, Bittersweet Nightshade, and Largeleaf Periwinkle (EPA, 2023; USDA Climate Hubs, 2024; WSDA, 2013).

Reed Canary Grass (*Phalaris arundinacea*):

Impacts: Forms dense monocultures in wetlands and along streambanks, displacing native plants and altering water flow. This leads to sediment buildup, warmer water temperatures, and reduced salmon habitat quality (Pierce County, 2025). Thick mats are difficult to move through and reduce safe access for student learning in wetland zones.

IPM Strategy:

- Mechanical: Sheet mulching with cardboard and wood chips; mowing before seed set
- Ecological: Live-staking fast-growing natives like willow and cottonwood to shade out RCG
- Monitoring: Spring and fall walkthroughs with photo points
- Education: Student mapping of spread zones; lessons tied to salmon habitat function

Himalayan Blackberry (*Rubus armeniacus*):

Impacts: Creates thick, thorny thickets that crowd out native vegetation, increase wildfire risk, and hinder animal movement. Roots persist even after cutting and regrow aggressively. Sharp thorns can injure students and make fieldwork difficult.

IPM Strategy:

- Mechanical: Cut back canes and dig out roots in fall/winter; re-mulch areas
- Ecological: Replace with competitive native shrubs like salmonberry, nootka rose, or ninebark
- Monitoring: Check for regrowth each spring and late summer
- Education: Emphasize resilience themes and safe tool use during work days

Scotch Broom (*Cytisus scoparius*):

Impacts: Outcompetes native shrubs in open areas and alters soil chemistry through nitrogen fixation. Releasing thousands of seeds with over a 50-year seed bank life. Increases fire risk due to woody stems. Its presence along trail edges reduces visibility and safe movement. Pollen may trigger allergic reactions during bloom.

IPM Strategy:

- Mechanical: Pull or cut before flowering (March–May); use weed wrenches for mature plants
- Ecological: Mulch disturbed areas and replant with natives
- Monitoring: Annual spot checks due to long-lasting seed banks
- Education: Link removal to discussions of fire ecology and Indigenous fire management

Bittersweet Nightshade (*Solanum dulcamara*):

Impacts: Climbs and smothers native shrubs and fences, especially in wetland margins. Berries are toxic to humans and pets and should not be touched or consumed, posing a safety risk for students. Easily spreads through disturbed soil and water movement.

IPM Strategy:

- Mechanical: Hand-pull vines with gloves before fruiting; bag and dispose of off-site
- Ecological: Replant affected areas with dense groundcover or native shrubs
- Monitoring: Focus on shady wetland edges and riparian buffer zones
- Education: Discuss plant toxicity, safety in the field, and respectful harvesting practices

Largeleaf Periwinkle *(Vinca major)*:

Impacts: Creates thick, evergreen mats in shaded areas, preventing native seed germination and reducing plant diversity. Often introduced through landscaping and difficult to remove once established. Dense mats can become slippery and hazardous along trails.

IPM Strategy:

- Mechanical: Dig or rake out roots and stolons; bag and remove off-site
- Ecological: Replace with native ferns, sedges, or woodland shrubs
- Monitoring: Annual checks in shaded zones under trees or near fence lines
- Education: Use as a case study in “escaped ornamentals” and the need for native landscaping

Note: Restoration as an Ongoing Relationship

While this plan includes phases and timelines, the work itself is not bound by deadlines. It is a continuous, evolving relationship with land, people, and place. Restoration here is not a project with an endpoint, it is a commitment to shared responsibility, guided by the seasonal rhythms of the ecosystem and the needs and vision of the community.

The food forest and surrounding habitat are being restored and stewarded through a collaborative and co-designed process. This means that students, educators, families, tribal staff, UW partners, and community members are not just participants; they are active co-creators. Each phase, whether planting, harvesting, or curriculum integration, is achieved by ongoing conversation, observation, and feedback, rather than predetermined deliverables.

This is a participatory process grounded in the principles of co-design and community-based research. It recognizes that restoration is not done for a community but with and by those most connected to the land. Over time, continued learning, observation, and care will guide how this project expands. The work will be sustained by future students, partners, and stewards, who will bring their own knowledge and creativity into the process. In that sense, this plan is not a conclusion but a living framework, to continue restoring relationships.

8. Monitoring & Adaptive Management

Monitoring at Chief Leschi Schools will reflect the dual purpose of the site: To support thriving ecosystems, thriving learners, Indigenous cultures, and collaboration between Indigenous and non-indigenous partners and institutions. Success is not measured solely in plant survival or weed control, it's also seen in the stories students tell, the language they learn, the foods they grow and share, and the community/partner relationships that take root. Monitoring efforts will incorporate both Western and Indigenous knowledges. They will be participatory, UW and CLS

student-led when possible, and adjusted each year to reflect changes in the land, school calendar, and project goals. This aligns with best practices in participatory action research (PAR) and adaptive environmental governance, which emphasize co-learning, flexibility, and community responsiveness (Community Tool Box, 2023; Voinov et al., 2018; Williams et al., 2009).

Ecological Monitoring

Invasive Species Tracking: Seasonal mapping and visual surveys of key invasives like Reed Canary Grass, Himalayan blackberry, and Scotch broom. Students will assess the extent of regrowth and identify priority areas for removal.

Plant Health & Survival: UW and CLS students, potential student interns, and classes will monitor newly planted trees, shrubs, livestakes, and food plants using survival surveys, height measurements, and photo points. Observations will be logged in field journals and digital records.

Water Quality: Students will continue and enhance regular water testing (e.g., pH, turbidity, temperature, macroinvertebrates) in lake and stream areas to assess progress toward salmon habitat goals.

Wildlife Presence: Wildlife cams, native mason bee houses, and direct observation will be used to document bird, pollinator, amphibian, and mammal activity. Special attention will be given to tracking ecological responses to restoration (e.g., return of birds, pollinators, or salmonids).

Cultural and Educational Success

Language & Signage: Presence and use of Lushootseed signage and plant labels across the site will be monitored, updated, and integrated into classroom use.

Cultural Events: Number and depth of cultural activities hosted at the site, including ceremonies, plant walks, food preparation, and storytelling, will be tracked as markers of community engagement and success.

Curriculum Integration: Teachers will be supported in integrating restoration into science, math, culinary, and art classes. Success will be measured in lesson plans developed, student participation, and feedback gathered.

Student Growth & Leadership

Youth Reflection: Students will be invited to document their experiences through written reflections, photojournalism, interviews, artwork, or presentations. These materials will help assess how the project impacts student learning, confidence, and environmental stewardship.

Living Stewardship Journal: A collaborative journal will capture seasonal observations, lessons learned, cultural protocols, and recommendations from each student cohort, serving as both a monitoring tool and legacy document.

Adaptive Management and Feedback Loops

Monitoring results will guide decision-making each season. High survival rates may lead to expansion of certain species or planting zones, while persistent invasive regrowth may prompt more intensive mulching or canopy strategies. Student feedback and educator input will shape internship design, programming, and restoration pacing. All data and reflections will be reviewed

collaboratively by the site coordinator, educators, students, and project partners to support responsive planning. This cyclical feedback model reflects Indigenous principles of relational accountability and environmental stewardship, alongside participatory research and adaptive management practices (Armstrong et al., 2024; Whyte, 2018).

9. Long-Term Stewardship, Mentorship & Leadership

The long-term success of this project depends on a collaborative stewardship model rooted in both UW SMEA and CLS student leadership, mentorship, and year-round care. Stewardship here is more than maintenance, it is a reciprocal relationship with the land and between institutions and individuals that builds skills, confidence, and future caretakers. Early in this project there was interest from CLS teachers for the space and restoration site to become a more integrated outdoor learning space. While consistent student engagement varies, sometimes due to seasonal weather or class dynamics, or simple kids not wanting to participate in the work, the shared hope is to build a structure for deeper connection over time. Teachers also noted that simply being in the space, whether actively working or not, offered value. The space provides a setting for grounding, and reflection, contributing to overall wellness for students and staff. Research has shown that even passive exposure to green spaces can reduce stress, enhance focus, and support emotional regulation in youth (Donatuto et al., 2014; USDA Climate Hubs, 2024).

<u>Ongoing Care & Student Leadership</u>

Daily and seasonal stewardship of the site and expansions will be shared across students, staff, site partners, and community members through collaborative planning, invasive species control, successional plantings, watering, monitoring, mulching, relationship building, and project

adaptation. These activities will be aligned with both school schedules and seasonal cycles that evolve over years based on what the land and people are ready for. Students will gain firsthand experience with restoration techniques and adaptive decision-making using both traditional ecological knowledge and scientific approaches. This work will also support for partner collaborators who are learning how to co-design and co-implement so the food forest not only becomes a successful outdoor classroom for youth but a space of shared professional and cultural development across institutions working together.

Governance Board or Visioning Group

To ensure the food forest continues to grow with the values of the school community, the project recommends the formation of a visioning group composed of, but not limited to, CLS teachers, a student representative, UW professor and student, and the cultural director. This group would meet seasonally to guide the food forest's use, planting plans, and evolving goals, ensuring decisions are rooted in a collective vision and momentum stays strong.

Site Coordinator Role

To ensure continuity and long-term care, the project recommends the establishment of a dedicated Site Coordinator position based at Chief Leschi Schools. This role would support day-to-day restoration efforts, mentor/support students and project partners, and facilitate curriculum integration. The coordinator would also be a liaison between tribal departments, school staff, external partners (e.g., DNR, Pierce Conservation District, UW), and technical support organizations to ensure that all work reflects the priorities of the CLS and project partners. This coordination is essential for ensuring that both ecological and social dimensions of

the work remain integrated over time, and that long-term goals such as food sovereignty, salmon recovery, and student empowerment continue to evolve in balance.

Intergenerational Learning

Beyond site maintenance, the food forest is a space for cultural practice, story, and intergenerational exchange. Elders, families, and cultural educators will play essential roles in integrating ceremonies, food processing, plant walks, and public learning events. These experiences ground the project to action based, hands on connections and ensure that restoration is guided by relationship and responsibility, not just outcome. Through this layered, long-term approach, the site becomes more than a project, it becomes a living learning environment where young people grow into stewards, leaders, and knowledge carriers.

10. Community & Partner Roles

This restoration and food sovereignty initiative is only possible through strong, sustained relationships across the community. At the center is the shared goal of supporting land, salmon, water, youth, and tribal sovereignty through reciprocal care and collaboration.

Chief Leschi Schools

- Chief Leschi Schools serve as the host, learning hub, and heartbeat of the project.
- Teachers integrate site activities into curriculum across grade levels and subjects, including science, math, art, culinary arts, and Lushootseed language.
- School leadership supports alignment with educational goals, site access, and communication with families.

University of Washington - School of Marine and Environmental Affairs (SMEA)

- As invited by CLS/CLS School Board and Puyallup Tribal Council, students and faculty members from the University of Washington contribute technical expertise, mentorship, and academic collaboration.
- UW thesis and capstone students may assist with ecological and social monitoring, curriculum development, GIS mapping, evaluation of restoration outcomes, and other support as deemed necessary.
- Faculty member partners can support grant writing, cross-institutional learning, and program evaluation in collaboration with Chief Leschi and Tribal leadership.

Washington Department of Natural Resources (DNR)

- DNR supports efforts to expand traditional food access on state-managed lands and is a key partner in exploring how culturally significant species can be included in riparian and upland restoration projects.
- Their collaboration helps align this local project with broader regional and state-level restoration priorities that center tribal sovereignty and food access and may lead to employment opportunities for CLS graduates.
- DNR may provide support with technical expertise, native species procurement, land use permissions, or long-term planning frameworks that help scale traditional food integration across public lands.

Nonprofit Partners (Free The Green, Pierce Conservation District, etc.)

- Local nonprofit organizations bring capacity in restoration coordination, native plant procurement, restoration knowledge, youth internship management, and community engagement.
- These groups may provide tools, training, volunteers, and logistical support during restoration days and community events.
- Nonprofits also support grant development, documentation, and communications to share the story of the site's growth.

Families and the Broader Community

- Families, Elders, and neighbors are essential to the site's success. Their knowledge, participation, and presence help root the work in relationships.
- Community members are invited to participate in planting days, harvesting events, language walks, and celebrations.
- A long-term goal is for the site to serve as a gathering space for both local and visiting communities to witness Indigenous-led restoration and food sovereignty in action.

10. Final Reflections & Next Steps

This management plan is more than a restoration outline, it is a vision rooted in responsibility, healing, collaboration, and relationship. What is being restored and the aim of this action based traditional food forest installation at Chief Leschi Schools is not just habitat, but intergenerational knowledge, access to traditional foods, and the right to a future grounded in tribal leadership and land-based learning.

The site itself is a living classroom, one that grows with the students, community, and land it supports. This plan is flexible, responsive, and intended to evolve. As the food forest matures, salmon habitat improves, and students cycle through, the work will shift. Priorities may change, new ideas will emerge, and relationships will deepen. This document is a living guide that will grow alongside the forest and those who tend it.

Next Steps

To keep this work thriving and aligned with its long-term vision, the following priorities will guide implementation:

- Continue building out the food forest and riparian zones with attention to site-specific conditions, climate adaptation, and seasonal rhythms.
- Maintain consistent monitoring, both ecological but also social and educational impacts, and suppression of invasive species, including Reed Canary Grass, Himalayan blackberry, Scotch broom, Bittersweet Nightshade, and Vinca major, to support the successful establishment of native and culturally significant plants.
- Apply site-wide IPM strategies that emphasize ecological competition, student safety, and long-term suppression through mulching, shade, and live-staking.
- Expand new planting zones using the same model: invasive removal, soil prep, culturally relevant plant selection, and aftercare.
- Establish norms of co-design and participatory planning to foster planning skills within all parties and deepen trust and co-leadership.
- Establish long-term funding and institutional support for a Site Coordinator and youth internship program to ensure site continuity, consistent maintenance, and mentorship.

- Strengthen curriculum integration across science, math, culinary arts, Southern Lushootseed language, art, and field-based learning.
- Deepen ecological and socio-cultural monitoring, including water quality testing, photopoints, student journaling, storytelling, and data sharing.
- Continue building and honoring partnerships with the Puyallup Tribe, University of Washington, Department of Natural Resources (DNR), Pierce Conservation District, Puyallup Indian Tribe Fisheries, Pierce County, Nisqually Cultural Center, Nisqually Land Trust, and aligned nonprofits working toward tribal sovereignty, food systems, and ecological justice. Explore opportunities for expanded partnerships as useful and welcomed by CLS and other lead organizations.

2–3 Year Maintenance Focus

The success of newly planted areas depends on consistent care and on the follow through on implementation and continuation of co-collaboration and shared planning, especially in the first two to three summers. The following tasks form the foundation of the maintenance model for both current and future restoration phases:

- Invasive Species Management: Ongoing removal using manual methods, mechanical tools, sheet mulching, and replanting with competitive native species. Maintenance is seasonally timed and tied to photopoint monitoring and student mapping.
- Watering: Regular supplemental watering during dry months or heat waves to support deep root growth and plant resiliency. This may become ever more important with growing drought and longer dry seasons (USDA Climate Hubs, 2024).

- Mulching: Annual mulch refreshes to suppress weeds, retain moisture, and support soil structure. Mulch rings and sheet mulching with cardboard and much should be inspected and reapplied seasonally.
- Shade & Microclimate Support: Temporary shade cloths or brush piles may be used to protect more sensitive plants, especially traditional food species that prefer cooler or wetter conditions.
- Student Stewardship: Youth-led care remains central to this plan. Students participate in photo journaling, water testing, plant health tracking, and decision-making. Maintenance is a form of mentorship and learning, not just labor.

As the site expands and additional planting phases unfold, this maintenance model will be replicated. Care is not an afterthought, it is a reflection of the community's and project partners ongoing commitment to wellness, healing, reciprocity, and long-term resilience and sustainability. Participatory and shared planning and governance is a reflection of commitment to institutional reciprocity.

11. Conclusion

This management plan is a starting point, a guide for how to care for land, culture, and community through restoration, education, and relationship. The work at Chief Leschi Schools is not just about habitat, it is about sovereignty, healing, and creating space for students to understand who they are through their connection to place. As emphasized in Indigenous environmental justice frameworks, ecological restoration must also attend to cultural and educational restoration (Frank Jr., 2012; Herman, 2016; Whyte, 2018).

As the forest grows, so will the people stewarding it. Teachers, students, parents, and partners will continue to adapt, reflect, and move forward in ways rooted in the values of reciprocity, respect, and responsibility (Armstrong et al., 2021; Grenz & Armstrong, 2023; USDA Climate Hubs, 2024). Restoration is not a one-time project, it is an ongoing process that asks for listening, tending, and time.

As mentioned many times throughout this plan, it is meant to grow and change as the site evolves. Living plans allow for co-learning, iteration, and flexibility while staying accountable to place-based knowledge and shared goals (Community Tool Box, 2023; Voinov et al., 2018). With continued care, collaboration, and commitment, this work can support not only salmon and native plants but also the next generation of leaders, and all living and nonliving beings, who will carry this vision forward with strength and purpose.

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Glossary of Terms

Adaptive Management

A flexible, iterative approach to restoration that allows for learning and adjustments over time based on ecological changes and community feedback.

Bullfrog Traps

Trapping structures used to capture invasive American bullfrogs (*Lithobates catesbeianus*), which prey on native species and disrupt wetland ecosystems.

Culvert

A tunnel or pipe that allows water to flow under a road or trail; often replaced or redesigned to improve fish passage.

Food Forest

A human-designed ecosystem that mimics a natural forest and includes edible, medicinal, and culturally important plants, often layered from canopy to groundcover.

Food Sovereignty

Food sovereignty is the right of people to eat healthy traditional foods that are produced sustainably and don't harm the environment. Through the treaties, we reserved the things that were most important to us as a people. Among them was the right to fish, hunt, and gather

shellfish and other traditional foods to feed ourselves and preserve our cultures." Billy Frank Jr. (2012), Traditional Foods Are Treaty Foods

Native and Culturally Significant Plants

Native and culturally significant plant species refer to plants that are indigenous to the region and hold ecological, cultural, medicinal, or ceremonial importance for local Indigenous communities. These species have traditionally been used for food, medicine, materials, and spiritual practices, and their presence reflects deep reciprocal relationships between people and place.

Integrated Pest Management (IPM)

A long-term approach to managing invasive species through a combination of methods such as manual removal, shading, mulching, and planting competitive native species.

Lushootseed

The Indigenous language is spoken by Coast Salish peoples in the Puget Sound region, including the Puyallup and Nisqually Tribes. Many plant names and place-based teachings are preserved in Lushootseed.

Live-staking

A restoration technique where cuttings from live native plants (like willow or dogwood) are inserted directly into the ground to root and grow, stabilizing banks and providing shade.

Macroinvertebrate Sampling

A method for assessing water quality by collecting and identifying aquatic insects and other small organisms that live in streams and wetlands.

Mulching

The application of organic material (like wood chips) around plants to retain moisture, suppress weeds, and build healthy soil.

Native Plant Species

Plants that evolved in the local ecosystem and are adapted to regional climate, soil, and ecological interactions; many are also culturally important to Coast Salish peoples.

Pollinator Corridor

A connected stretch of native plants that supports pollinators like bees, butterflies, and hummingbirds by providing food and habitat throughout the growing season.

Restoration

The process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed (physically, ecologically, and culturally).

Salmon Habitat

Freshwater and estuarine areas required for different salmon life stages, spawning, rearing, migration, which rely on cool, shaded, and unobstructed waterways.

Sheet Mulching

A restoration technique where cardboard and mulch are layered on soil to suppress invasive plants and prepare the site for native planting.

Stewardship

The ongoing act of caring for land and ecosystems with respect, intention, and reciprocity, often including planting, monitoring, and cultural practices.

Traditional Ecological Knowledge (TEK)

Place-based knowledge systems developed by Indigenous peoples through long-term relationships with land, water, and species. TEK includes observations, values, spiritual beliefs, and practices passed down through generations.

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