CREEC

CLIMATE RESILIENCE & ENVIRONMENTAL ECONOMIC CAMPUS

Report by the Greater Federal Way Chamber of Commerce, Inc.
for the Washington State Department of Commerce

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GREATER FEDERAL WAY Chamber of Commerce

Washington State Department of Commerce

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CLIMATE RESILIENCE & ENVIRONMENTAL CAMPUS REPORT
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EXECUTIVE SUMMARY

The Climate Resilience and Environmental Campus (CREEC) initiative represents a transformative opportunity to establish South King County as a leader in climate resilience, environmental education, and sustainable economic development. Located in the Federal Way hub, this integrated campus would create a comprehensive ecosystem for environmental learning, workforce development, and community engagement.

The initiative addresses several critical needs:

- Building environmental literacy from early childhood through professional development
- Creating clear pathways to careers in the growing environmental and natural resources sectors
- Addressing environmental equity challenges in South King County's diverse communities
- Supporting the region's transition to a climate-resilient economy
- Fostering innovation in environmental technology and sustainable practices

Key components of the proposed campus include:

- A nature-based early learning center for children ages 0-5
- K-12 environmental education facilities integrated with local school districts
- Specialized environmental technology programs through Highline College
- Professional development and workforce training programs
- Research facilities and innovation spaces
- Community engagement centers for public education and environmental justice initiatives

The project builds on South King County's unique position and strengths:

- Strategic location between Seattle and Tacoma
- Diverse population with rich cultural perspectives
- Existing industrial base ready for sustainable transformation
- Strong educational institutions and workforce development programs
- Growing environmental technology sector

Financial projections indicate significant economic impact through:

- Creation of high-wage jobs in environmental sectors
- Development of new green businesses and technologies
- Increased property values through environmental improvements
- Reduced infrastructure costs through natural system enhancement
- Workforce development in high-demand environmental fields

The initiative emphasizes equity and inclusion by:

- Ensuring program accessibility for underserved communities
- Creating multiple entry points to environmental careers
- Integrating traditional ecological knowledge
- Addressing historical environmental justice issues
- Supporting multilingual and culturally responsive programming

Implementation would occur through strategic partnerships among:

- Educational institutions (K-12 and higher education)
- Government agencies
- Private sector employers
- Community organizations
- Environmental nonprofits

Success metrics include:

- Student achievement in environmental science
- Career placement rates
- Industry certification completion
- College enrollment in environmental programs
- Community environmental health improvements
- Economic development indicators

A CREEC development positions the greater Federal Way region of South King County to become a national model for integrated environmental education and workforce development while addressing critical climate resilience challenges. Through careful attention to equity, community needs, and economic opportunity, the campus can drive sustainable growth while ensuring benefits reach all members of the community.

KEY FINDINGS FROM THE SURVEY

The survey, distributed to over 380 Greater Federal Way Chamber of Commerce members with a 12% response rate, aimed to assess the economic viability of establishing a Climate Resilience & Environmental Economic Campus in South King County. The study focused on understanding public/private partnership opportunities and evaluating four potential local sites.

Key findings from the survey reveal:

1. Overwhelming Support: 96.8% of respondents supported the campus development, with 93.5% specifically endorsing environmental education for younger learners.
2. Industry Readiness: The Software and Information sector showed the highest readiness rating (3.7 out of 5), followed by Construction/Logistics (3.6) and Healthcare (3.5). Maritime scored lowest at 3.1, indicating areas needing development.
3. Site Evaluation: Among the four considered locations:
    - Woodbridge Corporate Park received the highest ratings across environmental (4.4), economic (4.3), and educational (4.4) opportunities
    - Camp Kilworth and Dash Point Park showed strong environmental alignment but faced transportation accessibility challenges
    - The U.S. General Systems Administration building showed moderate potential across all metrics
4. Trust and Leadership: The Chamber of Commerce (4.2/5) and Education Sector (4.1/5) emerged as the most trusted institutions to lead the development, significantly outranking state (3.2) and local government (3.1).

5. Programming Priorities: Respondents strongly supported:
    - Career pathways and certification opportunities in climate-focused STEM fields
    - Environmental education for early learners and K-12 students
    - Sustainability initiatives focusing on waste management, clean energy, and water quality

The survey identified several challenges requiring attention:

- Transportation infrastructure needs across all proposed sites
- Varying levels of industry sector readiness
- Lower trust in government institutions potentially affecting public-private partnerships

The results strongly indicate community readiness for an environmentally focused campus while highlighting areas needing strategic development, particularly in transportation infrastructure and government stakeholder engagement. The high level of support from business and education sectors suggests a strong foundation for successful implementation, provided transportation and infrastructure challenges are adequately addressed.

Narrative Overview

The Climate Resilience and Environmental Campus (CREEC) represents a visionary approach to environmental education and economic development in South King County. At its core, the initiative recognizes that addressing climate challenges requires both technical expertise and deep community engagement.

The campus design creates a seamless educational pathway beginning with early childhood. Young children develop environmental awareness through daily interaction with nature in specially designed learning spaces. As students progress through K-12 education, they engage in increasingly sophisticated environmental science work, from monitoring weather stations to conducting research alongside scientists. This hands-on approach makes abstract concepts tangible while building practical skills.

CREEC's workforce development strategy addresses a critical gap in environmental sector employment. The campus serves as a bridge between education and industry, offering specialized training programs, industry certifications, and direct connections to employers. This integrated approach ensures that training aligns with actual workforce needs while creating multiple entry points to environmental careers.

The initiative places particular emphasis on environmental equity and justice. South King County's diverse population has historically faced disproportionate environmental burdens while having limited access to environmental benefits. CREEC directly addresses these disparities through programs that ensure equal access to environmental resources, protection from environmental risks, and meaningful participation in environmental decision-making.

The economic impact extends beyond direct employment in environmental sectors. By investing in green infrastructure and environmental improvement, the campus helps attract sustainable businesses while reducing long-term infrastructure costs. The focus on innovation and technology transfer creates opportunities for new business development, particularly in clean energy and environmental monitoring sectors.

Community integration remains central to the initiative's success. Through public lectures, family learning programs, community science projects, and environmental festivals, CREEC makes environmental education accessible to the broader community. Resources for home sustainability projects help community members apply environmental solutions in their own lives.

The campus design emphasizes flexibility and adaptation, recognizing that environmental challenges and solutions will continue to evolve. Advanced research facilities support ongoing innovation, while strong industry partnerships ensure that training programs remain current with emerging technologies and practices.

By creating this comprehensive ecosystem for environmental learning and innovation, CREEC positions South King County to lead in developing solutions for climate resilience and natural resource management while creating economic opportunities for local residents. The initiative demonstrates how thoughtful investment in environmental education and workforce development can drive both ecological sustainability and economic prosperity.

The success of CREEC will ultimately be measured by its impact on both environmental and economic outcomes in South King County. Through careful attention to equity, community needs, and workforce development, the campus can help create a more resilient and prosperous future for all residents while addressing critical environmental challenges.

CREEC

CLIMATE RESILIENCE & ENVIRONMENTAL ECONOMIC CAMPUS

CLIMATE RESILIENCY

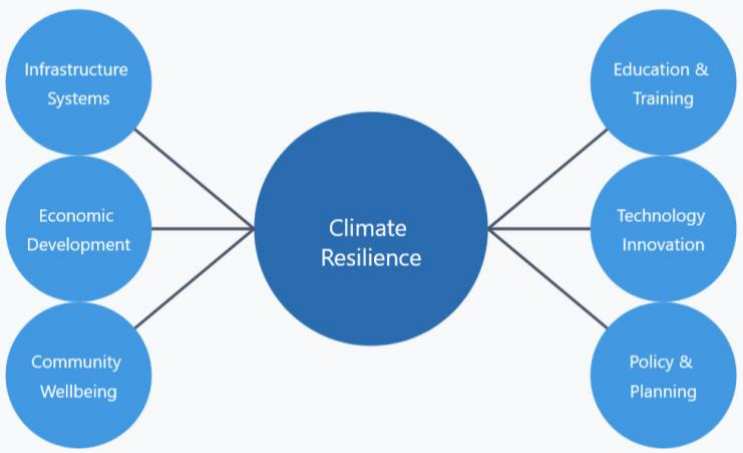
Climate resilience has emerged as a critical economic development priority for the Federal Way growth hub in South King County, where environmental challenges intersect with significant growth opportunities. The region's unique position between the Cascade Mountains and Puget Sound creates distinct vulnerabilities, particularly affecting key sectors like manufacturing, logistics, aerospace, and retail. The area's extensive manufacturing base, including major facilities in the Kent Valley and Boeing's operations, faces risks from flooding, power disruptions, and temperature fluctuations. National trends show a shift toward integrating climate resilience into core business and infrastructure planning, with financial markets now incorporating climate vulnerability into lending decisions. The region has responded by developing comprehensive education and workforce development programs, with climate resilience campuses achieving strong employment outcomes - including 85% placement rates for University of Washington climate science graduates and starting wages of $25-30 per hour for solar installation programs. This focus on climate resilience not only addresses environmental challenges but positions South King County to attract climate-conscious businesses while building a skilled workforce capable of supporting a more sustainable regional economy.

Climate resilience stands at the forefront of sustainable economic development, particularly in South King County, where multiple climate-related challenges converge. This intersection of environmental and economic concerns presents both challenges and opportunities for regional growth.

The greater Federal Way region, serving as the growth hub along South King County's north-south corridor, possesses both the talent pool and strategic location to foster an innovation economy. This positioning enables the region to strengthen existing industries while catalyzing the development of new technologies.

At its core, climate resilience encompasses a community's capacity to anticipate, prepare for, respond to, and recover from adverse climate impacts. This multi-faceted approach requires integrating environmental awareness into every aspect of community planning and economic development. Resilience initiatives span multiple functions, from infrastructure improvements and community planning to ecosystem restoration and technological innovation. Additionally, these efforts must address crisis planning for environmental challenges that require emergency services.

Consider climate resilience as a business's immune system against environmental challenges. Just as a healthy immune system helps bodies withstand and recover from illness, robust climate resilience enables businesses to thrive despite increasing environmental stresses. These stresses manifest in both acute events, such as hurricanes and floods, and chronic changes, including shifting rainfall patterns, rising temperatures, and more frequent extreme weather.



For businesses, climate resilience directly affects financial performance through multiple channels. When extreme weather disrupts transportation networks, it can paralyze supply chains. Rising temperatures increase operational costs through higher cooling demands and equipment strain. Water scarcity can halt manufacturing processes, while insurance premiums typically surge in vulnerable areas. These impacts ripple throughout local economies, affecting everything from worker productivity to consumer spending patterns.

Climate resilience, however, extends beyond risk management – it drives innovation and competitive advantage. Organizations that develop climate-resilient operations often uncover efficiency gains and new opportunities. For instance, investments in energy-efficient buildings not only reduce vulnerability to power disruptions but also lower operating costs. Companies that diversify their supply chains to mitigate climate risks frequently develop more adaptable and robust business models.

From an economic development perspective, regions prioritizing climate resilience demonstrate greater success in attracting and retaining businesses. These areas typically offer more reliable infrastructure, stable operating conditions, and stronger long-term growth prospects. This creates a virtuous cycle where resilient infrastructure attracts resilient businesses, fostering increasingly resilient communities.

Understanding and integrating climate resilience has become fundamental to business planning, comparable to market analysis or financial projections. As climate patterns continue to evolve, successful businesses will be those that weave climate resilience into their operational fabric, viewing it not as an obligation but as a catalyst for innovation, efficiency, and sustained prosperity.

Current Climate Vulnerabilities in South King County

South King County's distinctive geography and economic profile create unique challenges that make climate resilience essential for sustained economic development. The greater Federal Way region's position between major water bodies, combined with its significant manufacturing and logistics sectors and diverse population demographics, demands a focused approach to climate resilience.

The region's geographic vulnerability stems from its unique position between the Cascade Mountains and Puget Sound. This location exposes the area to multiple climate hazards, ranging from mountain snowmelt impacts to coastal flooding risks. These natural features, while historically advantageous for development, now present increasing challenges in the face of changing climate patterns.

Infrastructure dependencies play a crucial role in the region's vulnerability profile. South King County's position as a vital logistics and manufacturing hub requires transportation infrastructure to maintain continuous operation despite growing climate stresses. The reliability of these systems directly impacts regional economic stability and growth potential.

Socioeconomic considerations add another layer of complexity to the region's climate resilience needs. The area's diverse population includes communities with varying levels of resources available for climate adaptation. This disparity requires careful attention in developing resilience strategies that protect all residents while supporting business continuity.

Sectors Most Affected by Climate Risks in South King County

The manufacturing and logistics sector faces particularly significant climate-related challenges due to its complex operational requirements. Kent Valley, recognized as one of the West Coast's largest warehouse and distribution centers, faces heightened vulnerability to flooding events that could severely disrupt operations. Additionally, the region's semiconductor and electronics manufacturing facilities require precise environmental controls, making them especially susceptible to power disruptions and temperature fluctuations.

Agricultural activities, though diminished from historical levels, maintain importance in the Kent and Auburn valleys. Changing precipitation patterns and rising summer temperatures directly affect crop yields and growing seasons. The region's specialty crops, particularly nursery plants and vegetables, demonstrate high sensitivity to climate variations. Small-scale farmers, especially those from immigrant communities, often operate with limited adaptation resources, increasing their vulnerability to climate impacts.

The aerospace industry, anchored by Boeing's facilities and their extensive supplier network, requires exacting manufacturing conditions and depends on global supply chains. Climate disruptions can affect both production processes and logistics. Temperature extremes impact material properties and manufacturing precision, while transportation disruptions can compromise critical component deliveries and product distribution.

The retail sector, particularly in major commercial areas like Southcenter Mall, faces distinct climate-related challenges. Extreme weather events can significantly affect customer access and comfort levels. Recent experiences with extended periods of wildfire smoke have demonstrated measurable impacts on foot traffic and sales volumes. Small businesses within this sector often operate with limited financial reserves, making them particularly vulnerable to extended disruptions.

National Trends in Climate Resiliency

The evolution of climate resilience strategies across the United States reflects growing recognition that adaptation approaches must advance rapidly to match intensifying climate impacts. Throughout the country, several key developments are reshaping this field.

Infrastructure modernization has emerged as a fundamental shift in design and maintenance philosophy. Engineers and planners now embrace forward-looking design principles, moving beyond historical climate data to anticipate future conditions. Cities like Miami exemplify this approach, elevating roads and implementing advanced pump systems designed not just for current flooding patterns but for projected sea levels decades ahead. This transformation represents a broader movement toward adaptive design – creating infrastructure that can evolve with changing conditions rather than requiring complete replacement.

Financial markets have repositioned climate resilience as a core business consideration rather than a peripheral environmental issue. Major lending institutions now incorporate climate vulnerability assessments into their underwriting processes. Insurance companies have developed innovative products specifically designed for climate resilience, such as parametric insurance offering rapid payouts based on predefined weather triggers. Credit rating agencies like Moody's and S&P have begun factoring climate resilience into municipal bond ratings, creating direct financial incentives for communities to invest in adaptation measures.

Cross-sector integration has transformed traditional siloed approaches into comprehensive resilience planning that acknowledges the interconnected nature of urban systems. Modern parks serve dual purposes as recreational spaces and critical components of flood management systems. Green infrastructure projects simultaneously address multiple challenges - reducing urban heat islands, managing stormwater, and creating vibrant community spaces. This integration extends into emergency services, where communities develop coordinated response systems linking public health, transportation, and utility services into cohesive networks.

Technology and data analytics have revolutionized climate risk assessment and preparation. Cities increasingly employ digital twins - sophisticated virtual replicas of urban systems - to simulate various climate scenarios and evaluate adaptation strategies before implementation. Networks of remote sensing technologies and Internet of Things devices provide real-time data on environmental conditions, from soil moisture to heat stress, enabling precise and proactive resilience measures.

Economic development organizations across the nation have reframed climate resilience as an economic opportunity rather than merely a risk management challenge. Regions actively promote their climate preparedness to attract businesses, recognizing that companies increasingly weigh climate risks in location decisions. This shift has sparked the emergence of resilience hubs - areas combining robust infrastructure, advanced emergency services, and business continuity resources to create attractive environments for climate-conscious enterprises.

Community-centered design has gained prominence in resilience planning, ensuring that physical infrastructure improvements align with social equity goals. Cities develop neighborhood-level resilience hubs that integrate clean energy systems, emergency services, and social support networks. These facilities reflect a deeper understanding that strong community bonds and social networks play roles as crucial as physical infrastructure in building climate resilience.

The evolution of **regulatory frameworks** reflects changing climate realities. Federal agencies have updated key programs and standards - FEMA has revised its National Flood Insurance Program to better reflect actual risk levels, while the Department of Housing and Urban Development has enhanced building requirements for funded projects to incorporate resilience measures. These changes establish a more consistent national framework for resilience planning while preserving local flexibility.

Private sector leadership has emerged as a driving force in resilience innovation, with companies taking proactive stances rather than waiting for government mandates. Major corporations conduct comprehensive climate vulnerability assessments of their facilities and supply chains, often exceeding regulatory requirements. This private sector initiative spurs innovation in resilience technologies and creates expanding markets for adaptation solutions.

Educational institutions have responded to growing demand for climate expertise by developing specialized programs. Universities and technical schools now offer targeted training in resilient design alongside broader education in systems thinking and adaptive management. These programs create a workforce capable of implementing and managing increasingly sophisticated resilience strategies.

Integrating Climate Resilience Education and Workforce Development

Climate resilience campuses represent a transformative approach to addressing the growing demand for climate professionals while accelerating solution implementation. The synthesis of education and workforce development within these specialized environments creates powerful synergies benefiting students, employers, and communities.

Educational outcomes demonstrate remarkable success in establishing comprehensive pathways from K-12 through advanced professional development. The combination of hands-on learning with theoretical education produces particularly strong results. University of Washington's climate science program achieves an 85% relevant employment rate within six months of graduation, while Shoreline Community College's solar installation program boasts a 92% employment rate with starting wages of $25-30 per hour.

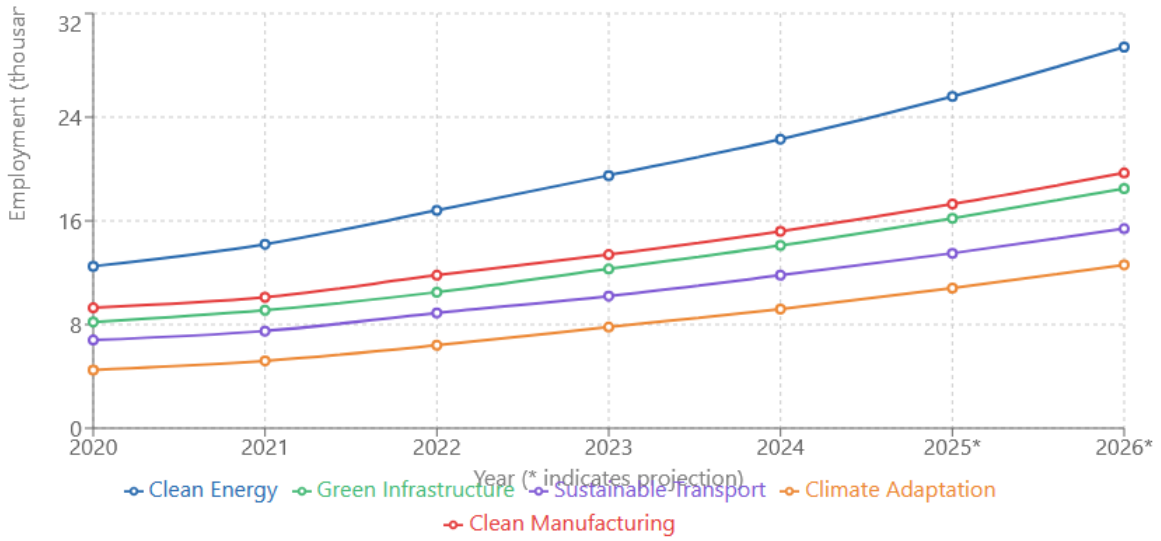
These programs succeed by embodying climate solutions within the learning environment. Students engage directly with renewable energy systems, green infrastructure, and climate monitoring

equipment as part of their daily educational experience. This approach transforms abstract concepts into practical skills while demonstrating real-world applications of climate solutions

Workforce Development Outcomes

The integration of workforce development into the educational framework yields compelling results across diverse sectors. Washington state's apprenticeship programs in clean energy demonstrate a 75% completion rate, with graduates achieving average starting wages of $32 per hour and 90% retention after two years. These outcomes stem from careful alignment between training programs and industry needs, coupled with multiple entry points into climate-related careers.

Climate Sector Employment Growth in South King County



Data sources: Washington State Employment Security Department and industry projections. Projections (marked with *) are based on current growth trends and policy initiatives.

This visualization offers several key insights about climate-related employment in South King County

1. Overall Growth Pattern: All sectors show consistent upward trends, reflecting the region's strong commitment to climate initiatives and green economy development.
2. Sector-Specific Trends:
    - Clean Energy leads employment growth, likely driven by Washington's Clean Energy Transformation Act
    - Green Infrastructure shows steady growth, reflecting increased investment in resilient systems
    - Sustainable Transport growth aligns with regional transportation electrification efforts
    - Climate Adaptation, while starting from a lower base, shows strong growth potential
    - Clean Manufacturing demonstrates stable growth, supported by industrial modernization

Career pathways created through this integrated approach span several key sectors. In maritime decarbonization, port environmental specialists and zero-emission equipment technicians earn between $55,000 and $110,000 annually, driven by Washington's maritime industry transformation. The Puget Sound region's clean technology sector supports diverse roles, from research scientists earning $70,000-100,000 to project managers commanding $90,000-130,000, with particular growth in energy storage and grid modernization. South King County's focus on climate resilience creates opportunities in stormwater management and urban forestry, offering salaries from $19 per hour for entry-level positions to $100,000 annually for program managers.

Regional Economic Impact

The presence of integrated climate campuses generates substantial regional economic benefits. In South King County, the development of a skilled climate workforce attracts clean technology companies and environmental services firms, creating multiplicative employment opportunities. The impact extends beyond direct employment - graduates frequently launch their own climate-focused ventures or implement climate-smart practices within existing operations, fostering a culture of innovation and sustainability.

Washington state's policy environment, including the Climate Commitment Act and Clean Energy Transformation Act, provides robust support for continued growth in climate-related employment. Educational institutions have responded by developing specialized programs preparing workers for emerging opportunities, with success in creating pathways for career transition and advancement.

Innovation and Knowledge Transfer

The synthesis of education and workforce development accelerates innovation in climate solutions. The collaborative environment of climate campuses, where students and professionals work together on real-world projects, generates novel approaches to climate challenges. The campus setting facilitates rapid testing and implementation of promising solutions, creating a continuous feedback loop between education, research, and practical application.

Equity and Access

South King County faces ongoing challenges in ensuring equitable access to climate careers. While programs demonstrate strong overall outcomes, demographic gaps persist, particularly in technical fields and advanced degree programs. Successful initiatives addressing these gaps must incorporate enhanced support services, including transportation assistance and childcare support; multilingual training options serving diverse communities; flexible scheduling accommodating working students; and targeted outreach to underrepresented communities.

Conclusion

Climate resilience represents more than an environmental imperative - it serves as a critical economic development strategy for South King County. By proactively addressing climate risks while capitalizing on related opportunities, the region can build a more sustainable and prosperous economy. As climate impacts intensify and demand for climate professionals grows, the integration of education and workforce development offers a proven framework for developing the skilled workforce needed to build climate-resilient communities.

Success requires coordinated action from government, business, and community partners, but the potential returns in economic stability and growth justify this investment. By embracing climate resilience as a cornerstone of regional development, South King County can position itself as a leader in sustainable economic growth while ensuring a more resilient future for all its residents.

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ENVIRONMENTAL EQUITY & ECONOMICS

Environmental equity in South King County, particularly in the Federal Way area, presents a complex intersection of social, economic, and environmental challenges. The region's diverse population, with over 45% identifying as people of color and schools accommodating more than 100 languages, faces disproportionate environmental burdens including poor air quality along major transportation corridors, limited access to green spaces, and increased climate change vulnerability. These challenges are compounded by economic disparities, with minority-owned businesses averaging significantly lower annual and lower homeownership rates among minorities. Public policy has evolved to incorporate both economic and equity considerations. The area's environmental policy framework attempts to address these inequities through comprehensive planning, targeted infrastructure investments, and community-led initiatives, while balancing both environmental economics and equity considerations. Despite these efforts, persistent gaps in access to environmental resources and protection from environmental hazards continue to affect lower-income neighborhoods and communities of color, highlighting the ongoing need for more equitable environmental policies and investments in the region.

Environmental Equity

Environmental equity represents the fair distribution of environmental benefits and burdens across all segments of society, regardless of race, income, or social status. This concept ensures everyone has equal access to clean air, safe water, green spaces, and protection from environmental hazards. In many cities, lower-income neighborhoods often have fewer parks, more industrial facilities, and higher pollution levels compared to wealthier areas. Environmental equity seeks to correct these imbalances by ensuring all communities have equal access to environmental resources and protection from environmental risks.

The concept encompasses several interconnected elements, beginning with procedural equity, which ensures all community members have meaningful participation in environmental decision-making. This means residents have a voice in decisions about new developments, environmental regulations, and resource allocation that affect their neighborhoods. Next, distributional equity focuses on the fair sharing of environmental benefits and risks, addressing historical patterns where certain communities, often low-income or minority populations, have borne a disproportionate share of environmental burdens like pollution or lack of access to natural resources. Finally, generational equity considers how today's environmental decisions will affect future generations' ability to meet their needs and thrive in their communities.

The connection to community and business growth is fundamental and multifaceted. For communities, environmental equity drives sustainable economic development by creating healthier, more livable neighborhoods that attract residents and businesses. When all areas have access to clean air, water, and green spaces, property values tend to stabilize or increase, creating a stronger tax base for community services and infrastructure improvements.

For businesses, environmental equity creates new opportunities while managing risks. Companies that locate in environmentally equitable communities often benefit from a healthier, more productive workforce, stronger community relationships and social license to operate, reduced regulatory and reputational risks, access to an expanding market for sustainable products and services, and greater resilience to environmental challenges and climate change. Environmental equity supports innovation and long-term business sustainability. When businesses operate in communities with strong environmental protections and resources, they are better positioned to adapt to changing regulations and consumer preferences for sustainable practices.

The fair treatment and meaningful involvement of all people regardless of income, gender, color, or national origin matters in developing environmental policies, regulations, and benefits. This approach focuses on ensuring that no group bears a disproportionate share of negative environmental consequences and that everyone has access to environmental benefits and decision-making processes. This equitable approach helps create resilient and prosperous communities, leading to investments in green infrastructure, public transportation, and pollution controls that benefit residents as well as the business base.

Environmental Economics

Environmental economy, also known as environmental economics, studies how economic activities interact with the natural environment. This field treats environmental resources as economic assets and focuses on efficiently allocating these resources to maximize economic benefits while managing environmental costs. It views natural resources through the lens of scarcity, market value, and economic efficiency.

This approach differs fundamentally from equity in several keyways. Environmental equity prioritizes fairness and social justice, ensuring that environmental benefits and burdens are distributed equally across different communities. It considers questions of who bears environmental costs and who receives environmental benefits, with particular attention to historically disadvantaged communities. When considering where to place a new park or waste treatment facility, an environmental equity approach examines whether certain communities are being unfairly impacted.

In contrast, environmental economy focuses on finding the most economically efficient solutions to environmental challenges. It uses tools like cost-benefit analysis, market mechanisms, and economic incentives to address environmental issues. When evaluating environmental decisions, it primarily considers questions of economic efficiency and optimal resource allocation rather than fairness or social justice.

Another crucial difference lies in how these approaches measure success. Environmental equity measures outcomes in terms of fairness and equal access, examining whether all communities have similar environmental quality, health outcomes, and access to natural resources. Environmental economy measures success through economic metrics like resource efficiency, cost effectiveness, and market performance.

The time horizons of these approaches also differ. Environmental equity often takes a longer-term view, considering historical patterns of discrimination and working to correct long-standing inequities. Environmental economy tends to focus more on current and near-term market conditions and economic efficiency.

These differences lead to distinct policy recommendations. Environmental equity advocates for stricter environmental protections in disadvantaged areas, increased community involvement in environmental decision-making, and targeted investments in historically underserved communities. Environmental economy proposes market-based solutions like carbon trading, pollution taxes, or resource pricing mechanisms.

Understanding these differences proves crucial because effective environmental policy often requires balancing both perspectives. While environmental economy helps us understand how to efficiently manage resources, environmental equity ensures we do so in a way that is fair to all communities. Together, they provide a more complete framework for addressing environmental challenges in a way that is both efficient and equitable.

Environmental Issues as Social & Economic Impacts

Environmental issues affect underserved populations in the greater Federal Way region of South King County. These challenges intersect with economic and social factors revealed in the Federal Way Chamber's *Economic Equity Assessment*.

Air Quality and Transportation

Communities along major transportation corridors in South King County face heightened exposure to air pollution. The location of Interstate 5, Highway 99, and industrial areas creates what environmental scientists call a "diesel corridor." The Federal Way assessment shows that communities of color and lower-income households are more likely to live near these high-traffic areas. With 71.4% of women and 81.2% of men in the workforce, many residents face long commutes that increase both their exposure to pollution and their transportation costs.

Water Quality and Infrastructure

The assessment reveals significant disparities in infrastructure investment. While some areas have updated stormwater systems, others face aging infrastructure that increases flood risks and water quality concerns. This particularly affects areas with higher concentrations of renters - the data shows only 24.3% of Black residents and 38.7% of Hispanic residents own their homes, compared to 67% of White residents. These communities often have less influence over infrastructure improvements in their neighborhoods.

Green Space Access

The distribution of parks and green spaces shows inequities that mirror economic patterns. The assessment indicates that neighborhoods with lower median household incomes (particularly where Black households average $53,405 compared to $77,885 for White households) typically have less access to quality green spaces. This affects both physical and mental health outcomes.

Climate Change Vulnerability

Lower-income communities face greater risks from climate change impacts. The assessment shows that 14.6% of Hispanic residents and 15.1% of Black residents live in poverty, making them more vulnerable to:

- Heat waves (less access to air conditioning)
- Flooding (more likely to live in flood-prone areas)
- Power outages (fewer resources for backup systems)
- Poor air quality during wildfires (older homes with less filtration)

Economic Development Patterns

The assessment reveals that while 35.5% of Federal Way businesses are minority-owned, these businesses tend to have fewer employees and lower sales than White-owned businesses. This economic

disparity affects communities' ability to adapt to environmental challenges. For example, minority-owned businesses average $642,000 in annual sales compared to $1,775,000 for White-owned businesses, limiting their capacity to invest in sustainability measures.

Health Impact Disparities

Environmental health impacts compound existing inequities. Communities with lower educational attainment and limited English proficiency often have:

- Less access to environmental health information
- Fewer resources to address environmental health issues
- More exposure to environmental hazards through work and living conditions
- Limited access to healthcare for addressing environmental health impacts

Food Security and Urban Agriculture

The assessment indicates that areas with higher poverty rates often qualify as food deserts. While 80.6% of Federal Way businesses sell directly to individuals, there are gaps in fresh food access. This connects to limited opportunities for community gardens and urban agriculture in denser, lower-income neighborhoods.

To address these environmental equity issues effectively, solutions must consider:

1. The economic context revealed in the assessment
2. The specific needs and barriers faced by different communities
3. The existing community assets and business networks
4. The intersection of environmental and economic development opportunities

Environmental Equity in South King County

South King County, particularly its Federal Way hub, faces unique environmental challenges requiring careful consideration of both equity and economics. This central area of the Puget Sound has a high concentration of underserved populations facing environmental risks from industrial activities, inadequate infrastructure, climate vulnerabilities, housing inequities, and health disparities.

Residents in areas like Kent, Auburn, and Federal Way have historically had less access to economic opportunities, despite living in a region with a thriving environmental industry. This creates both a challenge and an opportunity to bridge environmental workforce needs with community economic development. From an environmental economy perspective, the greater Federal Way region maintains a strong environmental sector, including clean energy companies, sustainable construction firms, environmental consulting businesses, and green infrastructure projects. These industries need skilled workers for roles ranging from solar panel installation and energy efficiency retrofitting to environmental monitoring, sustainable landscaping, and green building construction. The economic demand exists and continues to grow as the region focuses more on climate resilience and sustainability.

Many South King County residents, particularly in communities of color and immigrant communities, face barriers to entering these environmental careers. These obstacles often include limited access to

training programs, financial constraints, language differences, and lack of industry connections. An equitable approach recognizes and systematically works to remove these barriers.

Labor market analysis reveals significant disparities in Federal Way. Women show 71% participation in the workforce compared to 81% for men, despite equal education levels. Hispanic residents maintain 80% participation with a 14% poverty rate, while Black residents show 81% participation with a 15% poverty rate. Business ownership demographics in Federal Way indicate 35.5% minority-owned businesses compared to the King County average of 24%. However, substantial gaps exist in business performance: White-owned businesses average $1.77 million in annual sales, while minority-owned businesses average $642,000, and Black-owned businesses average $319,000 in annual sales. Additionally, homeownership shows marked disparities, with 67% ownership rates for White households versus 39% for Black and Hispanic households.

Businesses in the region report several primary challenges: 31% struggle with slow business or lost sales, 29% face late or nonpayment issues, and 26% cite unpredictable business conditions. Limited access to capital for minority-owned businesses remains a persistent challenge. Multiple studies indicate South King County faces significant environmental equity challenges that directly impact economic opportunities. Addressing these through targeted policies and programs could create more sustainable and equitable economic growth while improving environmental conditions for all residents.

Public Policy and Environmental Equity

Environmental equity shapes public policy through several interconnected pathways, providing a framework for understanding how environmental decisions affect different communities. This framework helps ensure that policies address historical inequities while preventing future disparities. In comprehensive planning, environmental equity influences how cities develop their master plans, requiring them to examine how zoning decisions, infrastructure investments, and development patterns affect all communities. For instance, Seattle's comprehensive plan explicitly requires an equity analysis for all major infrastructure projects, examining potential displacement risks and ensuring benefits reach historically marginalized neighborhoods.

The policy-making process itself has evolved to incorporate environmental equity principles more deeply. Public participation requirements now extend beyond traditional town hall meetings to include multilingual outreach, community liaisons, and participatory budgeting processes. Minneapolis's Green Zones initiative demonstrates this evolution by creating community-led planning committees with decision-making authority over environmental investments in their neighborhoods, representing a fundamental change in how policies are developed and implemented.

Environmental equity drives enforcement priorities in meaningful ways. When regulatory agencies like the EPA incorporate environmental justice into their strategic planning, it affects where they conduct inspections, how they prioritize cleanup efforts, and how they allocate resources. The creation of EPA's EJSCREEN tool, which maps environmental and demographic indicators, has helped agencies target their enforcement efforts more effectively toward communities facing the greatest environmental burdens.

The impact on budgeting and resource allocation proves particularly significant. Many jurisdictions have adopted equity-based budgeting tools in response to environmental equity considerations. Portland, Oregon exemplifies this approach by requiring all city bureaus to use an equity lens in their budget

requests, measuring how proposed expenditures will affect different communities and requiring specific plans to address disparities.

In terms of infrastructure investment, environmental equity has transformed how cities approach capital improvement planning. Rather than simply fixing the worst problems first, many cities now consider both physical condition and community vulnerability when prioritizing projects. San Francisco's capital planning process illustrates this transformation by giving additional weight to projects in disadvantaged communities, helping ensure that limited resources address both infrastructure needs and historical inequities.

The influence of environmental equity extends to policy evaluation and measurement methods. Traditional metrics like cost-benefit analysis have expanded to include equity indicators. The state of Washington demonstrates this evolution by requiring environmental justice assessments for major state actions, examining how policies affect highly impacted communities and tribes. This has led to more nuanced policy evaluations that consider both efficiency and fairness.

Environmental equity has also sparked new forms of regional cooperation, as communities recognize that environmental challenges transcend municipal boundaries. The Southeast Florida Regional Climate Change Compact exemplifies this cooperation by explicitly incorporating equity into its regional resilience planning, ensuring that vulnerable communities throughout the four-county region receive protection from climate impacts.

Economic Impact of Environmental Equity Policies

Transportation policy has undergone significant evolution to consider not just mobility but comprehensive accessibility. This shift recognizes how transit investments can meaningfully connect underserved communities to opportunities. Los Angeles exemplifies this evolution through its transit equity policy, which mandates that new projects evaluate impacts on disadvantaged communities and include specific measures to prevent displacement.

Housing policy increasingly acknowledges the intricate connection between affordable housing and environmental quality. Cities like Boston have taken a progressive stance by requiring new affordable housing developments to meet enhanced environmental standards and include green space access. This requirement stems from the recognition that low-income residents should not face a false choice between affordability and environmental quality.

Climate adaptation policies now incorporate equity considerations more thoroughly than ever before. Miami demonstrates this approach by developing specialized programs to help vulnerable communities prepare for climate impacts. These programs include targeted assistance for home hardening in low-income areas and multilingual emergency communication systems, ensuring that all residents can access critical information during environmental emergencies.

Economic Landscape in South King County

South King County, particularly Federal Way, stands out as one of Washington State's most diverse regions. Federal Way has evolved into a vibrant multicultural hub, with approximately 45% of its population identifying as people of color. The city serves as home to significant Asian American, African American, Pacific Islander, and Hispanic communities, with its schools accommodating over 100

languages. While this diversity brings tremendous cultural and economic potential, historical patterns of development and investment have created challenges that make inclusion particularly crucial.

The economic landscape of South King County reveals complex patterns of development. The region has traditionally received less economic investment compared to areas north of Seattle. Federal Way, strategically positioned along the I-5 corridor, has experienced significant commercial development but faces ongoing challenges in creating high-wage jobs within the community. Many residents undertake lengthy commutes to Seattle or Tacoma for work, investing considerable time and money in transportation. The median household income in Federal Way consistently falls below the King County average, indicating an opportunity gap that inclusive policies could help address.

Transportation infrastructure in the area historically emphasized car-dependent development. While the upcoming Federal Way Link Extension in 2025 will connect the area to the regional light rail system, many neighborhoods continue to face challenges accessing services and employment centers. This transportation gap particularly affects lower-income residents and those who depend on public transit, making inclusion in transportation planning essential for community wellbeing.

The region also faces distinct environmental considerations. Federal Way contains significant natural assets, including Dash Point State Park and the West Hylebos Wetlands, but simultaneously bears the burden of regional air pollution due to its proximity to major transportation corridors. Environmental stressors affect some neighborhoods more severely than others, making environmental equity a crucial consideration in regional planning and development.

Housing Affordability and Community Development

As housing costs rise throughout King County, Federal Way has emerged as a crucial affordable housing hub. However, this transition brings mounting pressure on existing residents as property values and rents increase. The community now faces the complex challenge of balancing growth with stability, requiring thoughtful policies that ensure longtime residents can remain in their communities while welcoming newcomers.

The educational landscape in Federal Way reflects both opportunities and challenges. The Federal Way Public Schools serve a highly diverse student population, with over 60% of students qualifying for free or reduced lunch. This demographic composition presents unique opportunities for creating innovative educational programs while highlighting the need for ensuring educational equity and preparing students for success in the regional economy.

These factors underscore why inclusion must serve as an essential component of economic development in the region. Federal Way's position as a regional hub means its development patterns influence surrounding communities throughout South King County. Through inclusive policies, the area can ensure that growth benefits existing residents while attracting new investment that strengthens the entire community.

The area's diversity represents a significant economic asset in today's global marketplace. Companies increasingly seek diverse workforces and multicultural communities to drive innovation and market understanding. By leveraging inclusive development strategies, Federal Way can harness its diversity for economic growth while ensuring benefits reach all community members equitably.

Economy and Equity Work Together

Several promising areas are emerging where environmental economics and equity can work together synergistically. Circular economy initiatives are taking root, designed to create economic opportunities in environmental justice communities while reducing waste and pollution. Urban mining programs exemplify this approach, establishing operations in low-income areas to create jobs while recovering valuable materials from electronic waste.

Environmental insurance markets have begun incorporating both risk-based pricing and equity considerations into their models. These innovative programs help protect vulnerable communities from environmental disasters while maintaining market efficiency. Similarly, green banking initiatives are combining traditional finance with environmental justice goals. New York's Green Bank demonstrates this approach by requiring a portion of its investments to benefit disadvantaged communities while maintaining market-rate returns.

The Power of Citizen-Led Initiatives

Citizen-led initiatives, rather than solely relying on top-down government policies, prove crucial for successful environmental equity and inclusion in South King County and Federal Way. When citizens actively participate in and lead environmental initiatives, they bring unique insights and create lasting change that government policies alone cannot achieve. This becomes particularly important in the region’s diverse community, where residents intimately understand the nuanced needs of their neighborhoods.

Consider the cultural complexity of this South King County area, where over 100 languages flourish. Government-designed programs might miss crucial cultural contexts that affect how different communities interact with their environment. For instance, some Asian American communities in Federal Way maintain strong traditions of community gardens, practices that traditional government zoning regulations might not adequately accommodate. When citizens lead these initiatives, they naturally incorporate cultural knowledge directly into program design.

Building Leadership for Environmental Policy Equity

Successful environmental equity initiatives in Federal Way and South King County require a carefully structured approach to community leadership and governance. Communities need comprehensive support to develop leadership skills and technical knowledge through training programs that enhance understanding of environmental science, project management, and community organizing. Importantly, these programs should build upon existing community knowledge rather than attempting to replace it.

The funding mechanisms supporting these initiatives require careful consideration. Grant programs and other funding sources must become more accessible to community groups while maintaining adaptability for different types of projects. Traditional government funding often imposes complex requirements that can hinder grassroots initiatives. Creating simpler, more flexible funding pathways enables community groups to access necessary resources while maintaining accountability.

Supporting infrastructure plays a vital role in the success of community-led environmental initiatives. While citizens should maintain leadership roles, they still need support from government institutions

through technical assistance, data access, and guidance in navigating regulatory requirements. The key lies in ensuring this support empowers rather than constrains community leadership.

The government's role in this framework requires careful calibration. Rather than leading environmental equity initiatives directly, government agencies should focus on creating conditions that enable citizen leadership. This involves removing regulatory barriers that might impede community-led projects, providing technical resources and expertise when requested, creating frameworks for collaboration between different community groups, and ensuring basic infrastructure supports community initiatives.

Business and Education Implications

Environmental equity and environmental economics continue to shape how organizations approach environmental challenges. Understanding both perspectives helps create more effective leaders, more informed citizens, and better solutions to environmental challenges, enabling businesses to operate more sustainably and responsibly while helping educators prepare students for complex environmental challenges.

For modern business success, understanding these concepts has become crucial. Companies increasingly face pressure from consumers, investors, and regulators to consider both the economic and equity implications of their environmental impacts. In strategic planning, companies must consider not just the economic costs and benefits of their environmental decisions but also how these choices affect different communities. When deciding where to locate a new manufacturing facility, businesses need to evaluate both economic efficiency factors like access to resources, transportation costs, and labor markets, alongside equity considerations such as impacts on local communities, environmental justice concerns, and community relations.

Risk management becomes particularly important, as failing to consider environmental equity can lead to significant business risks. Companies that ignore equity issues may face reputational damage, legal challenges, regulatory penalties, or community opposition. Many businesses have faced boycotts or lawsuits after their operations disproportionately affected disadvantaged communities. Understanding both perspectives helps businesses identify new market opportunities. Companies that effectively address both environmental efficiency and equity often find themselves better positioned to serve emerging markets, develop innovative products, and build strong relationships with diverse customer bases. For instance, renewable energy companies developing affordable clean energy solutions for underserved communities can tap into new markets while advancing environmental equity.

In education, the intersection of environmental equity and environmental economy presents important implications at all levels. Educational institutions need to integrate both concepts into their environmental science, business, and social studies curricula, helping students understand that environmental challenges require considering both economic efficiency and social justice. When teaching about climate change, educators should cover both economic aspects like carbon pricing and renewable energy economics, alongside equity considerations such as climate justice and disparate impacts on vulnerable populations.

Career preparation becomes more robust when students understand both perspectives. Whether entering business, public policy, environmental science, or other fields, professionals need to navigate both economic and equity dimensions of environmental issues. This includes learning how to conduct

traditional cost-benefit analyses alongside environmental justice assessments. Teaching both concepts helps develop more sophisticated critical thinking skills, enabling students to analyze environmental issues from multiple perspectives and understand that economically efficient solutions are not always equitable, and vice versa.

Moving Environmental Inclusion Forward

South King County and its Federal Way hub must take proactive steps to address environmental inclusion through comprehensive workforce development programs. These programs should connect local residents to growing industries in the region, particularly as light rail expansion creates new economic opportunities. The region needs robust affordable housing strategies that preserve existing communities while accommodating growth, potentially through community land trusts and inclusive zoning policies.

Environmental justice initiatives require careful attention to address historical disparities while creating new green spaces and environmental amenities accessible to all residents. The community must build stronger connections between its diverse populations through cultural programs, shared spaces, and inclusive decision-making processes that reflect the rich multicultural fabric of the region.

Success in these endeavors requires sustained commitment from all stakeholders - government agencies, businesses, community organizations, and residents. By working together and maintaining focus on both environmental equity and economic opportunity, South King County can create a model for sustainable, inclusive development that benefits all members of its diverse community while protecting and enhancing the natural environment for future generations.

Through this comprehensive approach to environmental equity and economics, the region can build a more resilient, sustainable, and prosperous future that truly serves all its residents while maintaining its unique character and natural heritage. The path forward requires patience, dedication, and ongoing collaboration, but the potential benefits for both current and future generations make this investment worthwhile.

ENVIRONMENTAL POLICY OVERVIEW: ECONOMIC IMPACT ANALYSIS

Federal Way's demographic landscape reveals a diverse community of approximately 101,030 residents. The population comprises 41.3% White, 17.5% Asian, 16.2% Hispanic/Latino, 12.7% Black/African American, 9.8% individuals of two or more races, and 2.5% Pacific Islander residents. The city maintains a median household income of $67,347, though 11.8% of its population lives below the poverty line.

Environmental equity has become increasingly critical for sustainable economic development and community growth in South King County, particularly in Federal Way and its surrounding areas. Recent census data and statistical reports highlight the region's significant demographic diversity and economic challenges.

South King County has historically encountered greater environmental burdens while experiencing reduced access to environmental benefits compared to other parts of the region. This area, encompassing Federal Way, Kent, Auburn, and other communities south of Seattle, faces several environmental challenges. These include heightened exposure to air pollution from major transportation corridors such as I-5 and SR 167, a higher concentration of industrial facilities, limited

access to green spaces, reduced tree canopy coverage, and increased vulnerability to climate change impacts, including urban heat islands and flooding.

The greater Federal Way regional hub, including Kent and Auburn, serves a total population of approximately 400,000 residents. This area demonstrates distinct demographic characteristics, including a lower median household income compared to the King County average. The region also features a significant immigrant presence, with 25-30% of residents being foreign-born, and notable linguistic diversity, as approximately 40% of residents speak a language other than English at home.

Environmental Impact Areas and Solutions

Environmental equity directly influences business development and community growth through three primary channels: health and productivity, economic development opportunities, and property values and investment. Poor air quality and environmental conditions significantly affect worker health and productivity, leading to higher healthcare costs for businesses and employees and increased absenteeism in areas with greater environmental burdens.

In terms of economic development opportunities, green infrastructure projects create local jobs, environmental remediation initiatives attract new businesses, and sustainable development practices enhance community resilience. Additionally, environmental improvements increase property values, while clean, green areas attract more retail customers and reduced environmental hazards lead to lower insurance costs.

To address these core areas effectively, policymakers should consider three key approaches: infrastructure investment, business incentives, and community engagement. Infrastructure investment should focus on expanding green infrastructure in industrial areas, improving public transportation access, and developing more parks and green spaces in underserved areas. Business incentives should include tax benefits for companies adopting sustainable practices, grant programs for minority-owned businesses implementing environmental improvements, and support for green job training programs. Community engagement efforts should establish environmental equity advisory committees, create multilingual outreach programs, and foster partnerships with local community organizations.

Assessment of Key Zip Codes

The assessment focuses on two primary ZIP codes in the region: 98001 and 98003, each presenting unique environmental challenges and demographic characteristics.

ZIP Code 98001 Analysis

ZIP code 98001, encompassing parts of Auburn and the Lake Tapps area, presents distinct environmental equity challenges shaped by its geography and development patterns. This area serves approximately 28,500 residents with a median household income of $89,450. The population shows significant diversity, with 65% White, 14% Asian, 9.5% Hispanic/Latino, 4% Black/African American, and 6% residents of two or more races.

The area faces several environmental challenges related to water quality and access. Its proximity to Lake Tapps creates complex water management issues, while historical industrial activities have impacted groundwater quality. The region also struggles with stormwater runoff affecting local streams and wetlands. Transportation infrastructure presents additional challenges, including limited public transit options and heavy reliance on personal vehicles. The SR 167 corridor contributes to significant air quality concerns through increased traffic congestion.

Industrial impact in the area manifests through warehouse district development, which has led to increased truck traffic, degraded air quality from logistics operations, and noise pollution affecting residential areas.

ZIP Code 98003 Analysis

ZIP code 98003, covering central Federal Way, presents distinct urban environmental challenges. This area serves approximately 32,700 residents with a median household income of $62,840. The population demonstrates significant diversity, comprising 38% White, 19% Asian, 18% Hispanic/Latino, 14% Black/African American, 3% Pacific Islander, and 6% residents of two or more races.

The urban heat island effect significantly impacts this area, with limited tree canopy coverage of 22% compared to King County's average of 38%. Large parking lots and commercial developments contribute to increased surface temperatures, particularly affecting vulnerable populations during summer months. Air quality concerns stem from proximity to the I-5 corridor, with diesel particulate matter from heavy traffic contributing to higher rates of asthma and respiratory issues compared to the county average.

Access to green space remains a persistent challenge in 98003, with uneven distribution of parks and recreational areas, limited walking access to green spaces in multi-family housing areas, and a pressing need for more urban green infrastructure.

Comparative Analysis of ZIP Codes

The two ZIP codes demonstrate distinct development patterns, with 98001 featuring more suburban characteristics, larger lot sizes, and greater tree coverage, while 98003 presents a more urban environment with higher density development and commercial concentration. Environmental burdens differ significantly between the areas, with 98001 primarily concerned with water quality and industrial development impacts, while 98003 focuses on urban heat islands and transportation-related air quality issues.

Socioeconomic factors also vary considerably between the two areas. ZIP code 98001 shows a higher median income and more single-family homes, while 98003 demonstrates greater diversity, more multi-family housing, and a lower median income. Addressing these challenges requires tailored approaches that consider both the physical environment and socioeconomic characteristics of each area.

Comparative Environmental Policy Frameworks

The environmental policy frameworks of Federal Way and Auburn, as the main municipalities in District 30 Legislative District, reflect their unique geographical locations and environmental challenges. Federal

Way's emphasis on urban forestry contrasts notably with Auburn's focus on river system management, demonstrating how local conditions shape environmental policy development and implementation.

Federal Way Environmental Policy Framework

Federal Way's environmental policies are primarily guided by its Comprehensive Plan Environmental Element and various municipal codes, with a strong emphasis on urban forest preservation and sustainable development practices. The city's critical areas protection measures, codified in Federal Way Revised Code (FWRC) Chapter 19.145, establish comprehensive regulations for environmentally sensitive areas. These include wetland protection with required buffers ranging from 50 to 300 feet based on wetland category, stream protection with buffers of 50 to 100 feet depending on stream type, and specific regulations for steep slopes exceeding 40% grade.

The city's urban forest management policies are particularly stringent, requiring 20% tree canopy coverage for new developments and implementing specific tree retention requirements through FWRC 19.120. The policies include a 1:1 replacement ratio for removed significant trees and a heritage tree program protecting historically significant specimens.

Stormwater management in Federal Way follows the Department of Ecology's 2019 Stormwater Management Manual for Western Washington, implementing Low Impact Development requirements for new construction and enhanced water quality treatment near sensitive water bodies. The city maintains annual inspection requirements for private stormwater facilities and mandates green stormwater infrastructure in new developments.

Auburn Environmental Policy Framework

Auburn's environmental policies reflect its unique position at the confluence of the Green and White Rivers, emphasizing watershed protection and flood management. The city's natural resource protection measures, established through Auburn Municipal Code (AMC) Chapter 16.10, provide enhanced protection for river corridors and associated wetlands, with specific regulations for development within the Green River Valley and habitat protection measures for salmonid species.

The city's climate action and sustainability initiatives include green building standards for municipal construction, energy efficiency requirements for new development, electric vehicle infrastructure requirements, and climate resilience planning focused on flood protection. Water resource management receives particular attention through comprehensive aquifer protection regulations, surface water management requirements, and riparian corridor preservation standards.

Comparative Analysis of Municipal Environmental Policies

Both Federal Way and Auburn demonstrate distinct policy strengths in their environmental frameworks. Federal Way excels in urban forestry protection, comprehensive critical areas regulations, natural vegetation maintenance, and detailed development standards for environmental protection. Auburn, meanwhile, shows particular strength in flood management provisions, watershed protection measures, climate adaptation planning, and salmon habitat protection initiatives.

The cities employ similar implementation mechanisms for their environmental policies. Both utilize rigorous permitting and review processes aligned with State Environmental Policy Act (SEPA) requirements, including critical areas reports for development near sensitive areas and requirements for qualified professional assessments. Regular monitoring and reporting requirements ensure ongoing compliance with environmental standards.

Enforcement approaches in both cities maintain dedicated code enforcement staff and regular inspection programs for environmental compliance. Both municipalities have adopted progressive enforcement approaches that begin with education before moving to civil penalties for significant violations.

Recent policy developments demonstrate ongoing commitment to environmental protection in both cities. Federal Way has updated its Critical Areas Ordinance in 2023, enhanced tree protection standards, implemented new green building incentives, and adopted updated stormwater manual provisions. Auburn has revised its flood hazard regulations, updated its Shoreline Master Program, launched new climate resilience planning initiatives, and enhanced water quality monitoring programs.

Regulatory Hierarchy and Integration

Environmental regulation in Federal Way and Auburn operates within a complex framework of overlapping jurisdictions, where each level of government plays a distinct yet interconnected role. This system of cooperative federalism establishes federal laws as baseline standards, while allowing state, county, and local governments to implement stricter requirements while maintaining minimum federal compliance.

Federal Level Integration

Federal environmental legislation creates the foundation for local environmental protection in both Federal Way and Auburn. The Clean Water Act significantly shapes local stormwater management and wetland protection policies, requiring both cities to meet or exceed National Pollutant Discharge Elimination System (NPDES) requirements. Federal Way's stormwater management program, for instance, incorporates federal water quality standards while adding locally specific requirements for development near Puget Sound.

The Clean Air Act guides local transportation and development policies, with both cities ensuring their development regulations support the maintenance of National Ambient Air Quality Standards. This manifests in specific local policies such as Auburn's anti-idling regulations and Federal Way's construction dust control requirements.

The Endangered Species Act notably influences local habitat protection policies, with both cities incorporating federal requirements for protecting endangered salmon species into their critical areas ordinances, often exceeding federal minimums to address local conditions.

State Level Coordination

Washington State environmental regulations add another layer of requirements that local policies must address. The State Environmental Policy Act requires both cities to conduct environmental reviews for

significant projects, with each city maintaining its own SEPA responsible official who coordinates with state authorities.

The Growth Management Act mandates comprehensive planning that protects critical environmental areas, leading both cities to develop environmental policies that satisfy state requirements while addressing local environmental concerns. The Shoreline Management Act influences waterfront management in both cities, with Auburn's policies for the Green and White Rivers and Federal Way's regulations for Puget Sound shorelines incorporating state requirements while adding specific provisions for local conditions.

King County Integration

King County's environmental regulations create a regional framework that both cities must consider in their local policies. Surface Water Management standards set by the county influence local stormwater policies, with both cities adopting the county's surface water design manual while adding local requirements. Auburn, for example, has implemented additional requirements for development in the Green River Valley flood plain while maintaining consistency with county standards.

The county's Comprehensive Plan influences local environmental planning through regional growth strategies, evident in both cities' participation in the King County-Cities Climate Collaboration while maintaining distinct local climate action approaches.

Implementation Challenges and Future Direction

The interaction between different regulatory levels creates several ongoing challenges. Jurisdictional overlap occurs when multiple agencies have authority over the same resources, requiring coordinated permit review processes to ensure all applicable standards are met. Regulatory updates at different levels necessitate constant policy alignment, creating an ongoing need for policy monitoring and updates. Enforcement coordination requires clear communication between different agencies, leading both cities to develop mechanisms for coordinating enforcement actions with county, state, and federal authorities when violations impact multiple jurisdictions.

Looking forward, both cities are working to improve regulatory integration through enhanced data sharing between jurisdictions, coordinated planning efforts that align local environmental initiatives with regional and state goals, and climate change response strategies that integrate local actions with county and state climate initiatives. These efforts demonstrate a commitment to maintaining effective environmental protection while adapting to evolving challenges and regulatory requirements.

The success of environmental protection in both communities relies on careful coordination between jurisdictions while maintaining flexibility to address local environmental challenges. Understanding these complex interactions enables more efficient resource use, better coordination of protection efforts, and more effective responses to environmental challenges as they emerge.

CREEC

CLIMATE RESILIENCE & ENVIRONMENTAL ECONOMIC CAMPUS

EDUCATION

The development of climate resilience and environmental economic growth in South King County demonstrates the critical intersection of STEM education, workforce development, and community engagement. Through innovative partnerships between K-12 schools, higher education institutions, and environmental organizations, the region has created comprehensive pathways for students to engage with environmental science and pursue careers in sustainability. Despite notable successes in programs like the ClimeTime Initiative and Maritime High School, significant disparities persist in access to environmental STEM education, particularly in South King County where schools receive less funding per student compared to neighboring districts. The region's diverse array of environmental education programs, from the Environmental Science Center's hands-on learning experiences to university research partnerships, provides a foundation for addressing these challenges while preparing students for careers in the growing green economy. By integrating climate education across age groups and fostering connections between educational institutions, industry partners, and community organizations, the Federal Way region of South King County is working to build both environmental literacy and economic opportunity for its communities.

Critical Role of STEM Education in Climate Resilience

The intersection of STEM education, climate resilience, and environmental economics represents a crucial nexus for addressing 21st-century challenges. This analysis examines how STEM education serves as a foundation for developing climate solutions and fostering sustainable economic growth, with a particular focus on Washington state and South King County.

National Context and Trends

The United States faces an increasing demand for STEM-educated workers in environmental sectors. According to the U.S. Bureau of Labor Statistics, environmental science and environmental engineering jobs are projected to grow 8% and 4% faster than average, respectively, through 2029. This growth reflects the expanding need for professionals who can address climate challenges while supporting economic development.

The National Science Foundation reports that only 18% of high school seniors are both proficient in STEM and interested in STEM careers, highlighting a significant gap between workforce needs and current educational outcomes. This gap is particularly pronounced in environmental science and sustainability-focused fields, where complex interdisciplinary knowledge is required.

Washington State Leadership and Initiatives

Washington state has emerged as a leader in connecting STEM education to environmental resilience. The state's Environmental and Climate Science Education initiative has reached over 200,000 K-12 students since 2019, integrating climate science across the curriculum. This approach has proven particularly effective in developing students' understanding of both environmental challenges and potential solutions.

Key achievements in Washington include geographic Information Systems (GIS) training programs in high schools have enabled students to map climate vulnerabilities in their communities, leading to practical adaptation strategies. The state's Clean Energy Transformation Act has created partnerships between schools and industry, providing students with hands-on experience in renewable energy technologies.

Environmental economics courses have been integrated into 85% of Washington high schools, teaching students to analyze the financial impacts of climate change and the economic opportunities in sustainable industries.

District Level Implementation and Innovation

Federal Way Public Schools (FWPS)

Federal Way Public Schools has emerged as a leader in integrating environmental science and STEM education. The district's Environmental Learning Centers program, established in 2021, provides hands-on experiences at three dedicated facilities where students engage in real-world environmental problem-solving. These centers serve over 15,000 students annually and have become models for district-wide environmental education.

The Technology Access Foundation (TAF) partnership at Federal Way High School has created an advanced environmental science pathway that combines computer science with environmental

monitoring. Students use coding skills to analyze local air quality data and develop mobile applications for community environmental awareness.

The district's "Green Schools" initiative has reduced energy consumption by 25% through student-led projects, generating annual savings of $450,000 while providing practical learning opportunities in environmental engineering and data analysis.

FWPS's Career and Technical Education program has developed a "Sustainable Industries" track that connects students with local green technology companies for internships and project-based learning experiences.

Photo Courtesy of Federal Way Public Schools

Highline Public Schools

Highline Public Schools has distinguished itself through innovative approaches to environmental justice and STEM education. The district's commitment to equity in environmental education has resulted in several groundbreaking programs:

The **Maritime High School program** incorporates climate science and marine biology into its core curriculum, preparing students for careers in sustainable maritime industries while addressing Puget Sound environmental challenges.

Highline's **"Climate Justice Youth Corps"** engages students in community-based research projects, combining environmental science with social justice advocacy. The program has conducted 15 major environmental impact studies in traditionally underserved communities.

The district's **partnership with Seattle-Tacoma International Airport** has created unique opportunities for students to study and propose solutions for aviation-related environmental impacts, including noise pollution and air quality issues.

Washington State Office of Superintendent of Public Instruction (OSPI) Leadership

OSPI has developed comprehensive frameworks and support systems for environmental and STEM education across the state.

ClimeTime Initiative

This state-funded program has become a national model for climate science education. OSPI has allocated $4 million annually to support teacher professional development and curriculum development focused on climate science and environmental justice. The program has reached:

90% of Washington's school districts have received ClimeTime training and resources Over 15,000 teachers have participated in professional development focused on integrating climate science across subjects Student assessment data shows a 35% improvement in climate science understanding in participating districts

Environmental and Sustainability Education Standards

OSPI has developed comprehensive K-12 environmental and sustainability education standards that integrate with Next Generation Science Standards. These standards emphasize:

Systems thinking approaches to understanding environmental challenges Integration of traditional ecological knowledge with modern scientific methods Focus on local environmental issues and solutions Career-connected learning in environmental fields

OSPI has implemented a robust system for tracking environmental education outcomes. Annual environmental literacy assessments measure student understanding of key concepts and their application to local challenges District-level tracking of green career pathway participation and outcomes Environmental justice metrics ensure equitable access to high-quality environmental education

Collaborative Initiatives Across Districts

South King County districts have developed several collaborative programs that maximize resources and impact. The South King Environmental Education Network (SKEEN) connects environmental education programs across districts, sharing resources and best practices while reducing duplicate efforts.

Joint professional development programs have trained over 500 teachers in environmental science and climate education methodologies. Shared environmental monitoring networks allow students across districts to collaborate on data collection and analysis, creating a comprehensive picture of regional environmental challenges.

Higher Education Leadership and Innovation

Washington state's public and private institutions of higher learning play a vital role in advancing environmental STEM education and research while preparing the next generation of environmental leaders. These institutions create crucial pathways from K-12 education to advanced environmental careers while conducting groundbreaking research in climate resilience and environmental economics.

Public Universities and Colleges

The University of Washington system has established itself as a cornerstone of environmental STEM education and research in the region. The UW College of the Environment conducts over $150 million in annual research focused on climate change, environmental justice, and sustainable resource management. The Seattle campus's Environmental Innovation Challenge has launched 73 student-led environmental startups since 2019, creating direct economic impact in the region.

Washington State University has developed the Center for Environmental Research, Education, and Outreach (CEREO), which connects researchers across disciplines to address complex environmental challenges. WSU's extension programs reach every county in the state, providing direct support for environmental education and sustainable agriculture initiatives. The university's partnership with tribal communities has created unique programs combining traditional ecological knowledge with modern environmental science.

The Evergreen State College stands out for its innovative approach to interdisciplinary environmental education. Its Graduate Program on the Environment has produced over 1,000 environmental leaders working in public policy, nonprofit organizations, and private industry. The college's Sustainable

Agriculture program serves as a model for integrating environmental science with practical skills development.

Western Washington University's Institute for Energy Studies demonstrates how specialized programs can address specific environmental challenges while creating career pathways. The institute's partnership with local utilities has created direct employment pipelines for graduates while advancing renewable energy research.

Community and Technical Colleges

South Seattle College has developed an Environmental Science and Technology program that creates direct pathways to environmental careers. The program's partnership with local industry has achieved an 85% placement rate for graduates in environmental fields.

Green River College's Natural Resources program combines traditional environmental science with innovative technology applications, including drone-based forest monitoring and GIS mapping. The program serves as a crucial bridge between K-12 education and advanced environmental careers.

Highline College's Marine Science and Technology Center provides unique opportunities for studying marine ecosystems and climate impacts on Puget Sound. The center's research contributes directly to regional environmental management decisions while training the next generation of marine scientists.

Private Universities

Seattle University's Center for Environmental Justice and Sustainability demonstrates how private institutions can advance both research and community engagement. The center's Environmental Justice Impact Fund has supported 45 community-based research projects since 2020, directly addressing environmental challenges in underserved communities.

Pacific Lutheran University has integrated environmental sustainability across its curriculum through its Environmental Studies program. The university's Living Laboratory initiative uses campus facilities as testing grounds for student-led sustainability projects, reducing campus carbon emissions by 35% while providing hands-on learning opportunities.

University of Puget Sound's Sound Policy Institute connects environmental research with policy development, creating opportunities for students to engage directly with environmental decision-making processes. The institute's work has influenced regional environmental policy while providing valuable experience for students entering environmental fields.

Cross-Institution Collaboration

The Washington Higher Education Sustainability Coalition connects sustainability efforts across institutions, sharing resources and best practices while reducing duplicate efforts. The coalition's annual conference draws over 500 participants from across the state, fostering collaboration and innovation in environmental education.

The Puget Sound Partnership for Environmental Research and Education combines resources from multiple institutions to address regional environmental challenges. This partnership has secured over

$25 million in research funding while creating opportunities for student involvement in environmental research.

Research and Economic Impact

Higher education institutions in Washington state generate substantial environmental and economic benefits. Environmental research conducted by Washington's higher education institutions attracts over $300 million in annual funding, supporting thousands of jobs while advancing environmental science and technology.

Graduate programs in environmental fields have a 92% employment rate within six months of graduation, with median starting salaries 15% above state averages. University research has led to 127 patents in environmental technology since 2020, spurring economic growth in green technology sectors.

Stem In Educational Equity and Environmental Justice

South King County presents a compelling case study in the importance of accessible STEM education for environmental justice. The region faces disproportionate climate impacts, including increased flooding risks and air quality challenges, while serving a diverse student population.

Recent data from the South King County STEM Network shows Environmental science programs in the region have seen a 45% increase in participation over the past three years, with particularly strong growth among students from underrepresented communities.

Schools partnering with local environmental organizations have reported a 60% increase in students pursuing post-secondary STEM education related to sustainability. Student-led climate resilience projects have generated an estimated $2.1 million in economic benefits through energy efficiency improvements and green infrastructure development.

Economic Impacts and Opportunities

The connection between STEM education and environmental economics creates substantial economic opportunities. Green technology sectors in Washington state have grown 12% annually since 2020, with STEM-educated workers earning an average of 26% more than those in traditional industries.

Companies participating in school-industry partnerships report 30% faster filling of environmental science positions when hiring from local STEM programs. Student environmental entrepreneurship programs have launched 47 new green businesses in South King County alone, creating local jobs while addressing sustainability challenges.

Conclusion

The data clearly demonstrates that strong STEM education programs serve as a crucial foundation for building both climate resilience and environmental economic opportunities. Washington state's experience, particularly in South King County, provides a valuable model for how targeted STEM education can create positive environmental and economic outcomes while addressing equity challenges.

Success in this area requires sustained commitment to educational resources, industry partnerships, and community engagement. As climate challenges continue to grow, the role of STEM education in preparing students to understand and address these challenges while creating sustainable economic opportunities becomes increasingly vital.

South King County Gaps in Environmental STEM Education

Geographic and Demographic Context

South King County represents one of the most diverse regions in Washington state, with significant populations of immigrant, refugee, and historically underserved communities. The region spans multiple school districts including Federal Way, Highline, Kent, Renton, and Tukwila, serving over 120,000 students. Within this context, several critical gaps have emerged in access to environmental STEM education programs.

Transportation and Physical Access Barriers

The distributed nature of environmental education facilities creates significant access challenges for South King County students. The region's primary environmental learning centers are concentrated in north Seattle and east King County, requiring extensive travel time from South King County communities. For example, while the University of Washington's environmental research facilities host numerous high school programs, students from Federal Way face average commute times of 90 minutes by public transit to participate in these opportunities.

The Maritime High School program in Highline Public Schools demonstrates both the potential and limitations of specialized environmental education. While the program offers exceptional marine science education, it can only accommodate 100 students per grade level, meeting less than 5% of the demonstrated interest from South King County students.

Resource Distribution Inequities

Analysis of program funding reveals significant disparities in resource allocation. South King County schools receive an average of $450 less per student for environmental STEM programs compared to schools in north King County. This funding gap manifests in

- Limited access to advanced environmental monitoring equipment, with South King County schools having one-third the environmental testing equipment per student compared to north King County schools.
- Fewer environmental science teaching specialists, with South King County districts averaging one specialist per 2,500 students compared to one per 1,200 students in other King County districts.
- Reduced availability of field study opportunities, with South King County students participating in 40% fewer environmental field experiences than their counterparts in other districts.

Language and Cultural Barriers

Despite South King County's linguistic diversity, with over 120 languages spoken across the region, environmental STEM programs often lack adequate multilingual support. Current data shows:

Only 15% of environmental education materials are available in languages other than English Less than 20% of environmental STEM educators in the region speak a language other than English Limited availability of culturally relevant environmental curriculum that reflects the diverse perspectives of South King County communities

Digital Divide Impacts

The increasing reliance on digital tools for environmental monitoring and data analysis has highlighted technology access gaps. 25% of South King County students lack reliable home internet access, limiting their ability to participate in environmental data collection and analysis projects School computer labs in the region average 6.5 years old, often unable to run current environmental modeling software. There is limited access to GIS and environmental mapping tools, with only 35% of South King County schools offering these technologies

Higher Education Pipeline Challenges

The transition from K-12 to higher education environmental programs reveals additional gaps. South King County students are underrepresented in university environmental science programs, making up only 12% of enrollments despite representing 28% of King County's student population.

Community college environmental technology programs in the region operate at capacity, with waiting lists averaging 18 months for popular programs like environmental monitoring and renewable energy technology.

There is limited availability of paid internships and research opportunities, with South King County students receiving 30% fewer placements in environmental research programs compared to other King County students.

Environmental STEM Education Funding Disparities in South King County

The funding disparities in environmental STEM education across South King County reveal complex patterns of resource allocation that affect student opportunities and outcomes. When we examine the current funding structure, we find multiple interconnected challenges that require systematic solutions.

Base Funding Disparities

South King County schools receive an average of $450 less per student for environmental STEM programs compared to schools in north King County, but this topline figure only tells part of the story. This gap compounds annually, resulting in a cumulative difference of approximately $5,850 per student over their K-12 education. To put this in perspective, a typical classroom of 30 students in South King County receives $175,500 less in environmental STEM funding over their academic career compared to their north King County peers.

The base funding gap breaks down across several key areas:

Equipment and Materials: South King County schools spend an average of $125 per student annually on environmental monitoring equipment and supplies, compared to $275 per student in north King County schools. This difference directly impacts students' ability to engage in hands-on environmental science activities and data collection.

Professional Development: Teachers in South King County receive $850 annually for environmental STEM professional development, while their counterparts in north King County receive $2,200. This disparity affects teachers' ability to stay current with environmental science teaching methods and technology.

Field Studies and Research: South King County schools allocate an average of $175 per student annually for environmental field studies, compared to $325 in north King County schools. This limitation reduces students' exposure to real-world environmental research opportunities.

Grant and Supplemental Funding

The base funding gap is further widened by disparities in supplemental funding sources.

Federal Grants: South King County schools secure 35% less federal environmental education grant funding per capita than other King County districts. This difference stems from limited grant-writing capacity and fewer resources for program development.

Private Sector Partnerships: North King County schools average 3.8 corporate environmental education partnerships per school, while South King County schools average 1.2 partnerships. These partnerships often provide additional funding, equipment, and internship opportunities.

Community Foundation Support: Environmental education programs in South King County receive an average of $85,000 less in foundation funding per district compared to other King County districts.

Conclusion

Addressing access gaps and funding disparities in environmental STEM education requires a comprehensive approach that combines immediate interventions with long-term structural changes. Success in this endeavor will not only benefit South King County students but will also strengthen the region's overall capacity for environmental innovation and climate resilience.

CLIMATE SCIENCE EDUCATION ACROSS AGE GROUPS

Environmental education begins in early childhood, when children's natural curiosity about the world around them creates perfect opportunities for foundational learning experiences. For our youngest learners in early childhood and primary grades, education should focus on fostering direct connections with nature through hands-on experiences. Simple activities like maintaining classroom gardens, observing weather patterns, and exploring local ecosystems help build an emotional connection to the natural world – a critical foundation for future environmental stewardship.

As students progress through elementary school, their growing cognitive abilities allow for more structured exploration of environmental concepts. Teachers can introduce basic scientific principles through practical experiments that demonstrate natural phenomena. For instance, creating miniature greenhouses helps students understand the greenhouse effect, while monitoring school energy usage introduces concepts of conservation and renewable resources. Project-based learning becomes particularly effective at this stage, allowing students to tackle real environmental challenges within their school or community.

Middle school presents a crucial period for deepening scientific understanding while maintaining student engagement. At this age, learners can begin to grasp more complex systems thinking – understanding how different elements of our environment interconnect. Climate science education should incorporate data analysis, scientific modeling, and exploration of cause-and-effect relationships. Digital tools and technology can enhance learning through interactive simulations of climate systems or citizen science projects that contribute to actual environmental research.

High school students are ready to engage with sophisticated climate science concepts and grapple with the societal implications of environmental challenges. Advanced coursework can integrate climate science across multiple disciplines – from physics and chemistry to economics and social studies. This interdisciplinary approach helps students understand both the scientific principles behind climate change and its broader impacts on human society. Service learning projects and internships with environmental organizations can provide valuable real-world experience and career exposure.

Key Principles of Climate Education

Throughout all grade levels, successful climate education should emphasize several key principles.

First, instruction must be age-appropriate and build progressively on previous knowledge. Abstract concepts like global warming need to be introduced gradually, starting with concrete observations and experiences before moving to more complex systems thinking.

Second, education should be solution-focused rather than problem-focused. While students need to understand environmental challenges, emphasis should be placed on innovation, problem-solving, and positive action. This approach helps prevent eco-anxiety and empowers students to become active participants in creating solutions.

Third, local contexts matter enormously. Students connect more deeply with environmental education when it relates to their immediate surroundings and communities. Studying local ecosystems, weather patterns, and environmental challenges makes abstract global concepts more tangible and relevant.

Fourth, family and community engagement amplifies learning outcomes. Take-home activities, community service projects, and partnerships with local environmental organizations can extend learning beyond the classroom and create lasting impact.

Fifth, environmental education should incorporate diverse perspectives and traditional ecological knowledge. Indigenous ways of knowing and cultural approaches to environmental stewardship enrich students' understanding and help create a more inclusive learning environment.

Educational Resources

To implement these principles effectively, schools need adequate resources and support. Professional development for teachers, access to quality curriculum materials, and funding for hands-on learning experiences are essential. Additionally, partnerships with scientific institutions, environmental organizations, and local experts can provide valuable resources and real-world connections.

Technology can play a vital role in modern climate education. Virtual field trips can transport students to distant ecosystems, while data visualization tools help make complex environmental information more

accessible. Citizen science apps and online platforms enable students to contribute to real scientific research, making them active participants in the scientific process.

Assessment in climate education should go beyond traditional testing to evaluate students' ability to think critically about environmental issues, propose solutions, and take informed action. Portfolio-based assessments, project presentations, and community action projects often provide better measures of environmental literacy than standard exams.

Looking ahead, climate education must continue evolving to meet the challenges of our changing world. This includes incorporating emerging scientific understanding, addressing new environmental challenges, and preparing students for green economy careers. Schools should strive to model environmental sustainability in their operations, creating living laboratories for students to observe and participate in sustainable practices.

Environmental Education Programs in South King County

The South King County region already hosts several environmental education initiatives that can complement and connect to Climate Resilience Campus in the Federal Way region. Understanding these existing programs helps identify collaboration opportunities and gaps in current offerings.

Environmental Science Center in Burien serves as a significant provider of environmental education in South King County. Operating since 2000, they offer school programs reaching over 10,000 students annually through their Salmon Heroes program and beach naturalist activities at Seahurst Park. Their curriculum connects directly to Washington State standards and includes specific units on climate change impacts on Puget Sound ecosystems. They provide programs both at their waterfront location and through classroom visits, making environmental education accessible to schools throughout the region.

Pacific Marine Research, though based in Seattle, conducts extensive programming in South King County through **their Marine Science Afloat** program. This floating classroom experience on Puget Sound allows students to study marine ecosystems firsthand while learning about climate change impacts on local waters. They serve numerous South King County schools, providing opportunities for students to engage in authentic scientific research.

The Nature Conservancy's Port Susan Bay Preserve offers field trip opportunities for South King County schools, allowing students to study coastal ecosystems and climate resilience strategies. Their programming includes specific modules on sea level rise and coastal adaptation, providing **real-world context for climate science education.**

Friends of North Creek Forest, while primarily serving the Bothell area, has developed educational programs that could serve as models for similar initiatives in South King County. Their curriculum integrates traditional ecological knowledge with western science, offering a template for inclusive environmental education.

Among public institutions, several stand out for their environmental education initiatives.

Highline Public Schools has integrated environmental education across their curriculum through their Environmental Science Pathways program. This district-wide initiative includes school gardens, waste

reduction programs, and partnerships with local environmental organizations. Their experience implementing large-scale environmental education programs offers valuable lessons for similar efforts in Federal Way.

Federal Way Public Schools currently partners with several environmental organizations to provide outdoor education experiences. Their relationship with Camp Waskowitz enables multi-day environmental education experiences for middle school students, focusing on watershed education and climate science.

The City of Federal Way's Surface Water Management Division conducts educational outreach through their Storm Drain Art program and classroom presentations about water quality and conservation. These existing programs could be expanded and integrated with the Climate Resilience Campus initiatives.

Private providers in the region include a range of programming.

Wild Seeds Nature School offers early childhood environmental education programs that could inform the development of programming for younger students at the Climate Resilience Campus. Their nature-based curriculum emphasizes seasonal observations and physical engagement with the natural world.

Soundview Educational Programs provides after-school and summer environmental education experiences, including specific programming around climate change and sustainability. Their existing relationships with South King County schools could facilitate program integration.

Point Defiance Zoo & Aquarium, while located in Tacoma, serves many South King County students through their climate science education programs. Their successful model of combining live animal encounters with climate education could inform similar initiatives at the Federal Way campus.

Several community organizations also contribute to environmental education in the region.

The Federal Way Community Garden Foundation maintains several garden sites that serve as informal environmental education spaces. Their expertise in community engagement and sustainable gardening practices could support the development of the campus's Learning Gardens program.

The **Weyerhaeuser King County Aquatic Center,** while primarily a recreation facility, has expressed interest in expanding their educational programming to include water conservation and climate resilience topics. This presents an opportunity for partnership and program coordination.

The **EarthGen program** (formerly Washington Green Schools) works with several South King County schools to implement sustainability initiatives and provide teacher professional development. Their existing networks and curriculum resources could support teacher training at the Climate Resilience Campus.

These existing programs and providers create a rich context for the development of a Climate Resilience Campus in the Federal Way hub of South King County. With connection to with these initiatives, the campus can:

- Build on successful existing models rather than duplicating efforts
- Create strategic partnerships to expand educational reach
- Fill identified gaps in current environmental education offerings

- Develop complementary programming that enhances rather than competes with existing resources
- Share resources and expertise across organizations
- Create clear pathways for students to engage with environmental education throughout their academic careers

Coordination with these existing programs, would strengthen the overall environmental education ecosystem in South King County while providing unique and valuable learning opportunities for students at all levels.

Maximizing Impact Through Partnerships and Program Integration

The Climate Resilience Campus is a unique opportunity to create a collaborative ecosystem of environmental education in this central area of the Puget Sound. Through thoughtful partnership development and program integration, the campus can amplify existing successful programs while addressing current gaps in environmental education offerings.

Strategic Partnership Development

The Marine Science and Technology (MaST) Center, operated by Highline College, serves as a pivotal marine biology and aquarium facility dedicated to expanding knowledge about Puget Sound. The MaST Center provides a variety of educational programs aimed at fostering marine stewardship through interactive learning and community engagement. The center organizes field trips and tours for schools and community groups by appointment, providing tailored educational experiences that align with curriculum standards and promote environmental awareness among students.The Center also engages the community through outreach initiatives and volunteer opportunities.

Federal Way Public Schools offer a range of environmental education programs designed to engage students in hands-on learning about local ecosystems and environmental stewardship. A notable example is the "Storming the Sound with Salmon" program, where fourth-grade students raise Coho salmon from eggs to fry in classroom tanks. This initiative allows students to observe the salmon life cycle closely and understand human impacts on local waterways. The program culminates in a salmon release event at West Hylebos Wetlands Park, where students participate in activities related to environmental stewardship and local ecology.

Additionally, the Federal Way District partners with AmeriCorps to support environmental education and stewardship. AmeriCorps members serve in various capacities, including performing service projects that focus on the environmental vitality of the Federal Way community. These projects provide students with opportunities to engage in environmental service and learn about sustainability practices.

Highline Public Schools' Environmental Science Pathways program offers a proven model that could be adapted and enhanced to the Climate Resiliency context. The Campus could serve as a hub for expanding this program southward, providing specialized facilities that support hands-on learning experiences. The campus could work with Highline's curriculum developers to create modules specifically focused on climate resilience, while maintaining alignment with state standards and district learning objectives.

Environmental Science Center partnership presents several promising opportunities. Their Salmon Heroes program could be enhanced by establishing a permanent presence at the Climate Resilience

Campus, creating a year-round learning environment that connects marine and terrestrial ecosystems. The campus could develop a specialized learning station focused on salmon habitat restoration and climate impacts on local waterways. This would complement the existing beach-based program by allowing students to explore the entire watershed system, from upland areas to Puget Sound. The partnership could also expand to include joint teacher training programs, sharing expertise in marine science education while incorporating new climate resilience elements.

Program Integration Opportunities

The campus's Weather and Climate Monitoring Station could become a regional hub for student research, integrating with existing programs in creative ways. For instance, Pacific Marine Research's Marine Science Afloat program could incorporate data from the campus's monitoring station into their analyses, allowing students to explore connections between terrestrial and marine climate impacts. This integration would help students understand climate systems more holistically.

The Learning Gardens and Food Systems area presents opportunities to partner with the Federal Way Community Garden Foundation in ways that benefit both organizations. The Foundation's expertise in community engagement could help develop intergenerational learning programs, where community members share traditional growing practices and climate adaptation strategies with students. The campus could provide additional growing space and specialized facilities for seed saving and climate-resistant crop experimentation.

Addressing Programming Gaps

Current analysis reveals several gaps in environmental education programming that the Climate Resilience Campus could address.

Advanced Technical Training: There is currently limited opportunity for high school students to engage with sophisticated climate monitoring equipment and data analysis tools. The campus could fill this gap by establishing an advanced research program that gives students hands-on experience with professional-grade scientific instruments and data visualization technologies.

Early Childhood Climate Education: While nature-based programs exist for young children, few specifically address climate resilience in age-appropriate ways. The campus could partner with Wild Seeds Nature School to develop innovative early learning programs that introduce climate concepts through play-based learning and sensory experiences.

Teacher Professional Development: Current professional development offerings primarily focus on general environmental education rather than specific climate resilience strategies. The campus could work with EarthGen to develop specialized training programs that help teachers integrate climate resilience concepts across all subject areas.

Community Science Integration: There's currently limited infrastructure for coordinating community science initiatives across South King County. The campus could serve as a central hub for citizen science projects, coordinating data collection and analysis across multiple organizations and programs.

Education Ecosystem for Sustainable Future

The ultimate goal is to create an integrated environmental education ecosystem where the Climate Resilience Campus serves as both a hub for innovation and a connector between existing programs. As climate change continues to affect our region, this collaborative approach will become increasingly important for preparing students to understand and address environmental challenges.

By developing these partnerships and integrations, the campus can create a multiplier effect, where each organization's strengths are amplified through collaboration. This approach will help ensure that environmental education resources are used efficiently while providing students with rich, varied learning experiences that build their understanding of climate science and resilience strategies.

Climate education is not just to impart knowledge, but to develop environmentally literate citizens who understand natural systems, recognize their role within them, and feel empowered to contribute to positive environmental change. By providing comprehensive, engaging, and age-appropriate learning opportunities throughout the early learning and K-12 journey, we can help prepare the next generation to address environmental challenges and create a more sustainable future.

CLIMATE RESILIENCE: AN INTEGRATED CAMPUS APPROACH

The Integration of Education and Workforce Development

The integration of education and workforce development within climate resilience campuses represents a transformative approach to preparing professionals for the growing climate sector. This comprehensive model creates an ecosystem where academic learning, hands-on experience, and professional opportunities continuously reinforce each other, producing graduates who are thoroughly prepared for careers in climate resilience.

Educational Foundation and Early Career Development

The foundation of this approach begins at the K-12 level, where students gain early exposure to climate science and sustainability through direct interaction with real-world projects. High school students, for instance, work alongside facilities managers to analyze campus energy consumption patterns, simultaneously developing technical data analysis skills and practical understanding of energy management. This early exposure helps students envision themselves in climate-related careers while building essential foundational skills.

Post-Secondary Pathways and Professional Integration

At the post-secondary level, the integration creates multiple entry points to climate careers, accommodating diverse educational and professional backgrounds. Consider a student interested in renewable energy: they might begin with a technical certificate in solar installation, gain practical experience through campus maintenance projects, and then progress to an associate's degree in renewable energy systems while working part-time in the field. This flexible pathway allows students to earn while they learn and build professional credentials incrementally.

Advanced Learning and Career Transition

The workforce integration aspect transforms traditional internships into deep learning experiences. Instead of brief summer placements, students engage in long-term projects that address real climate challenges. An environmental engineering student might spend several semesters working with local government partners on green infrastructure projects, developing both technical expertise and valuable professional network connections.

Industry and Community Impact

Industry Partnership Benefits

Industry partners benefit substantially from this integrated approach, gaining access to a pipeline of workers who possess not just theoretical knowledge but practical experience with current technologies and methodologies. The continuous interaction between industry and education ensures that training programs remain aligned with evolving workforce needs. As new climate technologies emerge, curriculum and training programs can be quickly updated to incorporate these innovations.

Community Development and Economic Growth

The community impact proves equally significant. The integration creates economic opportunities through the development of a skilled local workforce in growing climate-related sectors. Small businesses and startups in the climate sector can tap into this talent pool, fostering local economic development. Furthermore, the presence of skilled climate professionals enhances community resilience through improved planning and implementation of adaptation strategies.

CAREER PATHWAYS AND OPPORTUNITIES

Clean Energy Sector Growth

In examining specific career pathways, the clean energy sector continues to experience particularly strong growth, driven by federal initiatives like the Inflation Reduction Act and increasing corporate commitments to renewable energy. Solar and wind energy installation technicians represent one of the fastest-growing occupational categories, with projected growth rates exceeding 50% over the next decade. In South King County specifically, this trend manifests through increasing demand for solar installation technicians and energy efficiency specialists, with entry-level positions starting at $18-22 per hour and expert-level positions commanding salaries of $90,000-120,000 annually.

Green Infrastructure Development

Green infrastructure development presents another promising pathway, particularly in urban areas facing climate adaptation challenges. Professionals in this field design, implement, and maintain systems for stormwater management, urban forestry, and sustainable landscaping. Entry-level positions such as

Green Infrastructure Maintenance Technician typically start at $19-24 per hour, while experienced Watershed Program Managers can earn $80,000-100,000 annually.

Climate Data and Technology Careers

The climate data and technology sector offers yet another avenue for career development, particularly relevant given South King County's strong technology sector presence. Roles range from Environmental Data Technician positions starting at $20-25 per hour to Chief Climate Scientist positions earning $120,000-150,000 annually. These positions combine technical expertise with analytical skills, addressing the growing need for data-driven climate solutions.

Educational Support and Long-term Impact

Washington State Educational Programs

Education and training programs throughout Washington State support these career pathways through various approaches. The University of Washington's College of the Environment offers specialized programs in climate science, while community colleges like Shoreline Community College provide comprehensive clean energy technology programs. These educational offerings show strong outcomes, with many programs reporting employment rates above 85% within six months of graduation.

Innovation and Sustainable Growth

Looking at long-term impacts, this integrated approach helps address the critical shortage of climate professionals while ensuring quality and relevance in climate education. Students graduate not just with degrees but with portfolios of real-world experience and professional connections. This comprehensive preparation leads to higher employment rates and better career advancement opportunities.

The model also creates a self-reinforcing cycle of innovation. As students and professionals work together on climate solutions, they generate new knowledge and approaches that feed back into both educational programs and industry practices. This continuous loop of learning and application accelerates the development and implementation of climate solutions, contributing to broader community resilience and environmental sustainability.

Implementation Strategies and Support Systems

Building Comprehensive Training Infrastructure

The success of climate resilience career pathways depends heavily on the careful implementation of support systems and training infrastructure. Washington State's Board for Community and Technical Colleges has developed a coordinated approach that ensures students receive both academic and practical support throughout their educational journey. This comprehensive system begins with financial assistance programs that make education accessible to diverse populations. The Worker Retraining Program, for instance, helps displaced workers transition into climate-related careers by covering educational costs and providing living expenses during the transition period. The Opportunity Grant

Program extends similar support to low-income students, while the Basic Food Employment and Training Program ensures that basic needs don't become barriers to education.

Beyond financial support, the state has implemented a robust network of student services that address the multifaceted challenges of career development. Career counselors work one-on-one with students to develop personalized career plans, taking into account their existing skills, interests, and long-term goals. Academic advisors help students navigate complex course requirements and certification pathways, ensuring efficient progress toward their career objectives. This personalized guidance proves particularly valuable for students transitioning from traditional industries into climate-related fields, as it helps them identify transferable skills and choose appropriate specializations.

Phased Implementation Approach

The development of career pathways follows a carefully structured timeline that allows for continuous improvement and adaptation to changing workforce needs. The first year focuses on establishing core partnerships between educational institutions and industry leaders. During this foundation-building phase, initial training programs are developed with direct input from employers, ensuring alignment with immediate workforce needs. Basic certification pathways are created to provide quick entry points into the field while laying groundwork for more advanced programs.

As programs mature in their second and third years, the focus shifts to expansion and deepening of opportunities. Advanced training programs are launched, building upon the success and lessons learned from initial offerings. Degree pathways are developed that allow students to progress from certificates to associate and bachelor's degrees while maintaining employment. Internship networks are formalized, creating structured opportunities for students to gain practical experience while building professional connections.

By the fourth and fifth years, programs reach full implementation with complete career lattices that offer multiple entry and advancement points. Advanced certifications address specialized industry needs, while leadership programs prepare experienced professionals to take on management roles in the climate sector. This mature phase also includes the development of mentor networks, where program graduates return to support and guide new students, creating a self-sustaining professional community.

Innovation in Program Delivery

Training centers across Washington State have developed innovative approaches to program delivery that accommodate diverse learning needs and work schedules. The Washington Environmental Training Center at Green River College exemplifies this innovation through its modular training approach. Students can stack credentials over time, building expertise in specific areas such as water quality management or hazardous materials handling while maintaining employment. Compressed course formats accommodate working professionals, with intensive weekend sessions and hybrid learning options making education accessible to those with full-time jobs.

The Maritime Innovation Center has pioneered the use of simulation technology in training for sustainable maritime operations. Their state-of-the-art facility allows students to practice complex procedures in a safe environment, from managing shore power systems to operating zero-emission port equipment. This approach not only enhances learning outcomes but also reduces training costs and

environmental impact. The center's success demonstrates how technological innovation in education can accelerate the transition to sustainable practices in traditional industries.

Measuring and Improving Outcomes

Program assessment reveals both strengths and areas needing attention in the current training landscape. While overall employment outcomes are strong, demographic analysis shows persistent gaps in program participation and completion. Women remain underrepresented in technical programs, particularly in advanced roles. Geographic disparities in program access affect rural communities, while income-based differences in completion rates highlight the need for enhanced support services.

Skills assessment has identified emerging areas requiring additional focus. Digital technology training needs strengthening across programs to keep pace with industry innovation. Business and entrepreneurship skills have become increasingly important as more graduates start their own climate-focused enterprises. Data analysis capabilities are in growing demand as climate solutions become more data-driven. Communication skills prove crucial for professionals who must explain complex climate solutions to diverse stakeholders.

Building Long-term Success

The long-term success of climate resilience career pathways depends on maintaining strong connections between education, industry, and community needs. Regular curriculum updates ensure training remains relevant to evolving technology and industry practices. Industry advisory boards provide ongoing guidance about workforce needs and emerging trends. Community partnerships help programs address local climate challenges while creating employment opportunities.

Professional development support extends beyond graduation through alumni networks and continuing education programs. These networks facilitate knowledge sharing, career advancement, and professional collaboration. Continuing education programs help professionals stay current with evolving technology and regulations while developing new specializations as the field expands.

Future Directions

Looking ahead, several priorities emerge for strengthening climate resilience career pathways. Programs must continue expanding flexible learning options to accommodate diverse student needs while maintaining hands-on training quality. Early intervention systems need enhancement to identify and support struggling students before they fall behind. Cross-program articulation agreements require strengthening to facilitate seamless career advancement. Industry partnerships must expand to provide more work-based learning opportunities and ensure training remains relevant to workforce needs.

The success of climate resilience career pathways demonstrates the effectiveness of integrated approaches to workforce development. By combining educational excellence with practical training and comprehensive support systems, these programs prepare professionals who can lead the transition to a climate-resilient future. As climate challenges grow more complex, this model provides a framework for developing the skilled workforce needed to implement effective solutions.

Through careful attention to program design, implementation, and continuous improvement, climate resilience career pathways create opportunities for individual advancement while building community resilience. The model's success in Washington State offers valuable lessons for expanding similar programs nationwide, contributing to both economic development and environmental sustainability.

INTERNSHIPS, TRAINING, AND PROGRAMS

South King County offers a variety of internships and training programs focused on climate resiliency and the environmental economy, providing valuable opportunities to engage in sustainable practices and green careers.

King County's NextGen Climate Internship Program connects students from underrepresented backgrounds with paid opportunities to implement climate policies aligned with the Strategic Climate Action Plan (SCAP). Interns gain hands-on experience, participate in professional development workshops, and network with environmental professionals. This program is open to undergraduate and graduate students.

Port of Seattle's South King County Community Impact Fund (SKCCIF) supports community-led projects that create pathways to training and well-paying jobs in the environmental sector. From 2020 to 2024, SKCCIF committed $9.25 million to 52 community-based organizations, funding initiatives such as urban forest restoration, youth environmental stewardship, and community

Environmental Science Center (ESC) in South King County offers hands-on environmental education programs for all ages, including internships and volunteer opportunities. ESC's programs at beaches, streams, forests, and schools inspire stewardship, promote access, and strengthen community ties.

King County's Deconstruction Training Program provides education in deconstruction methods, sustainable building, energy, and wastewater treatment. The program aims to divert materials from landfills and promote equitable access to the green economy by offering training to individuals facing systemic barriers to employment.

These programs collectively enhance climate resiliency and foster an environmental economy in South King County by equipping individuals with the skills and knowledge necessary for sustainable careers and community engagement.

Opportunities in Higher Education

Within a 50-mile radius of Federal Way, Washington, several higher education institutions offer programs focused on climate resiliency and the environmental economy, providing valuable training and educational opportunities.

Highline College offers courses and programs related to environmental science and sustainability. The college provides foundational courses in environmental studies, which can serve as a stepping stone for students interested in pursuing careers in environmental fields. The college also operates the Marine Science and Technology (MaST) Center, a marine biology and aquarium facility dedicated to expanding knowledge about Puget Sound.

The Hub: Federal Way Higher Education Center is a collaborative initiative between Highline College, the University of Washington Tacoma, the City of Federal Way, and Federal Way Public Schools. It offers accessible post-secondary and adult education to the local community. The Hub provides a variety of hybrid and in-person classes, including courses like Introduction to Environmental Science (ENVS& 101), which covers fundamental environmental concepts and issues. Additionally, The Hub offers programs in computer science, health care, and early childhood education, aiming to equip students with skills relevant to the environmental sector.

The University of Washington's Clean Energy Institute (CEI) provides undergraduate and graduate students with leading-edge programs supporting education, research, and development of clean energy technology. CEI has compiled a list of organizations offering internships, fellowships, and training opportunities in the clean energy sector, facilitating pathways into the environmental economy.

Western Washington University's Climate Leadership Certificate offers training and experience for students to apply various skills to critical work in climate action and justice, as well as other vital areas of sustainability. The program includes curriculum targeted at sustainability literacy, planning, and leadership, along with hands-on practicum work with sustainability organizations.

University of Washington Tacoma provides programs that address environmental sustainability and climate resilience. Through its Professional Development Center, UW Tacoma offers courses and certificates focusing on environmental policy, sustainable practices, and community resilience, preparing students for careers in the environmental economy.

Youth and Young Adult Engagement

Tribal Stewards Program: Washington is one of nine states receiving a federal grant from the National Oceanic and Atmospheric Administration (NOAA) to develop a climate-ready workforce. Six community colleges, including Green River College, partnered with five Tribes to develop a "Tribal Stewards Program." The program will provide natural resources training that cultivates a new generation of Tribal leaders and non-Tribal environmental co-stewards.

Washington Climate Corps Network: Engages young adults and veterans in service projects that provide career training in climate resilience fields. Project examples include creating green spaces in cities, reducing wildfire risks in forests, or managing sea-level rise.

Washington Conservation Corps: An AmeriCorps program that provides hands-on experience, field skills, and training opportunities to those ages 18-25 and veterans. Members restore critical habitat, build trails, and respond to local and national disasters. https://ecology.wa.gov/about-

Ecology Youth Corps: Hires Washington teens and adults to pick up litter on the state's roads and highways. The organization provides valuable training, job skills, experience in environmental cleanup, and environmental field trips

Student Conservation Association - Northwest: This is the largest provider of hands-on environmental conservation programs for youth and young adults. Participants protect and restore national parks, marine sanctuaries, cultural landmarks, and community green spaces.

Career Connect Washington: This is a statewide network of business, labor, education and community leaders creating work-based programs for young people to prepare for college and careers, including clean energy and the environment.

AJAC Advanced Manufacturing Apprenticeships: Offers registered apprenticeship opportunities for youth, adults and veterans. Clean energy is among the manufacturing industries they serve.

Pacific Northwest Center of Excellence for Clean Energy: From hydroelectricity and wind power to solar and transmission, PNCECE has compiled a list of entry-level, apprenticeship, certificate and degree programs for career paths in the clean energy sector.

Clean Energy Institute at University of Washington: Offers undergraduate and graduate students with programs to support education, research and development of clean energy technology. They also compiled a list of organizations that offer internship, fellowship and training opportunities:

Institute for Northwest Energy Futures at Washington State University: This is a research center located on the WSU Tri-Cities campus to help address the increasing demands for resilient, affordable, and available low-carbon electricity and transportation fuels. The institute is developing curriculum to support future workforce needs across various energy sectors.

Clean Energy Ambassadors Network at Washington State University: The program incorporates student research and innovation teams working with faculty and industry mentors to address local challenges related to climate change and its impact on disadvantaged communities.

CREEC

CLIMATE RESILIENCE & ENVIRONMENTAL ECONOMIC CAMPUS

WORKFORCE

South King County exemplifies Washington state's leadership in environmental stewardship and climate-related careers, showcasing the complex relationship between environmental resources and economic development. The region's industrial areas, including the Kent Valley and Auburn Manufacturing Industrial Center, demonstrate both the challenges and opportunities in balancing economic growth with environmental protection. The area has seen significant growth in climate-related positions, with projections indicating 3,000 new positions by 2030, particularly in renewable energy and environmental technology. Notable developments include a 79.5% increase in software employment between 2016-2021 and a 40.3% rise in electric vehicle registrations in 2022. To support this growth, the region is developing comprehensive workforce initiatives and embracing circular economy principles across various sectors. These efforts are supported by substantial funding from federal, state, and private sources, with the Puget Sound Regional Council estimating needs of $850 million for clean technology research facilities and $1.2 billion for sustainable manufacturing infrastructure. Through these initiatives, region is positioning itself as a hub for environmental innovation while addressing crucial climate challenges and creating meaningful economic opportunities.

ENVIRONMENTAL ECONOMY AND WORKFORCE

Washington state stands as a national leader in climate-related careers, ranking third nationally for employment of environmental scientists and specialists. The state's commitment to environmental stewardship and clean energy has created a robust ecosystem of career opportunities across multiple sectors. As of May 2023, Washington employed approximately 4,100 environmental scientists with an annual mean wage of $94,300, reflecting the state's strong investment in environmental protection and climate action.

South King County's environmental economy exemplifies the intricate relationship between environmental resources, economic development, and market forces in the region. This complex interplay shapes both economic outcomes and environmental resources across the area's diverse communities.

The region's economic framework is distinguished by several unique characteristics within the Puget Sound area, particularly in its industrial development patterns. The Kent Valley industrial area serves as a prime example, generating substantial economic activity through logistics and manufacturing while simultaneously creating environmental challenges through increased truck traffic and air quality impacts. Local businesses in this area invest approximately $2.5-3.5 million annually in environmental compliance and mitigation measures. Similarly, the Auburn Manufacturing Industrial Center, while supporting over 20,000 jobs, continues to navigate the delicate balance between economic growth and environmental protection, especially regarding stormwater management and habitat preservation near the Green River.

Natural Resource Impact & Value

Natural resources play a vital role in the region's economic profile. The Green River provides essential support for both industrial water needs and recreational activities, while groundwater resources deliver economic value through reduced water treatment costs. The region's wetlands offer natural flood control, effectively reducing infrastructure costs. Urban forest resources contribute significantly, with the tree canopy providing ecosystem services valued at approximately $10-15 million annually. These green spaces enhance property values by 5-15% in adjacent areas while supporting local tourism and small business development.

Market dynamics in South King County operate through various mechanisms, particularly in real estate and business development. Properties located near parks and green spaces command 10-15% higher values, while areas with better air quality demonstrate stronger property value appreciation. Environmental cleanup sites experience significant value increases of 20-30% after remediation. Business location decisions increasingly reflect environmental considerations, with clean technology firms preferring areas with strong environmental protections, while manufacturing businesses carefully factor in environmental compliance costs.

The environmental economy presents numerous growth opportunities, particularly in green industry development. The environmental remediation services market, estimated at $50-75 million annually, shows strong potential, along with growing demand for green building and energy efficiency services. Workforce development in environmental sectors creates diverse job opportunities, with environmental compliance positions averaging $65,000-85,000 annually and green construction jobs growing at 5-7% annually.

In renewable energy technology, wind turbine service technicians represent one of the fastest-growing occupations nationally, with projected growth of 60% from 2023 to 2033. Solar photovoltaic installation also continues to expand rapidly, with entry points available through technical and community college programs.

However, these opportunities come with significant cost considerations. Infrastructure maintenance, particularly for stormwater systems, requires approximately $15-20 million annually, while green infrastructure projects demand $5-10 million in initial investment. Business compliance expenses are also substantial, with medium-sized businesses facing average annual environmental compliance costs of $50,000-150,000, along with environmental impact study costs ranging from $25,000-100,000 per project.

Regional Framework & Industrial Development

Regional economic patterns vary significantly across South King County. Federal Way demonstrates a stronger focus on retail and service sector environmental impacts, with higher investment in shoreline environmental management and urban forest economic benefits. In contrast, the Auburn/Kent Valley shows more significant industrial sector environmental compliance costs and higher investment in flood management infrastructure.

Looking ahead, climate change will significantly impact the region's environmental economy, with flood management infrastructure needs estimated at $100-150 million over the next decade. Heat island mitigation costs are projected at $20-30 million, while energy efficiency upgrades are estimated at $50-75 million. Market evolution continues to drive growing demand for sustainable development and increasing value of green infrastructure.

To strengthen the environmental economy, strategic initiatives should focus on expanding green infrastructure in high-growth areas, supporting environmental technology business development, and investing in workforce training for environmental sectors. Policy frameworks should develop market-based environmental incentives, create environmental business innovation zones, and establish green building incentive programs.

The environmental economy of South King County represents a sophisticated system where market forces, policy frameworks, and economic opportunities intersect. Success in this arena requires careful balance between environmental infrastructure investment and business development support, while maintaining focus on workforce training in environmental sectors. This balanced approach will ensure sustainable economic development that benefits both business growth and environmental protection.

Statistics and Growth Projections

According to recent data from the Puget Sound Regional Council, the South King County region has seen significant growth in environmental sector employment. The Federal Way area specifically has experienced a 12% increase in climate-related positions since 2022, with particular growth in renewable energy installation and energy efficiency services. The council projects continued growth through 2030, with an estimated 3,000 new positions in climate-related fields within the 50-mile radius of Federal Way.

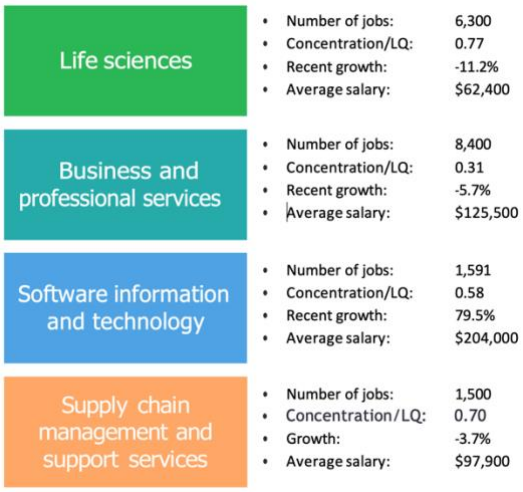
Local employment data indicates that graduates from these programs achieve strong placement rates, with 85% of program completers finding relevant employment within six months of graduation. The average starting salary for entry-level positions in climate-related fields within the region ranges from $55,000 to $75,000, with significant variation based on specific role and education level.

Federal Way Growth Corridor

Based on the Federal Way Chamber's *Priority Industry & Workforce Assessment* and *Regional Economic Development Strategies* work with Ernst & Young, several promising sectors emerge that align well with climate-focused STEM workforce development

The Life Sciences sector represents a major opportunity, particularly in the Federal Way hub. While the sector saw an 11.2% decline between 2016-2021, it still employs over 6,300 people locally and pays an average salary of $62,400. The aging population and growing healthcare needs suggest continued demand for workers. Environmental health scientists and specialists who focus on climate impacts on public health would be particularly relevant.

The Technology sector, specifically software and information technology, shows strong potential with 79.5% growth in Federal Way area between 2016-2021. With an average salary of $204,000, this sector offers opportunities for climate-focused software developers working on environmental monitoring systems, clean energy applications, and sustainability tracking tools. The sector is projected to grow another 31% over the next five years.



The Federal Way Chamber's Priority Industry and Workforce Assessment with Ernst & Young identifies regional growth sectors based on industry and occupation trends, competitive assets, and national and global industry dynamics.

The Business and Professional Services sector, while experiencing recent declines (-5.7% growth), maintains competitive wages averaging $125,500 in Federal Way. This sector can support climate initiatives through environmental consulting, green building design, and sustainability planning services. The sector is forecast to grow 8.5% locally from 2022-2027.

Conclusion

This overview represents current programs as of 2024, though new opportunities continue to emerge as regional institutions expand their climate-focused offerings. Prospective students should contact individual institutions for the most current information about program requirements, application deadlines, and available financial support

SECTOR ANALYSIS: ENVIRONMENTAL BUSINESS DEVELOPMENT OPPORTUNITIES

South King County stands at the intersection of environmental innovation and industrial transformation. This report examines the region's potential to become a hub for environmental business development, analyzing key sectors where climate resilience and economic growth align. Drawing on comprehensive data from state agencies, industry associations, and economic development organizations, we identify significant opportunities for sustainable business growth across multiple industries.

As Washington state pursues ambitious climate goals, South King County's diverse industrial base positions it uniquely to capitalize on the transition to a green economy. The region's strategic location between Seattle and Tacoma, combined with its existing manufacturing infrastructure and skilled workforce, creates fertile ground for environmental innovation. This analysis examines how key industrial sectors can contribute to and benefit from this transformation.

Current Industrial Landscape

South King County's environmental business opportunities build upon a foundation of established industries undergoing rapid transformation. The Washington State Department of Commerce reports that traditional sectors are actively incorporating sustainable practices and clean technologies, creating new business opportunities while addressing environmental challenges.

The aerospace industry, employing over 136,100 workers statewide with approximately 330 jobs in South King County, exemplifies this transition. According to the Puget Sound Regional Council's 2023 Aerospace Technology Innovation Cluster Study, the sector is rapidly adopting sustainable aviation technologies in response to Washington's Clean Fuel Standard. This policy framework requires a 20% reduction in transportation fuel carbon intensity by 2034, driving innovation in sustainable aviation fuels and electric aircraft technologies.

Maritime activities present another avenue for environmental business development. The Washington Maritime Federation's 2023 Economic Impact Study reveals that the maritime sector generates $37.6 billion in economic activity statewide. The Northwest Seaport Alliance's Clean Air Strategy has established aggressive environmental targets, including the complete transition to zero-emission cargo-handling equipment by 2050. These goals create substantial opportunities for businesses developing clean maritime technologies and environmental services.

Technology Sector Integration

The information and communications technology sector serves as a crucial enabler of environmental innovation. The Washington Technology Industry Association reports that software employment in Federal Way grew by 79.5% between 2016 and 2021, with average wages reaching $204,000. This growth creates opportunities for environmental technology applications, particularly in energy management and environmental monitoring systems. The Computing Technology Industry Association projects 15.8% growth in environmental technology jobs across Washington state through 2025, indicating sustained demand for innovative solutions.

Automotive Clean Technology Evolution

The transformation of the automotive sector represents one of the region's most promising environmental business opportunities. According to the Department of Ecology's 2022 Greenhouse Gas Inventory, transportation accounts for 44.9% of Washington's greenhouse gas emissions, creating urgent demand for clean technology solutions.

The Washington State Auto Dealers Association reports a 40.3% increase in electric vehicle registrations during 2022, reaching 104,000 vehicles statewide. This growth, combined with the state's mandate for 100% zero-emission vehicle sales by 2035, creates multiple business opportunities. The Department of Transportation's Zero Emission Vehicle Infrastructure Plan identifies the need for 4,500 public DC fast charging ports by 2030, with South King County designated as a priority region receiving $24.6 million in dedicated funding through 2026.

Implementation Framework

Successful development of these environmental business opportunities requires coordinated investment in infrastructure and workforce development. The Washington State Office of Financial Management's 2023 Workforce Report projects 25,000 new clean energy jobs statewide by 2030, requiring approximately $42 million in annual technical training investment. The Puget Sound Regional Council estimates infrastructure needs including $850 million for clean technology research facilities and $1.2 billion for sustainable manufacturing infrastructure.

Funding Landscape

Multiple funding sources support this environmental business development. The federal Infrastructure Investment and Jobs Act allocates $8.6 billion to Washington state, while the state's Clean Energy Fund provides $100 million in biennial funding. The Washington State Infrastructure Bank offers $2.5 billion in lending capacity, complementing $1.8 billion in private sector cleantech venture funding recorded in 2022.

Conclusion

South King County possesses the industrial base, workforce capabilities, and strategic location needed to become a leader in environmental business development. By leveraging existing strengths while embracing clean technology innovation, the region can create sustainable economic opportunities while contributing to state and national environmental goals.

WORKFORCE CERTIFICATE TRAINING

South King County's environmental challenges require a skilled workforce prepared to address climate change impacts while ensuring equitable outcomes for historically underserved communities. This could include the development of an industry-recognized Climate Resilience and Environmental Equity Certificate (CREC) program designed to prepare post-secondary students for emerging careers in environmental fields while addressing critical community needs.

Current Certification Landscape

Several existing certifications inform the development of this program. In Washington State, the Department of Ecology offers the Environmental Professional In-Training (EPI) certification, which provides a foundation for environmental careers. The University of Washington's Professional and Continuing Education program offers a Certificate in Climate Change & Health, focusing on public health impacts of climate change.

Nationally, several recognized certifications align with our program goals. The Association of Climate Change Officers provides the Climate Change Professional (CC-P) certification, which has become an industry standard. The U.S. Green Building Council's LEED Green Associate certification remains relevant for professionals working on sustainable infrastructure projects. The National Association of Environmental Professionals offers the Certified Environmental Professional (CEP) credential, which requires extensive experience and education in environmental science and planning.

Partnership Development Strategy

The success of the Climate Resilience and Environmental Equity Certificate program depends on creating and maintaining strong, mutually beneficial partnerships. Our partnership development approach focuses on four key domains: educational institutions, industry partners, government agencies, and community organizations.

Educational partnerships begin with formal memoranda of understanding (MOUs) between participating institutions. These agreements outline resource sharing, faculty exchange programs, and curriculum alignment strategies. Green River College, Highline College, and University of Washington-Tacoma will form the core educational consortium, with each institution contributing unique strengths and resources. Regular inter-institutional working groups will ensure curriculum consistency and resource optimization.

Industry partnerships require a structured engagement process beginning with an industry advisory committee. This committee will help identify workforce needs, shape curriculum development, and create internship opportunities. We will establish partnership agreements with environmental consulting firms, engineering companies, and sustainability-focused businesses. These agreements will include commitments for internship placements, guest speaking engagements, and potential hiring pathways for program graduates.

Government partnerships will be developed through formal interagency agreements. The King County Climate Action Team will serve as the primary government partner, providing access to climate data, planning documents, and professional mentorship opportunities. Additional partnerships with the City of

Seattle's Office of Sustainability and Environment and the Washington State Department of Ecology will expand student opportunities for practical experience and professional networking.

Program Funding Mechanisms

The program's funding structure incorporates diverse revenue streams to ensure long-term sustainability. Initial program development will be supported through a combination of institutional funds and external grants. We have identified several potential funding sources:

Federal funding opportunities include the National Science Foundation's Advanced Technological Education (ATE) program, which supports the development of technical education programs at two-year colleges. The Environmental Protection Agency's Environmental Education Grants Program offers another potential funding source, particularly for curriculum development and community engagement components.

State-level funding will be pursued through the Washington Student Achievement Council's Career Connect Washington initiative, which supports career-connected learning programs. The Washington State Department of Commerce's Clean Energy Fund provides additional opportunities for program support, particularly for components focused on clean energy and climate resilience.

Private sector funding will be solicited through corporate partnerships and foundation grants. The Boeing Company's environmental grants program and the Russell Family Foundation's environmental education initiative represent potential funding sources. Industry partners will be encouraged to support the program through sponsored internships, equipment donations, and professional development opportunities.

Tuition revenue will provide operational sustainability once the program is established. The program will be structured to qualify for federal financial aid, making it accessible to students from diverse economic backgrounds. Additional student support will be sought through industry-sponsored scholarships and work-study opportunities.

Community Engagement Approaches

Community engagement serves as a cornerstone of the program, ensuring its relevance and impact in South King County. Our engagement strategy operates at multiple levels to create meaningful connections between the program and the communities it serves.

The Community Advisory Board will be carefully structured to represent the diversity of South King County. Board membership will include representatives from environmental justice organizations, neighborhood associations, faith-based groups, and cultural organizations. The board will meet quarterly to review program progress, provide feedback on curriculum development, and ensure alignment with community needs.

Community-based learning opportunities will be integrated throughout the curriculum. Students will participate in community environmental assessment projects, working with neighborhood groups to identify and address local environmental challenges. These projects will be designed collaboratively with community partners to ensure they address real community needs while providing valuable learning experiences for students.

Public education and outreach programs will extend the program's impact beyond enrolled students. Regular community workshops will address topics such as climate resilience, environmental justice, and sustainable practices. These workshops will be offered in multiple languages and at various community venues to ensure broad accessibility.

Youth engagement initiatives will connect the program with local high schools and youth organizations. Activities will include environmental education workshops, career exploration events, and mentorship opportunities. These initiatives aim to build a pipeline of future students while increasing environmental awareness among young people in South King County.

A community feedback loop will be established through regular surveys, focus groups, and community forums. This ongoing dialogue will help identify emerging community needs, evaluate program effectiveness, and guide program development. Feedback mechanisms will be designed to be accessible and culturally appropriate for South King County's diverse communities.

Climate Campus Workforce Programming

The CREC program structure combines theoretical knowledge with practical skills across three core areas: environmental science and climate impact assessment, social equity and environmental justice, and practical resilience planning and implementation. This comprehensive approach prepares students for roles in government agencies, nonprofit organizations, and private sector environmental consulting firms.

Collaborative Partnership Framework

The program will establish partnerships with key institutions across South King County to create a robust educational ecosystem. For example, Green River College can provide core environmental science curriculum and laboratory facilities, while Highline College's social justice programs can contribute to the equity components. The University of Washington-Tacoma's Urban Studies department offers expertise in urban resilience planning.

Workforce development partnerships will include the Port of Seattle's environmental programs, King County's Climate Action Team, local environmental consulting firms, and community-based organizations working on environmental justice. These partnerships create opportunities for internships, applied research projects, mentorship programs, and direct hiring pipelines for program graduates.

Sample Certificate Structure

Based on other models, the certificate program would require completion of 24 credits. Core coursework comprises 15 credits covering climate science and local impacts, environmental justice and community engagement, resilience planning and implementation, and professional skills for environmental careers. Students select six credits of specialized coursework in areas such as green infrastructure, community advocacy, environmental policy, or sustainable business practices. A three-credit capstone project addressing a local environmental challenge completes the program requirements.

Industry Recognition and Accreditation

The program aligns with standards from the Association of Climate Change Officers, National Association of Environmental Professionals, and Urban Sustainability Directors Network. Students can pursue industry-recognized certifications including LEED Green Associate, Climate Change Professional, and Environmental Professional In-Training as part of their studies.

The certificate program aims to provide students with practical skills in climate resilience planning, environmental justice principles, and professional networking opportunities. Community benefits include increased local capacity for climate resilience, stronger connections between academic institutions and community needs, and economic development through workforce preparation. Industry partners gain access to well-prepared professionals and innovative research solutions.

Program expansion possibilities include developing additional specialization tracks, creating advanced certificates for continuing education, establishing articulation agreements with bachelor's degree programs, implementing online and hybrid learning options, and extending the program to other regions in Washington State.

Conclusion

With the creation of this industry-recognized certificate program, South King County institutions can lead the way in preparing environmental professionals while addressing critical community needs for climate resilience and environmental equity. The program's alignment with existing certifications and strong partnership framework positions it to make significant contributions to regional environmental workforce development.

This initiative represents a strategic investment in both environmental protection and community development, creating pathways for students to enter growing fields while addressing crucial environmental challenges in South King County.

A comprehensive approach to partnership development, funding, and community engagement ensures the program's sustainability and relevance to the workforce needs in the greater Federal Way region. By carefully cultivating relationships with educational institutions, industry partners, government agencies, and community organizations, while maintaining stable funding streams and meaningful community connections, the program will create lasting positive impact in this South King County region.

THE CIRCULAR ECONOMY:
A PATH TO SUSTAINABLE GROWTH IN WASHINGTON STATE

The circular economy is an innovative economic model that emphasizes the sustainable use of resources by promoting practices such as sharing, leasing, reusing, repairing, refurbishing, and recycling materials and products for as long as possible. By extending the lifecycle of products and minimizing waste, the circular economy aims to create a closed-loop system where materials are continuously repurposed, thus conserving natural resources and reducing pollution. Ultimately, it seeks to foster a regenerative economic framework that supports environmental sustainability while enhancing economic resilience and social equity.

The circular economy offers substantial opportunities for economic growth and impact at local, regional, and national levels, decoupling economic development from resource consumption. By promoting durable, reusable, and recyclable product design, the circular economy enhances resource efficiency and reduces waste, fostering environmental justice and equitable access. It addresses existing inequalities while generating meaningful economic benefits and opportunities, with the potential to positively reshape our economic landscape.

In Washington State, climate education and circular economy initiatives are at the forefront, making the state a national leader in this arena. Numerous programs focus on environmental justice, sustainability, and economic growth through innovative projects and collaborations. The implementation of a centralized hub and investment in leadership in South King County would further enhance these efforts by providing a platform for initiatives that promote climate-focused STEM careers, K-12 education, industry-recognized certificates, and community engagement. By addressing environmental equity and fostering community involvement, Washington State continues to lead the movement toward a more sustainable and inclusive future.

Climate-Focused Innovation with Community

In Washington State, industry partners can create market career opportunities in climate-focused industries by leveraging existing initiatives and developing community-led efforts. These opportunities aim to bridge historical inequities and enhance inclusion by facilitating access to education and jobs, particularly in diverse communities. Notable initiatives include the U.S. Climate Alliance's Governors' Climate-Ready Workforce Initiative and the American Climate Corps, which aim to create pathways for underrepresented groups to enter high-quality clean energy careers.

In other parts of the country, innovation and climate are a winning combination. Examples from the “Innovation Economy and Placemaking in Federal Way” report by the Innovation Collective, they highlight the clean energy sector growth, and public space investments of Fort Collins, Colorado. With intersections of business, research, government, and community engagement “...showcase Boulder’s natural beauty and outdoor recreational opportunities but also highlight its role as a center for innovation and technology in the outdoor industry.” Other examples such as Asheville, North Carolina convene culture, expression, and humanity by showcasing the community at its core.

Programs such as Boston's Heatwise EcoEquity Initiative and the Paskenta Band of Nomlaki Indians' solar microgrid in California exemplify how targeted efforts can promote climate justice and economic opportunities for marginalized communities. Additionally, the Duwamish Superfund cleanup in Washington demonstrates the importance of community involvement in environmental restoration projects. The collaboration between community-led organizations, nonprofits, and government entities has resulted in significant progress that positively impacts both the environment and surrounding communities.

Funding initiatives like the EPA's Environmental and Climate Justice Program further enhance climate resilience and support overburdened areas. The federal Justice40 Initiative seeks to ensure that at least 40% of benefits from climate investments reach disadvantaged populations. These efforts underscore a commitment to ensuring that climate investment benefits reach those most in need while fostering both environmental and economic equity.

Community-Based Solutions

In Washington State, particularly in South King County, several existing and potential community-based organizations focus on the circular economy, environmental equity, and connecting communities with nature. Established organizations such as Front and Centered, Khalsa Gurmat Center, Pacific Islander Community Association of WA (PICA-WA), Zero Waste Washington, South King Tool Library, Korean Youth Ecology, and Earth Corps work to address environmental justice issues while restoring local ecosystems and engaging communities in stewardship.

Potential initiatives include environmental justice education programs, lending libraries, deconstruction training programs, restoration projects, community gardens, urban farming efforts, citizen science programs, small business accelerators, green job training programs, repair training workshops, upcycling initiatives, pitch competitions for startups, and youth environmental leadership programs. These efforts empower local communities—especially those historically marginalized—to participate in environmental initiatives while fostering a deeper connection with nature.

Industry Intersectionality

Industry intersectionality approaches within the circular economy are gaining prominence in Washington State as well as across the U.S. This approach aims to eliminate industry waste while maximizing resources for centralized environmental and economic benefits to communities through cost savings and career growth.

In Washington State, sustainable practices are already being implemented across sectors. Seattle's Bullitt Center exemplifies sustainable building practices with features like on-site renewable energy generation and water efficiency measures. In healthcare sectors like Providence St. Joseph Health are leading efforts toward carbon negativity by 2030 through supply chain logistics optimization and food waste reduction strategies.

Partnerships with regional programs like Health Industry Leadership Table (HILT) could address challenges posed by these goals. The circular economy is revolutionizing multiple sectors by promoting sustainable practices that prioritize resource efficiency while reducing waste. In art and design sectors, creators utilize upcycled materials to produce unique works with minimal environmental footprints. Engineering sectors adopt circular principles to enhance product longevity while driving down costs.

Community development initiatives harness circular practices to foster local economies by creating jobs that build resilient communities. By intertwining ecological responsibility with economic viability across various industries—including art, design engineering—the circular economy paves the way for a more sustainable future that leverages environmental impacts alongside economic benefits.

Careers and Workforce Development

Washington State boasts a robust ecosystem of climate-focused STEM career opportunities that can be further expanded to include sustainable practices alongside circular economy principles. These opportunities can diversify the workforce while providing meaningful pathways for emerging professionals as well as those re-engaging with work after a hiatus.

Programs such as the Washington Climate Corps Network; Pacific Northwest Center of Excellence for Clean Energy; university-based initiatives like Clean Energy Institute enable individuals access entry-level positions or apprenticeships within clean energy technology fields or environmental conservation roles.

Projected aging among industry workers in the South Sound, coupled with shifts in market demand, could falter without anticipated workforce adjustments like adaptive modeling or retraining programs. Compelling projects like The Reclaim Project in Spokane demonstrate successful integration of circular construction careers through deconstruction training—highlighting potential for similar programs supporting workforce reintegration while adopting sustainable practices within construction industries.

Strategic partnerships among state agencies educational institutions industry leaders are essential for addressing workforce gaps while creating comprehensive career pathways—collaborative efforts such as Career Connect Washington; Washington STEM; EarthLab connect research capabilities directly with community needs supporting work-based learning programs developing curricula tackling emerging climate challenges.

Moreover community-led certification training programs like “Tools for Life” offered by various tool libraries encourage intergenerational learning, skill development, and community investment. Several universities—including those located within Washington—now offer certificates courses focused on circular economies indicating viable opportunity available community technical colleges develop similar programs less traditional post-secondary education settings.

Building a Talent Pipeline for Circular Economy

A Climate Campus in South King County would serve as a centralized hub for resources to enhance opportunities for students to explore environmentally-based fields at every level.

According to Washington Office Superintendent Public Instruction (OSPI) best practices regarding climate education emphasize hands-on interdisciplinary learning empowering students take action through community-focused projects collaboration local organizations starting early childhood engagement fosters intergenerational learning community involvement preparing young learners become informed advocates resilient futures.

Early Education Foundation

Washington State recognizes that building a skilled workforce for the circular economy must begin early. The ClimeTime program serves as the cornerstone of K-12 education, providing educators with comprehensive resources to integrate sustainability concepts across all subject areas. Rather than treating environmental education as a separate subject, teachers weave circular economy principles into mathematics, science, social studies, and even language arts. For example, students might analyze data from their school's recycling program in mathematics class while exploring the environmental impact of waste in science.

Middle and High School Engagement

As students progress through middle and high school, NextCycle Washington builds upon this foundation by introducing more sophisticated concepts of circular economy principles. The program creates hands-on learning opportunities where students can see these principles in action. For instance, high school students might participate in designing and implementing waste reduction systems for their schools or collaborate with local businesses to analyze their sustainability practices. The Office of Superintendent of Public Instruction supports these efforts by emphasizing project-based learning that connects students with real community challenges, helping them understand how classroom concepts translate to practical solutions.

Bridge to Higher Education

The transition from K-12 to higher education represents a crucial junction in the workforce development pipeline. Washington has created several bridge programs that help students navigate this transition. The Washington Climate Corps Network plays a vital role here, offering internships and mentorship opportunities that expose students to potential career paths while they're still in high school. These experiences help students make informed decisions about their educational and career trajectories while building valuable professional networks.

Higher Education Pathways

At the collegiate level, Washington's approach becomes more specialized and career-focused. The Clean Energy Institute at the University of Washington serves as a hub for advanced research and education in sustainable technologies. Students can pursue various pathways aligned with their interests and career goals.

- Technical Programs: The Pacific Northwest Center of Excellence for Clean Energy offers specialized training in renewable energy systems and sustainable infrastructure maintenance.
- Research Tracks: University programs provide opportunities for students to contribute to cutting-edge research in circular economy innovations.
- Industry Partnerships: Collaborative projects with local businesses give students hands-on experience with real-world sustainability challenges.

Washington State has implemented educational initiatives aimed at engaging young learners regarding climate science sustainability—for instance ClimeTime supports educators grants resources related specifically towards climate education integration Next Generation Science Standards ensures students learn about environmental impacts connections between climate change natural resources.

Programs such as NextCycle Washington further promote circular economy education—highlighting potential sites similar Weyerhauser campus Federal Way would serve well

Certificates and Training Opportunities

In line with Washington State's Workforce Education and Training and efforts spearheaded at both University of Washington, Washington’s Office of Superintendent of Public Instruction (OSPI), the Ellen

MacArthur Foundation's Circular Economy Learning Paths, and the Washington Department of Ecology - there is a need for growth to access of formalize certifications, and trainings in the circular economy.

A proposed industry-recognized certificate program for postsecondary students in Washington state would focus on climate resilience, environmental equity, and circular economy principles. A potential program structure could include a core curriculum covering fundamental concepts, specialized tracks for in-depth study, and practical components such as internships and community-based projects.

Key recommendations for a certificate program include integrating real-world applications through partnerships with local initiatives, emphasizing community engagement and environmental justice, and incorporating resilience planning. Such a certificate program also promotes interdisciplinary learning, develops industry partnerships, and focuses on innovative technologies and data analysis.

Conclusion

Washington State leads the way regarding climate education circular economy initiatives driving environmental justice sustainability economic growth through innovative projects collaborations adopting comprehensive strategies establishing strong pathways actively engaging communities empowering workforce citizens become well-informed advocates resilient futures creation centralized hub leadership South King County will further enhance these efforts providing platform address challenges cultivate diverse opportunities growth social equity—as national leader sustainable development climate resilience continues pave way more equitable future all.

CREEC

CLIMATE RESILIENCE & ENVIRONMENTAL ECONOMIC CAMPUS

POTENTIAL CAMPUS LOCATIONS

CLIMATE RESILIENCE & ENVIRONMENTAL ECONOMY CAMPUS

House Representative Kristine Reeves (District 30), in consultation with the state Capital Budget team and economic development staff, have identified four properties of regional significance to explore in South King County. The four sites under consideration represent diverse opportunities for environmental education and workforce development in South King County.

The Washington Department of Commerce has contracted with the Greater Federal Way Chamber to assess the economic viability of creating an environment economy campus focused on STEM education and workforce development opportunities in the climate resiliency space.

Identified Sites for Campus Consideration

Camp Kilworth: A 25-acre former Boy Scouts property now managed by the YMCA, is being revitalized for environmental education and community engagement. The site is projected to serve over 5,000 youth annually starting in 2024 through outdoor education programs, with a particular focus on reaching underserved youth populations. The property supports biodiversity and conservation efforts while creating opportunities for roles in outdoor education, youth mentoring, and event management.

Located on the shoreline of Puget Sound in what is now the City of Federal Way in Southwest King County, Camp Kilworth was initially developed for the Boy Scouts of America Troops of Tacoma, which included Browns Point and Dash Point. From 1934 until 2016, it was one of five camps operated by the Pacific Harbors Council of Tacoma, BSA National. Camp Kilworth spans over 25 acres and includes two historically significant buildings, Timberwolf Lodge and Rotary Lodge.

Dash Point State Park: Dash Point State Park is a popular regional destination for outdoor activities including hiking, camping, and beach recreation. The park plays an important role in conservation, particularly for its marine shorelines and forest ecosystems. It supports employment across various sectors including park management, environmental education, tourism, and sustainability-focused positions. The park's contribution to local tourism makes it a valuable economic asset, while its environmental programs and educational initiatives enhance its long-term sustainability.

Established in 1922, Dash Point State Park is a 461-acre Washington state park on Puget Sound that straddles the line between King and Pierce counties. The park has over 3,300 feet (1,000 m) of shoreline, 140 campsites, 11 miles of trails for hiking and mountain biking, and offers beachcombing, fishing, swimming, birdwatching, windsurfing, skimboarding, and wildlife viewing.

The Dash Point area has been the subject of three survey expeditions since 1800. In the past, the property was called lson Landing, Fairview Beach and Woodstock Beach. In the late 1940s, the McLeod family sold the

land to the state of Washington with the understanding the property would be used as a park. The park was dedicated in 1962.

Woodbridge Corporate Park: Located in Federal Way, functions as a business hub hosting companies in technology, logistics, and professional services. While primarily a commercial property, the site presents opportunities for green building initiatives and sustainability upgrades. The park supports jobs in business services, technology, logistics, and sustainability-focused positions such as green building specialists and environmental impact assessors. Its diverse business ecosystem contributes to job creation and economic stability in the region.

The Woodbridge Corporate Park (formerly the Weyerhaeuser Corporate Campus), located in Federal Way, Washington, was a collaborative design project between architect Charles Bassett, landscape architect Peter Walker, and George Weyerhaeuser. The 430-acre campus is visible from Interstate 5 and Highway 18 and emphasizes the integration of the headquarters building with the surrounding landscape. The building has five floors totaling 337,604 square feet. It allows multiple access points with two separate entrances for four floors, connecting to six parking areas. The building also features two helipads.

The former headquarters building, which was completed in 1971 and once housed over 1,000 employees, was sold to the Industrial Realty Group (IRG) after Weyerhaeuser moved to a new facility in downtown Seattle in 2016.

The U.S. General Services Administration: The GSA facility plays an essential role in supporting federal services and providing infrastructure for the federal workforce. The facility adheres to sustainability mandates, including energy-efficient building designs and operational standards aligned with green certifications like LEED. Employment opportunities at the GSA facility include federal positions, facility management roles, and sustainability-focused positions such as energy efficiency experts and green building specialists. While the facility provides stable, long-term employment in government services, its focus on environmental education and community engagement is more limited compared to other sites

GSA's Northwest/Arctic Region serves government agencies who represent more than 94,000 federal workers in Alaska, Idaho, Oregon, and Washington. With offices in 15 cities, they deliver services, innovation, and value to civilian and military agencies anywhere around the world. They work in design, real estate management, information technology, fleet, credit cards, travel services, supplies and services, and real and personal property disposal.

CREEC

CLIMATE RESILIENCE & ENVIRONMENTAL ECONOMIC CAMPUS

SURVEY & INTERVIEWS

Survey & Interviews Overview

To aid in the efforts of this report to assess the economic viability of creating an environmentally focused campus featuring STEM education and workforce development opportunities in the climate resiliency space, a survey was designed for local community business and service leaders.

This study seeks to understand the public/private partnership opportunities around the potential economic development of a Climate Resilience & Environmental Economic Campus in the South King County area and to evaluate the potential of four possible local sites.

The survey was sent to identified local and regional stakeholders comprised of business, education, non-profit, and government entities. Additional one-on-one, in-person outreach was conducted.

Survey Findings

- 96.8% of respondents indicated support for the development of the campus.
- 93.5% of respondents expressed interest in environmental education for younger learners (e.g., Early Learning and K-12).
- According to respondents, most industry sectors show strong readiness for economic development.
- The average ratings for specific site evaluations (e.g., Camp Kilworth) suggest varied perceptions of their potential, especially regarding transportation needs.
- These findings indicate strong community and stakeholder support for both the proposed campus and related educational initiatives.

The survey reveals significant interest and support for developing a Climate Resiliency and Environmental Economy Campus in South King County. While environmental and educational benefits are widely recognized, economic and infrastructure readiness present areas for further exploration. Trust levels vary, with the Education Sector and the Chamber being favored leaders in the initiative. The findings underscore the need for robust community engagement and tailored partnerships to address specific occupational priorities and regional needs.

SURVEY QUESTIONS

Question #1:

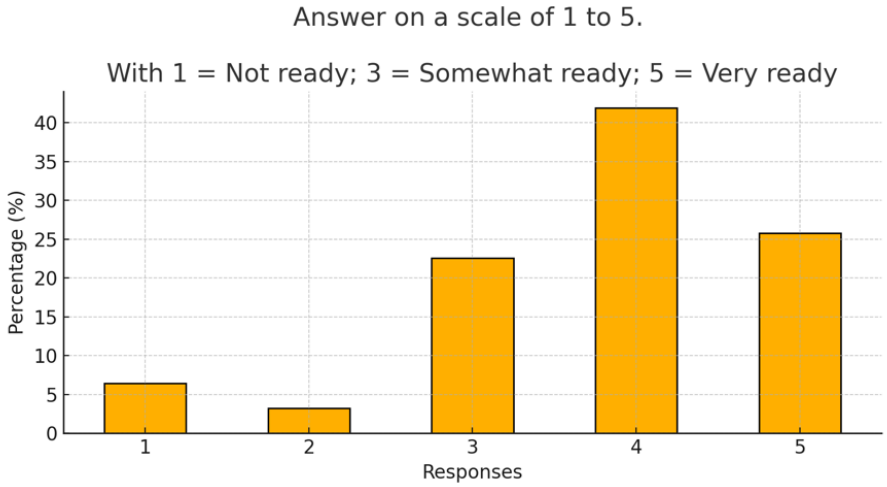
Opportunities for the development of green/clean technology with a focus on natural resources runs across a range of industry sectors. The Chamber has identified Healthcare, Construction/Logistics, Maritime, Aerospace, Software and Information as fast-growing industry sectors for job creation in South King County.

Please indicate how ready you think each of those industry sectors are for economic development in South King County.

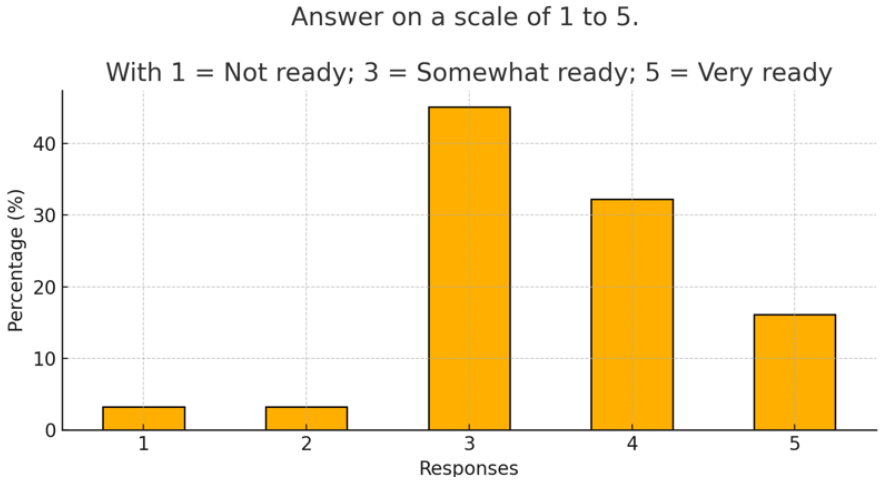
Answer scale of 1-to-5 with: 1 = Not ready; 3 = Somewhat ready; 5 = Very ready

Results:

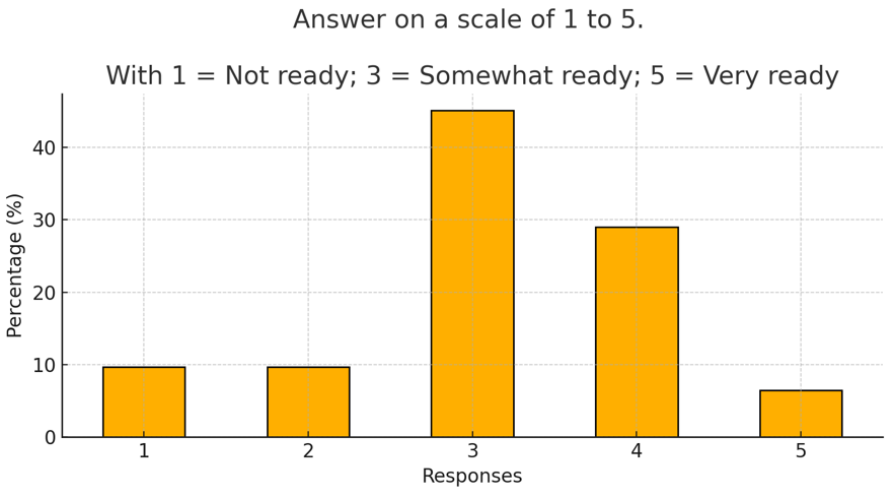
Healthcare Industry



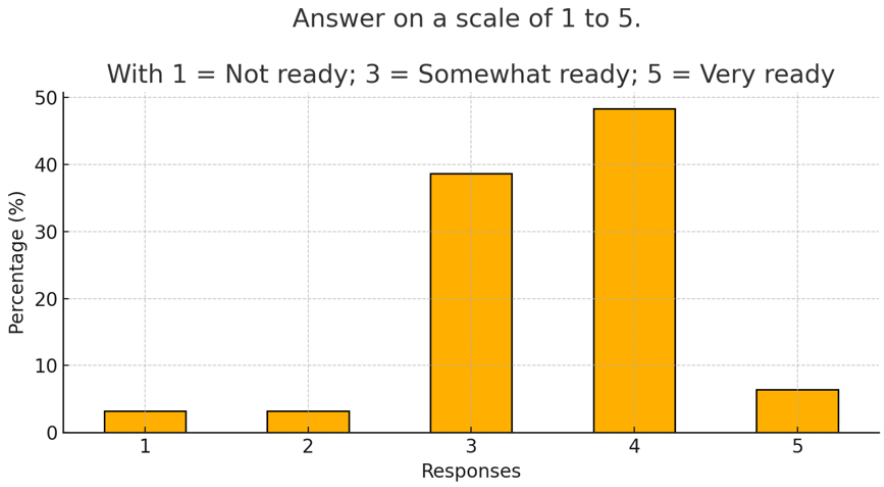
Construction/Logistics Industry



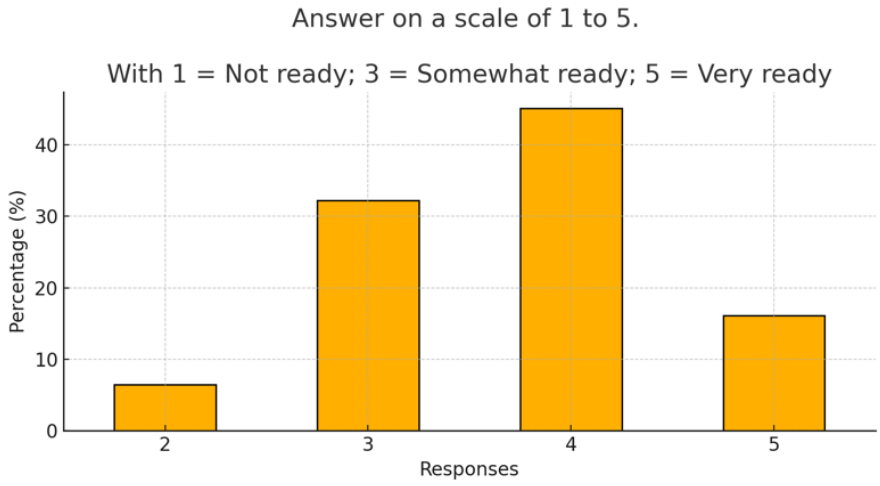
Maritime



Aerospace



Software and Information Industry



Insights:

Healthcare:

- Responses ranged from "Not Ready" to "Very Ready," with a mean readiness rating of approximately **3.5**. This suggests a moderate level of readiness with room for growth, potentially in infrastructure or workforce alignment.

Construction/Logistics:

- The average rating was **3.6**, with most responses leaning towards "Somewhat Ready" or higher. This reflects confidence in this sector's potential, possibly due to existing resources in logistics hubs.

Maritime:

- Ratings were more varied, averaging around **3.1**, indicating a perception of some readiness but with significant development required to optimize opportunities.

Aerospace:

- With an average score of **3.4**, this sector reflects a recognized strength in the region but may require additional support for green and sustainable advancements.

Software and Information:

- Scoring an average of **3.7**, this sector is seen as one of the most prepared for development, likely due to the region's established tech ecosystem.

Summary:

Respondents rated readiness across key industries with averages ranging from 3.1 to 3.8, indicating moderate readiness overall. The Software and Information sector leads slightly, followed by Healthcare.

Healthcare and **Construction/Logistics** industries show moderate readiness for economic development, with a mean rating near "Somewhat Ready.

Maritime and **Software/Information** sectors have slightly higher perceived readiness compared to Aerospace, but all sectors exhibit varying levels of readiness depending on the respondent's industry familiarity.

Question #2:

Please share the names of any companies in the region that you see as leaders in any of these five spaces.

Open text answer

Results:

- Applexus
- Berger ABAM
- Blue Origin (x3)
- Boeing (x6)
- CHI/Virginia Mason
- Franciscan Health (x3)
- Kaiser Permanente
- Kiewit Construction
- Lloyd Enterprises
- MultiCare (x2)
- Orion
- Peweit
- Port of Seattle
- Sound Transit
- Tote (x2)
- Totem Ocean
- UW | Valley Medical Center
- Virginia Mason (x4)

Summary:

These companies can provide a starting point for possible partnerships while also showing pre-approval from respondents that could result in more engaged collaborations and enthusiasm for a potential campus project.

Question #3:

Of the sites considered, four were identified by the State as having regional significance that aligns with environmental and workforce opportunities: Camp Kilworth; U.S. General Systems Administration building; Woodbridge Corporate Park; Dash Point Park.

Please indicate how much you think each potential site can meet the needs of environment, economy, and education.

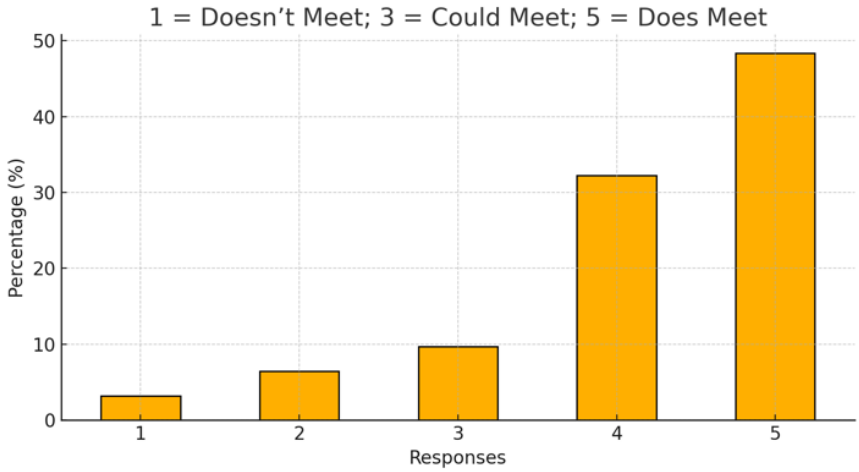
Environment (Alignment to environmental legacy)
Economic (Opportunity for economic growth)
Education (Potential for educational opportunities)
Transportation (Accessibility to transportation)

Answer Scale of 1-to-5 with: 1 = Doesn't Meet; 3 = Could Meet; 5 = Does Meet

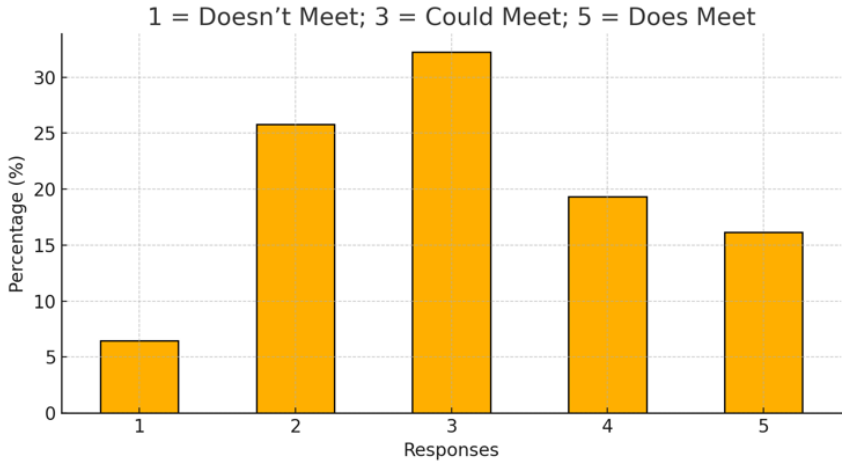
Results:

Camp Kilworth Results:

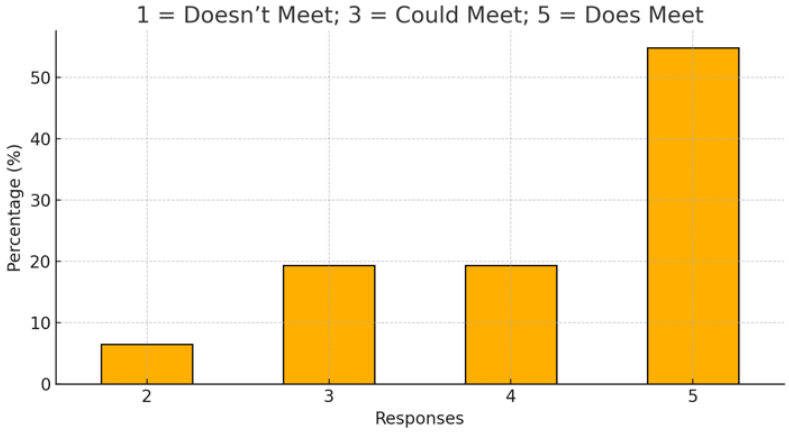
Environment (Alignment to environmental legacy)



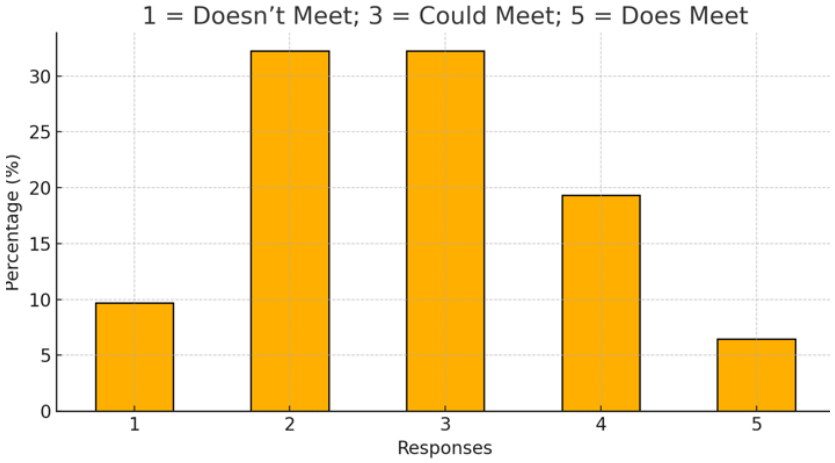
Economic (Opportunity for economic growth)



Education (Potential for educational opportunities)

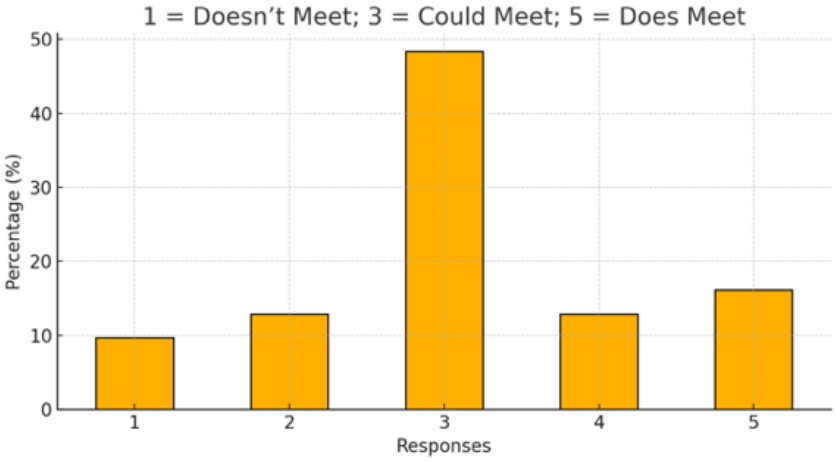


Transportation (Accessibility to transportation)

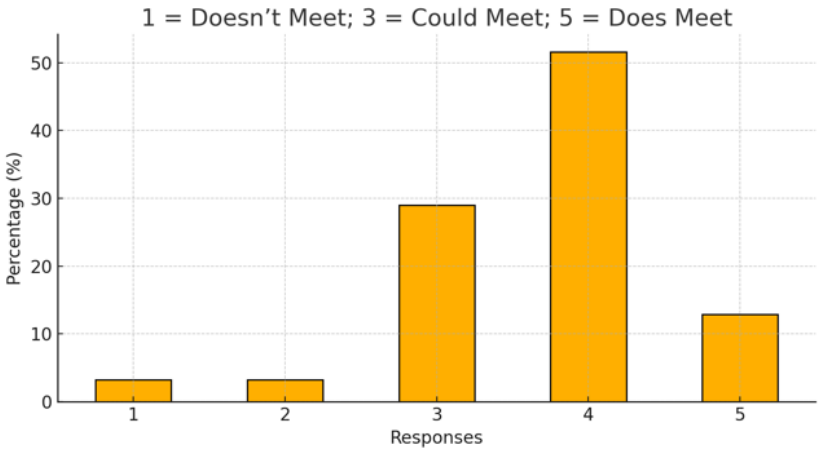


U.S. General Systems Administration Results:

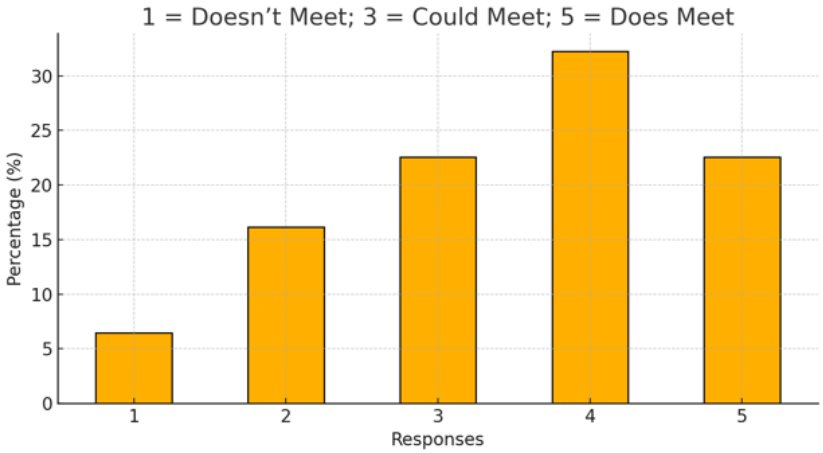
Environment (Alignment to environmental legacy)



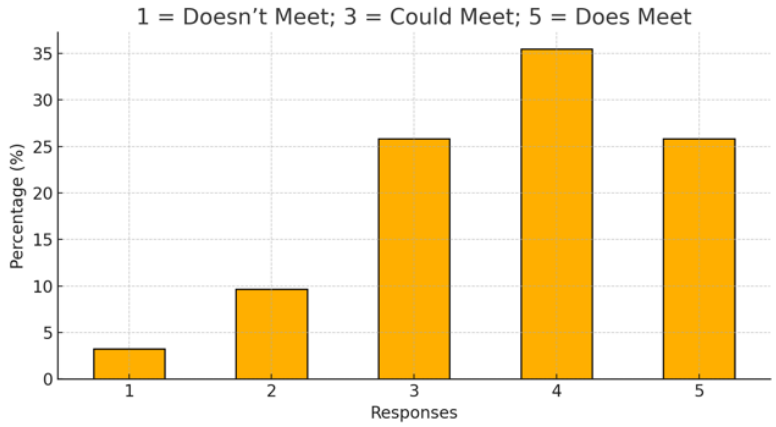
Economic (Opportunity for economic growth)



Education (Potential for educational opportunities)

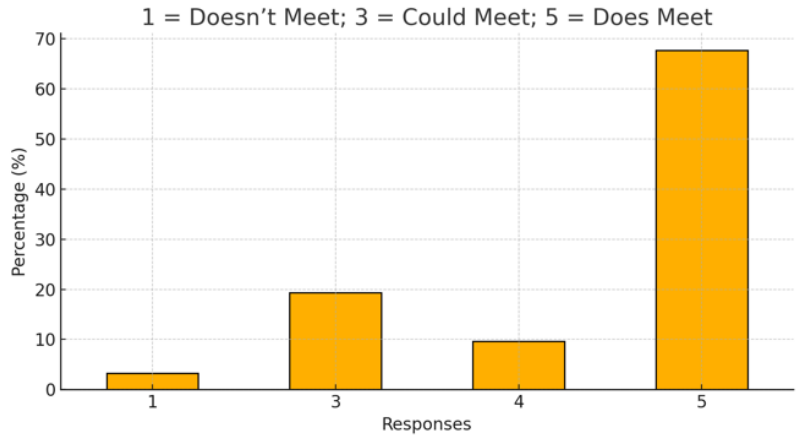


Transportation (Accessibility to transportation)

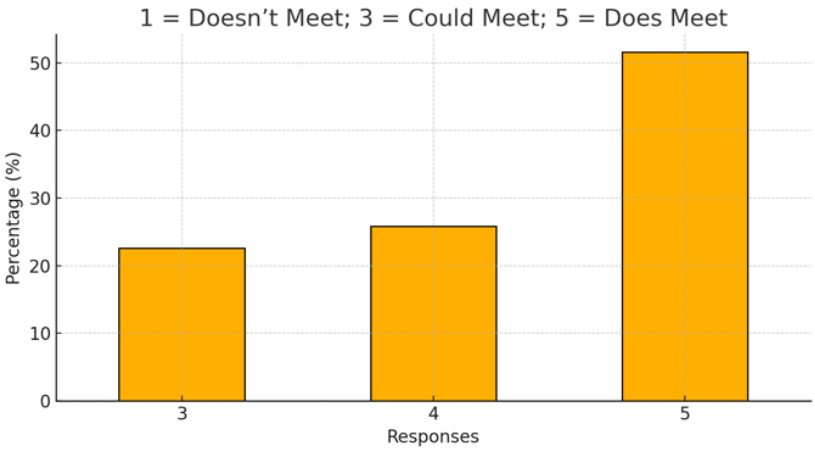


Woodbridge Corporate Park Results:

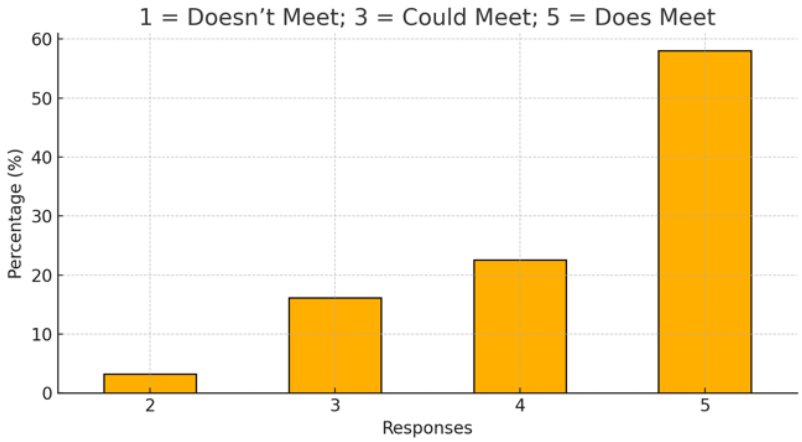
Environment (Alignment to environmental legacy)



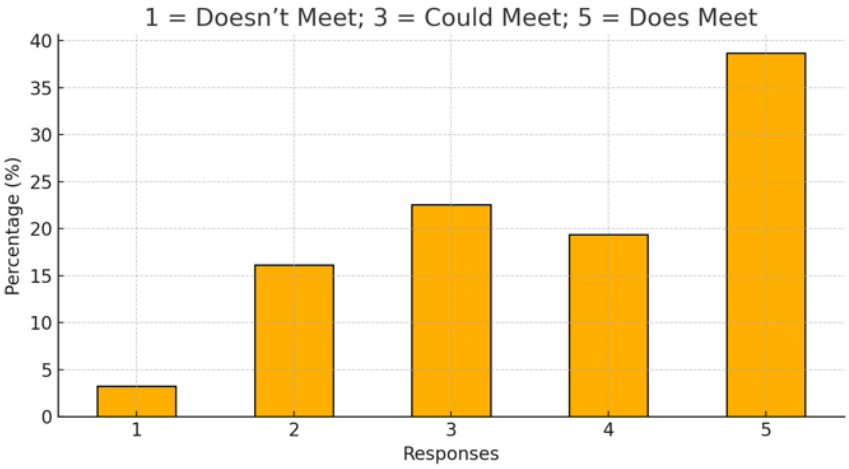
Economic (Opportunity for economic growth)



Education (Potential for educational opportunities)

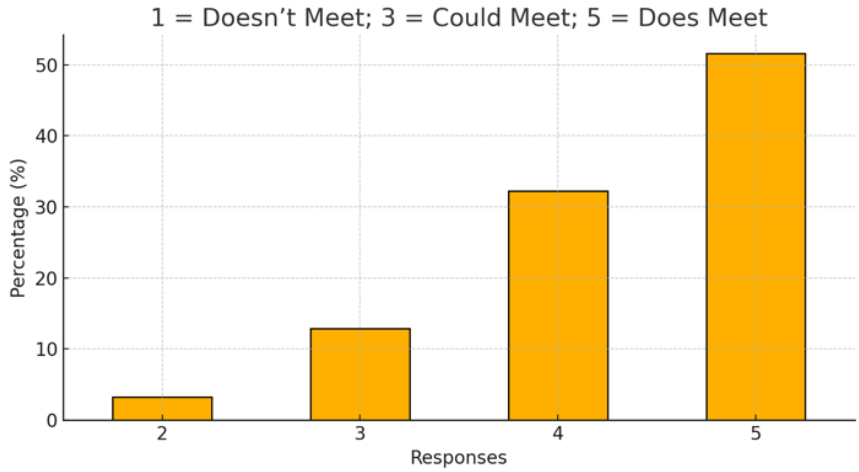


Transportation (Accessibility to transportation)

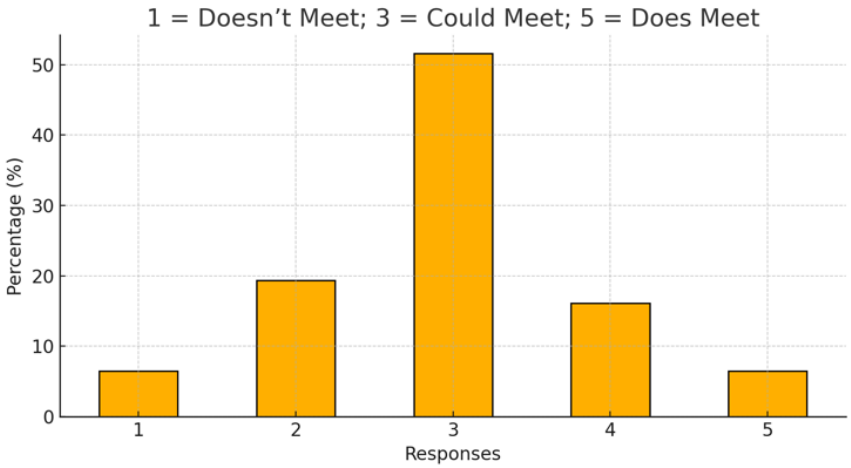


Dash Point Park Results:

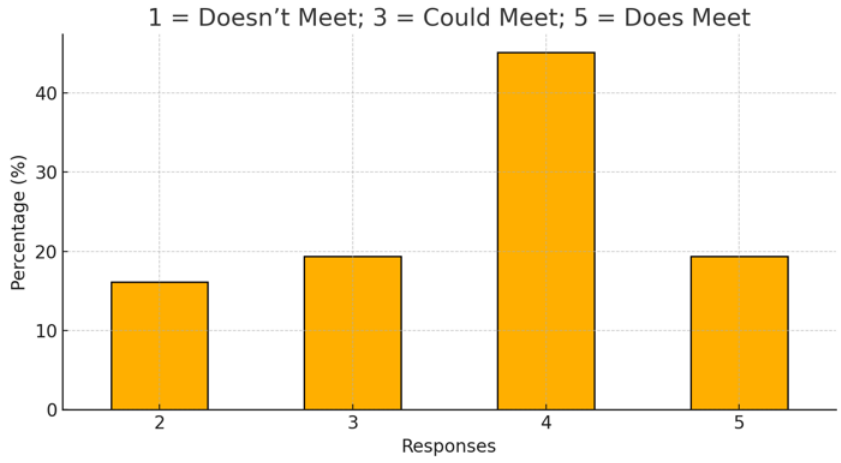
Environment (Alignment to environmental legacy)



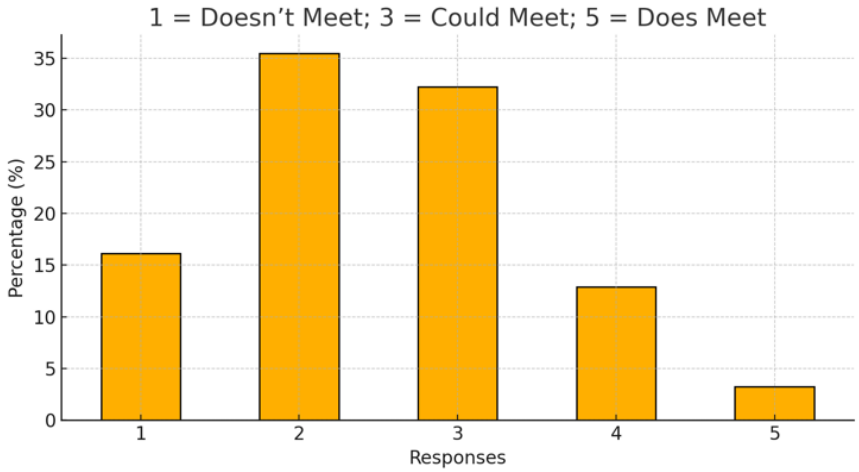
Economic (Opportunity for economic growth)



Education (Potential for educational opportunities)



Transportation (Accessibility to transportation)



Insights:

- **Woodbridge Corporate Park** showed the highest scores for environmental (4.4), economic (4.3), and educational (4.4) opportunities.
- **Camp Kilworth** is well-supported for environmental and educational alignment but faces challenges in transportation readiness (2.8).
- **Dash Point Park** emphasizes environmental alignment (4.3) but also has low transportation readiness (2.5).
- **U.S. General Systems Administration** showed moderate potential across metrics (3.1-3.7)

Summary:

Camp Kilworth and **Dash Point Park** are seen as strong candidates for meeting environmental and educational needs, with high scores for alignment to environmental legacy and educational opportunities. Economic and transportation needs scored lower across all sites, signaling potential challenges or areas for improvement in accessibility and economic viability.

Question #4:

Is there another site in South King County that meets the criteria for consideration?

Open text answer

Results:

Des Moines Waterfront Area; Dumas Bay; Former Salty's Building; Green River College Campus (x2); Landmark on the Sound in Des Moines

Summary:

Various potential locations were mentioned with the Green River College Campus mentioned twice as a place to consider. Respondents who answered “Green River College Campus” did not report any affiliation or employment with the college (Occupation and Job Titles were required to participate in this survey).

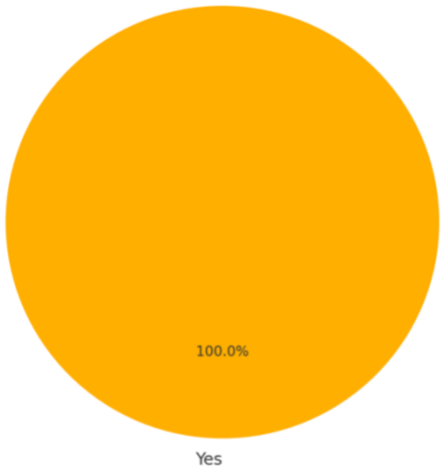
Whether there is a need to formally include any of these sites in future evaluations for this project should be considered.

Question #5:

Would you like to see career pathways, training, and certification opportunities in climate focused science, technology, engineering, and mathematics housed at the campus?

Multiple Choice answer: Yes or No

Results:



Insights:

All respondents reported a desire to see full workforce training and support opportunities housed at a potential campus.

Summary:

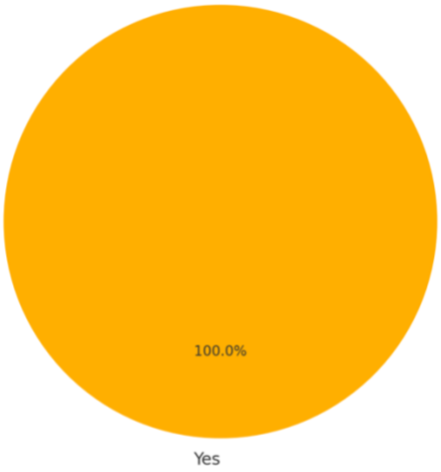
Respondents all would like to have trainings, consulting, and certification opportunities.

Question #6:

Would you like to see the development of environmental education for younger learners (i.e. Early Learning and K-12), to engage with climate science and nature?

Multiple Choice answer: Yes or No

Results:



Summary:

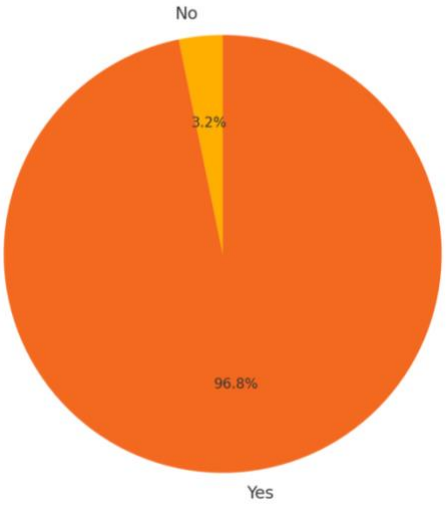
According to respondents, development of environmental education for younger learners should be a primary and integral focus of a potential campus.

Question #7:

Do you believe we need community engagement around ecological issues impacting the health and sustainability of our region?

Multiple Choice answer: Yes or No

Results:



Insights:

One elected official with the local government (City of Federal Way) said they do not believe that community engagement around this topic is needed.

Summary:

Despite one respondent who does not see a need for community engagement, all other surveyed see a need in the community for engagement around ecological issues.

Question #8:

What environmental issues in South King County would you like to see addressed on this campus?

Open answer text response

Results:

Access to Open Spaces, Air Quality, Alternative Energy Use and Development, Arts, Bio Diversity, Carbon Footprint Reduction and Sustainable Transportation, Circular Economy Startups and Integrations, Clean Air, Clean Rivers, Clean Water, Climate Resilience, Coastal, Coastal Erosion and Climate Change, Composting at Household and Business Level, Connection with Tribes, Construction Waste/Deconstruction, Educational, Education and Research, Energy, Enhance the Tree Canopy for Fresh Air, Environmental Conservation, Environmental Justice, Environmental Impact (Across Sectors), Finding Better Solutions Instead of Taking Shortcuts That Impact the Environment, Forest Management, Forestry, Given Our History, Mass Timber Architecture Technology and Research, Groundwater Protection, Healthy Waterways, Hiking and Biking, Littering and Walkable Communities, Make Decisions With a Strategic, Forward-Thinking, Long-Term Perspective, Native Restoration and Natural Resource Preservation, Natural Areas, Natural Resources, Noise and Air Pollution From I-5 Affects, Recycling, Recycling and Waste Management, Regenerative Farming, Sensible and Balanced Use of Natural Resources, Soil Contamination From Asarco Drift, Suburban Farming, Supply Chain, Sustainability, Sustainable Food Sources, Sustainable Housing, Sustainable Practices, Sustainable Resources, The Importance of Disposing of Waste Properly, Transportation Issues and Education, Transportation: South King County Is a Car-Driven Geography. That Needs to Change, Urban Agriculture, Waste Reduction, Water Quality, Water/Salmon Populations, Watershed Health, Watershed Conservation, Wildlife Corridor Protection, Wildlife Habitat.

Insights:

From the responses, sustainability emerges as the overarching theme, focusing on responsible resource management, reducing carbon footprints, and promoting practices that ensure environmental health for future generations. Many items emphasize creating a balanced relationship between human activities and nature, reflecting a desire for long-term environmental resilience and sustainability.

- **Sustainability and Waste Reduction**: Frequent mentions of recycling, waste management, and clean energy.
- **Land and Water Conservation**: Requests for clean rivers and coastal protection suggest a strong desire to preserve local natural resources.
- **Community Engagement**: Many respondents expressed interest in accessible green spaces and educational programming for all age groups.

Top themes mentioned include:

- **Environmental Justice** (3 mentions)
- **Air Quality** (2 mentions)
- **Sustainability**, **Natural Resources**, and **Clean Air** (1 mention each).
- **Environmental Priorities:** Key concerns included environmental justice, air quality, sustainability, and clean air.

Summary:

The most common issues revolve around pollution control (particularly air and water quality) as well as sustainable practices such as recycling and waste management. The recurring emphasis on sustainability underscores a community-wide recognition of the need to balance environmental stewardship with societal and economic development.

The responses also show that community members reflect a strong emphasis on sustainability, conservation, and improving quality of life. The results tend to reveal the community is deeply engaged with environmental challenges and eager to see meaningful action taken in key areas.

Question #9:

What kind of on-campus programming around workforce training, potential business development, and other educational opportunities should this campus feature?

Open answer text response

Results:

Alternative Energy; Apprenticeship; Architecture Design; Business Analytics and Technical; Career Pathways in Environmental Sciences; Career Pathways in Food Production; Childcare and Early Learning Training and Certification Programs; Clean Energy Job Opportunities and Training; Climate Resiliency; Climate Smart Agriculture; Community-Based Solutions; Economic Development; Education Certification for Students and Professionals; Ensuring Environmental Justice; Environmentally Friendly Architecture; Flora and Fauna; Forestry; Green Infrastructure; Grant Supports; Habitat Restoration; Hands-On Learning; How to Incorporate Climate Resilience and Sustainability into Existing Industries; Hubbed Resources for NPOs/CBOs; Incubators/Accelerators; Internships; Lifelong Learning Courses; Not Much if You Take It Off the Tax Roles; Not Sure. The Groundwork and a Plan Needs to Be Laid Before This Can Be Determined; Outdoor Education; Outdoor Education Guide Trainings; Outdoor Environmental Education Training; Partnership Opportunities; Recycling; Research Facilities; Seismic Resilience; Showcase Career Opportunities in Environmental Space; Small One-Off Community Workshops and Education Classes; Supply Chain Valuations/Impact; Sustainable Practices; Teacher Trainings and Certifications; The Intertwining of Cultural Education and Arts; Urban and Rural Development Considerations for Climate-Resilient Infrastructure; Waste Management; Water and Wastewater Technologies; Wilderness First Aid.

Insights:

There was nearly unanimous support for environmental education targeting younger learners, with respondents emphasizing:

- Early integration of climate science and nature-based learning.
- Creating awareness and skillsets for future generations.

Respondents indicated overwhelming interest in integrating STEM education and workforce training into the campus, with the majority advocating for:

- Career pathways in environmental sciences.
- Collaborative programs with businesses to enhance practical learning.
- Focus areas including sustainability, clean energy, and climate resiliency.

Top suggestions include: **Alternative Energy**, **Habitat Restoration**, and **Climate Resiliency**. One critique expressed concern about removing the campus from tax rolls.

Summary:

The list of programs highlights several recurring themes that reflect the community's priorities and aspirations. These themes emphasize sustainability, education, career development, and equitable resource management. Below are the most prominent themes based on the responses:

1. **Education and Training:** Preparing individuals for environmental challenges and green careers.
2. **Career Development:** Building pathways to meaningful and sustainable work opportunities.
3. **Sustainability:** Promoting eco-friendly practices and climate resilience.
4. **Community Resources:** Strengthening collaboration, innovation, and economic opportunity.
5. **Equity:** Ensuring fair access to programs and addressing environmental justice concerns.

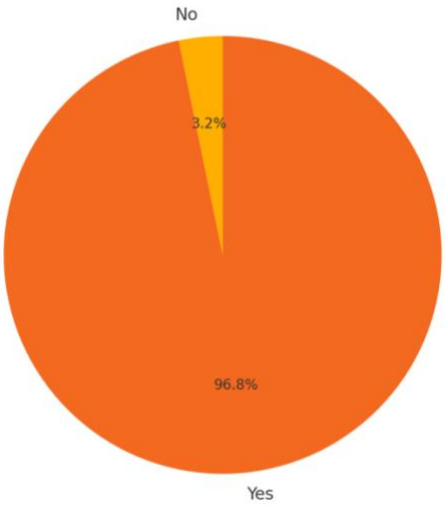
This feedback underscores the community’s desire for comprehensive, forward-thinking programs that empower individuals, support the environment, and foster an inclusive and sustainable future.

Question #10:

Would you like to see the development of environmental education for younger learners (i.e. Early Learning and K-12), to engage with climate science and nature?

Multiple Choice answer: Yes or No

Results:



Insights:

One elected official with the local government (City of Federal Way) said they would not like to see development of environmental education for younger learners to engage with climate science and nature.

Summary:

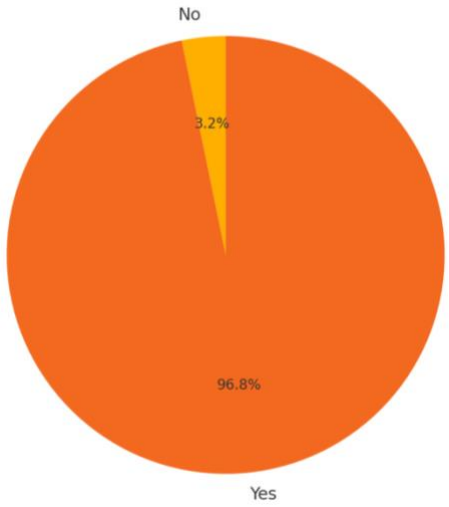
Despite one respondent who would not like to see the development of environmental education for younger learners, all other surveyed see a need for this and the results indicate that the creation of said education opportunities would be a benefit to the community.

Question #11:

Do you see a need for a campus like this in South King County?

Multiple Choice answer: Yes or No

Results:



Insight:

A strong **96.8%** of respondents supported the idea, citing:

- Urgent need for climate-focused workforce development.
- Potential for South King County to become a leader in green technologies and education.

Summary:

There is strong support for creating an environmentally focused campus with integrated STEM education and workforce development, aligning with community priorities in sustainability and climate resilience.

Question #12:

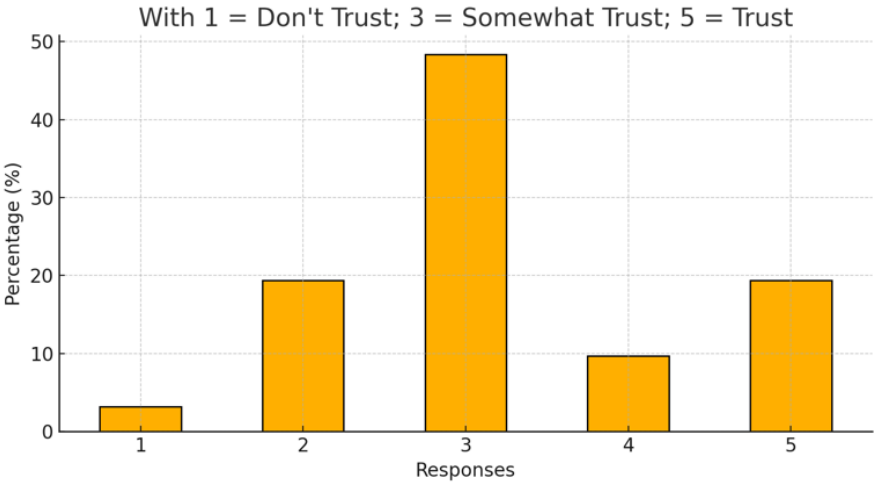
For each institution below, please indicate how much you trust that institution to lead this economic development partnership in South King County.

- State Government
- Local Government
- Chamber
- Education
- Industry

Answer scale of 1-to-5 with: 1 = Don't Trust; 3 = Somewhat Trust; 5 = Trust

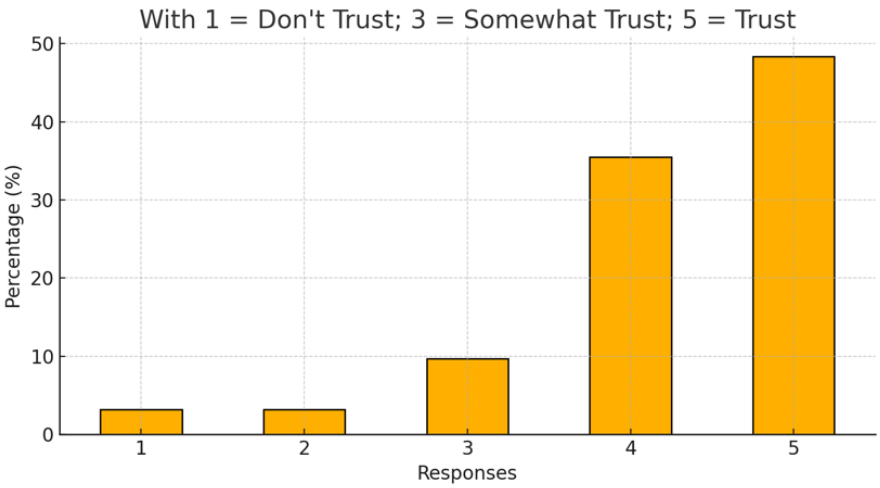
Results:

State Government Trust

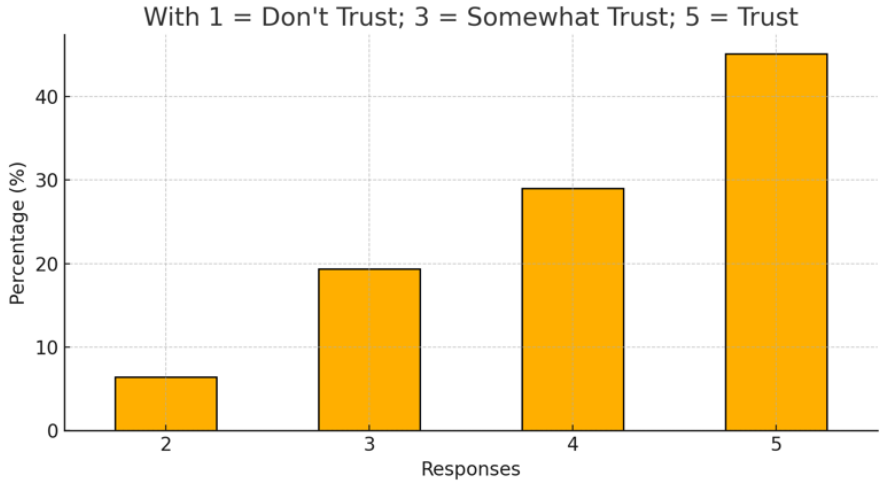


Local Government Trust

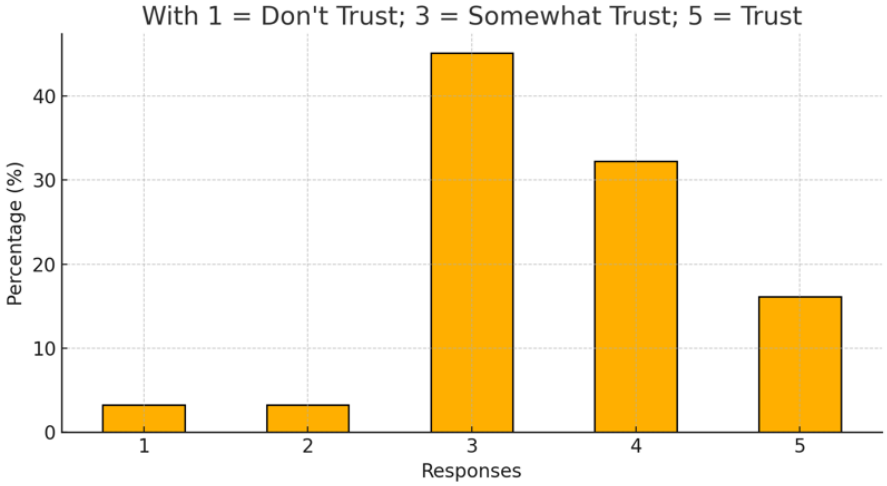
Chamber Trust



Education Trust



Local Industries Trust



Insights:

[Note: "Chamber" is an entity representing and supporting businesses; "Industries" represents individual businesses]

- The **Chamber of Commerce** is the most trusted entity for leading economic development partnerships, with mean trust scores exceeding "Somewhat Trust."
- **State and Local Governments** have lower trust scores, indicating skepticism from respondents.
- **Local Industries** scored moderately, reflecting variability in confidence among different sectors.
- Based on average trust score, the Chamber and Education Sector are shown to be the first and second most trusted entity, respectively.

Institution Trust Ranking

Institution	Average Trust Score
Chamber of Commerce	4.2
Education Sector	4.1
Industries	3.5
State Government	3.2
Local Government	3.1

Summary:

These findings align with broader national trends. According to a September 2024 survey, 67% of Americans expressed a great or fair amount of trust in their local government, and 55% felt the same about their state government. This suggests that while trust in local and state governments is relatively moderate, it is higher than the trust levels observed in your survey.

Regarding the **Chamber of Commerce** and **Industries**, national data indicates that trust in business remains strong. A study by the U.S. Chamber of Commerce Foundation found that over 80% of respondents hold positive views of both large and small businesses. This is consistent with the survey's high trust scores for the Chamber of Commerce and Industries.

The **Education Sector** also enjoys significant trust nationally. While specific percentages vary, educational institutions are generally viewed favorably, which aligns with the high trust levels observed in your survey.

In summary, the survey results are consistent with national trends, reflecting a higher trust in business and educational institutions compared to government entities. This may be due to the more direct and positive interactions individuals have with businesses and educational institutions, as well as perceptions of their effectiveness and reliability.

ADDITIONAL SURVEY INSIGHTS

Support for Climate Resilience and Economic Development:

A strong majority of respondents supported the development of a Climate Resiliency and Environmental Economy Campus in South King County, with 96% answering “Yes."

Perceived Readiness of Industry Sectors:

The healthcare, construction/logistics, and maritime sectors were viewed as moderately ready for economic development, with average scores ranging between 3 (somewhat ready) and 4 (ready).

Aerospace and software/information technology sectors scored slightly higher on readiness, reflecting a stronger perception of potential for economic growth.

Site-Specific Opportunities:

Respondents evaluated potential campus sites on environmental alignment, economic growth opportunities, and educational potential:

- **Dash Point Park** was rated highly for its environmental legacy and educational opportunities.
- **Camp Kilworth** showed potential for meeting both environmental and economic needs, but slightly lower scores in educational opportunity.

Workforce Development and Programming:

Respondents expressed interest in diverse programming, including sustainable practices, career pathways in environmental sciences, and partnerships with local industries.

Early learning and K-12 environmental education received unanimous support, emphasizing the importance of engaging younger learners.

Key Challenges and Priorities:

Top environmental issues included sustainability, clean water access, and waste reduction.

Workforce development should focus on partnerships with industry leaders and fostering STEM-related career pathways.

Conclusion

The survey results indicate robust community interest in developing a Climate Resiliency and Environmental Economy Campus. However, strategic focus is needed on transportation infrastructure and engaging government stakeholders to ensure comprehensive support.

Summary of desired outcomes based on survey results:

- **Strengthen Public-Private Partnerships**:
  Engage local industries, government, and educational institutions to support site development and programming alignment with workforce needs.

- **Focus on Environmental and Educational Alignment**:
  Prioritize campuses with strong environmental legacies, like Dash Point Park, for STEM and sustainability-focused education.

- **Expand STEM Opportunities**:
  Leverage existing interest to develop specialized training programs in climate resiliency, green technology, and industry-specific applications.

Respondents indicated robust support for the development of a Climate Resiliency and Environmental Economy campus in South King County. Most recognize the need for targeted workforce development and STEM education to build resilience against climate challenges. While the tech and construction sectors are seen as highly prepared, maritime and healthcare sectors could benefit from additional investment. Overall, the findings highlight the community's strong interest in fostering economic development in the Federal Way growth hub that aligns with sustainability and environmental stewardship.

QUALITATIVE REVIEW: RECURRING THEMES

Interviews were conducted with a range of stakeholders over a three-month period. Stakeholders included, but were not limited to, representatives from: Weyerhaeuser, the Nature Conservancy, AFRC Forest Resource Council, Washington Forest Protection Association, Sierra Club, Washington Department of Natural Resources, King County Executive Climate Office, Tribes of Puyallup and Muckleshoot, Workforce Development Council of Seattle- King County, and other public and private stakeholders.

There was particular interest in citing the climate resiliency and environmental equity campus at the former headquarters of the Weyerhaeuser headquarters in Federal Way. All interviewees expressed interested in participating in the potential development.

Key themes and concerns emerged from the qualitative collection of data.

Environmental Impact and Sustainability

- Weyerhaeuser emphasized sustainable forestry practices and the potential for the campus to incorporate eco-friendly technologies and land use. Also highlighted the interest of the family in possible future plans.
- The Nature Conservancy focused on biodiversity, habitat preservation, and ecological restoration efforts in the area, along with a need for future workforce in the natural resources conservation space.
- Both the Puyallup and Muckleshoot tribes were focused on natural resource management and government to government accountability.

Economic Development

- AFRC (Forest Resource Council) may advocate for economic opportunities related to forestry and wood products, highlighting the importance of maintaining a viable timber industry alongside the new campus.
- Weyerhaeuser discussed job creation and partnerships with local businesses as essential components of the project.

Community Engagement and Equity:

- Sierra Club and other environmental justice advocates stressed the importance of community involvement in the planning process to ensure the campus serves marginalized communities and addresses historical inequities.
- Discussions around equitable access to resources and benefits derived from the campus were prominent, including areas such as agricultural sustainability, sustainable forestry, & water quality/conservation.

Collaboration and Partnerships

- There was a call for collaborative efforts among stakeholders, predominantly tribes, to create a shared vision for the campus that balances environmental goals with economic needs.
- The Department of Natural Resources was interested in management responsibilities clarifications and land ownership/trust land aspects of any proposal.

- Identifying potential partnerships with additional educational institutions or non-profits to foster innovation and research in sustainability was a topic of interest.

Regulatory and Policy Considerations

- Stakeholders expressed concerns about existing regulations and policies that could impact the development of the campus, including zoning laws, environmental assessments, and funding mechanisms.

Climate Resilience Strategies:

- King county Office was generally focused on the climate resilience piece and how we insure integration based on climate resilience plans popping up around the state
- All parties discussed specific strategies for enhancing climate resilience, such as green infrastructure, urban forestry, and climate adaptation measures that can be implemented on-site. This is top of mind for Ecology, King County, and the State Emergency Management teams.

Long-Term Vision and Maintenance:

- There were discussions on the long-term management and maintenance of the campus, ensuring that environmental and equity goals are sustained over time. Questions about oversight, maintenance, and accountability of the property were highlighted. This was a strong focus of the conversation with both the Department of Natural Resources and the Department of Agriculture.

CREEC

CLIMATE RESILIENCE & ENVIRONMENTAL ECONOMIC CAMPUS

FUNDING OPTIONS

POTENTIAL FUNDING OPTIONS

There is a range of potential funding options to explore that would support the creation, maintenance and operation of a Climate Resiliency and Environmental Economy Campus in the Federal Way growth hub of South King County. This review looks at regional, state, and national sources as well public/private options. Focus for this listing was on funding workforce development, infrastructure development, and community programming, and education, inclusive of early learning and K-12 opportunities.

State and Regional Funding Sources

Boeing Grants for STEM Education

Boeing offers grants supporting STEM education and workforce preparation in King, Pierce, and Snohomish Counties. The program emphasizes economic mobility and community well-being with a particular focus on environmental initiatives. While grant-making is by invitation only and currently closed, the program's objectives closely align with project goals.

King County Community Climate Resilience Grant Program

This program provides funding for education and communication projects led by qualifying nonprofits. The program encompasses leadership development training for climate resilience, along with youth development programs centered on climate action. Additional funding supports training materials for emergency events and climate-related health impacts, development of climate resilient infrastructure, and initiatives to build energy literacy in frontline communities.

Port of Seattle's 2025 Operating Budget

The Port maintains an annual operating budget of $678 million, complemented by a five-year capital plan of $5.6 billion. Their funding priorities include expanding access to maritime, aviation, construction, and green jobs. The budget supports various initiatives including the Youth Maritime Career Launch Program and Construction Trades Pre-Apprenticeship program. Additional focus areas include the Green Economy Feasibility study and environmental justice partnership grants.

South King County Community Impact Fund Environmental Grants Program

With $14 million authorized for 2025-29, this program targets environmental improvements in near-airport communities. The fund supports job application assistance for underserved communities, pre-apprenticeship programs, maritime career development, and environmental education expansion. The program has demonstrated significant impact, having committed approximately $7.2 million to 44 South King County nonprofits and community-based organizations since 2019.

King County Land Conservation Initiative

This initiative focuses on preserving natural lands and urban green spaces, including open spaces, trails, and natural lands. The program includes opportunities for green stormwater acquisitions and has set an

application deadline of February 10, 2025. Funding comes primarily through King County Conservation Futures (CFT).

Paul G. Allen Family Foundation

The foundation offers investments up to $5 million for Natural Climate Solutions (NCS) projects in the Pacific Northwest. Their funding approach emphasizes place-based and inclusive projects, with particular attention to collaboration with indigenous peoples and local communities, including nonprofits and academic groups.

Washington Climate Action Programs

Washington State offers several climate-focused programs including the Washington Climate Corps Network and Career Connect Washington. These initiatives provide comprehensive opportunities for environmental career development through the Program Builder platform, connecting participants with environmental and climate resilience careers.

Washington State Department of Commerce Clean Energy Fund

The Clean Energy Fund supports projects that develop, demonstrate, and deploy clean energy technologies. The fund includes specific programs for workforce development and community-based clean energy initiatives. Grant opportunities typically open annually, with funding amounts varying by program category. Projects focused on equitable clean energy workforce development and training are particularly encouraged.

Washington Department of Ecology Environmental Justice Grants

The Department of Ecology offers grants to support community-led projects that address environmental and public health disparities. The program emphasizes projects that combine environmental education, community engagement, and climate resilience planning. Organizations serving vulnerable and overburdened communities receive priority consideration.

Puget Sound Energy (PSE) Foundation

PSE Foundation provides grants to local organizations working in environmental stewardship and climate resilience. Their funding priorities include environmental education, STEM programs, and projects that help communities prepare for and adapt to climate change. Grants typically range from $20,000 to $100,000, with applications accepted on a rolling basis.

Seattle Foundation Climate Justice Fund

This fund supports community-led climate justice initiatives in the greater Seattle area. The foundation prioritizes projects that combine environmental action with economic opportunity, particularly in historically underserved communities. Funding focuses on building community capacity for climate resilience and creating pathways to green jobs.

Washington State Recreation and Conservation Office

The RCO administers several grant programs that can support climate resilience infrastructure and education. While primarily focused on outdoor recreation and conservation, these grants can fund projects that combine environmental education with climate adaptation strategies. The office typically announces new grant rounds annually.

Washington State Department of Natural Resources Urban and Community Forestry

The Urban and Community Forestry Program offers grants for projects that enhance urban tree canopy and green infrastructure. These grants can support educational programs and workforce development related to urban forestry and climate resilience. Application cycles usually open in the fall, with awards ranging from $10,000 to $50,000.

Washington STEM Network

Washington STEM provides funding and partnership opportunities for programs that connect STEM education to environmental and climate-related careers. Their regional networks often collaborate with local organizations to create career pathways in emerging green industries. The organization emphasizes programs that serve historically underrepresented communities in STEM fields.

City of Seattle Environmental Justice Fund

The Environmental Justice Fund provides grants to community-led projects that address environmental inequities and promote climate resilience. The fund emphasizes projects that build community capacity and create economic opportunities in environmental sectors. Annual funding cycles typically open in the spring, with grants ranging from $15,000 to $75,000.

National Funding Sources

ClimateWorks Foundation

Since its inception in 2008, ClimateWorks has distributed over $1.8 billion in grants across more than 50 countries. Their funding encompasses sustainable finance, power infrastructure, forests and land use, and transportation initiatives. The foundation has supported over 850 grantees through various environmental and climate-focused programs.

Department of Energy -- Climate Resilience Centers

Through Funding Opportunity #DE-FOA-0003464, the Department offers grants ranging from $100,000 to $1,000,000, with total funding of $10,000,000. Applications are due February 20, 2025. The program emphasizes climate resiliency research, community stakeholder engagement, and research capacity building, particularly focusing on underrepresented or vulnerable communities.

National Science Foundation -- Advancing Informal STEM Learning

Under Funding Opportunity #24-601, this program provides grants between $150,000 and $3,500,000, with total funding of $41,000,000. The January 8, 2025 deadline applies to projects in synthesis, conference organization, partnership development and planning, research practice integration, and public engagement with STEM. The program specifically aims to enhance science communication and public understanding of STEM processes.

WORKFORCE DEVELOPMENT FUNDING SOURCES

Federal Workforce Development Opportunities

Department of Labor Workforce Innovation and Opportunity Act (WIOA) Grants

The WIOA program provides comprehensive funding for workforce development initiatives. Programs can access funding through state workforce boards and American Job Centers. Funding streams include adult employment and training, youth workforce investment, and dislocated worker programs. Special emphasis is placed on programs that prepare workers for growing industries like clean energy and environmental technologies.

Environmental Protection Agency Environmental Workforce Development and Job Training Grants

These grants support programs that recruit, train, and place local unemployed and under-employed residents in environmental jobs. Funding ranges from $200,000 to $500,000 per grant. Programs can include sustainable cleanup and environmental training, including green jobs related to climate resilience and environmental restoration.

National Science Foundation Advanced Technological Education (ATE) Program

The ATE program focuses on educating technicians for high-technology fields, including environmental technologies. Grants support curriculum development, professional development for college faculty and secondary school teachers, career pathways, and industry partnerships. Typical awards range from $300,000 to $800,000 over three years.

State and Regional Workforce Development Funding

Washington State Employment Security Department

The department administers several workforce development grants including:

- Governor's Statewide Workforce Development Discretionary Fund
- Economic Security for All (EcSA) grants focusing on poverty reduction through career development
- Industry Sector Development grants targeting high-demand sectors including green industries

Washington State Department of Commerce Working Washington Grants

These grants support small businesses and workforce development initiatives. Recent rounds have included funding for job training programs and business expansion in emerging industries, including clean technology and environmental services sectors.

Pacific Northwest Center of Excellence for Clean Energy

Located at Centralia College, the Center provides resources and partnership opportunities for clean energy workforce development. They offer periodic grant opportunities and facilitate connections between education providers and industry partners.

Private and Foundation Workforce Development Funding

JPMorgan Chase SkillUp Program

This initiative funds innovative workforce training programs, particularly those focusing on emerging industries and underserved communities. Grants typically range from $100,000 to $500,000 and prioritize programs that create career pathways in growing sectors like environmental technology.

Microsoft Workforce Development Technology Grants

Microsoft provides both funding and technology resources to organizations developing workforce training programs. Special consideration is given to programs incorporating technology training for environmental and sustainability careers.

Kaiser Permanente Community Health Grants

While primarily focused on health, these grants include workforce development components, particularly for programs that connect environmental health and career opportunities. Funding ranges from $50,000 to $200,000 per grant.

Bank of America Economic Mobility and Workforce Development Grants

These grants support workforce development initiatives that help build thriving economies. Programs focusing on green jobs and environmental sustainability are eligible. Grant amounts vary by region and program scope.

Industry-Specific Workforce Development Resources

Clean Energy Business Alliance Workforce Development Fund

Supported by a consortium of clean energy businesses, this fund provides grants for training programs that prepare workers for careers in renewable energy and energy efficiency. Funding includes support for curriculum development and equipment purchases.

Manufacturing Institute Training Grants

These grants support workforce development in advanced manufacturing, including green manufacturing and sustainable production processes. Funding priorities include programs that create clear career pathways and industry-recognized credentials.

Associated General Contractors Education Foundation

The foundation provides grants for construction workforce development, including training for green building and sustainable construction practices. Programs can include apprenticeship support and career technical education.

Public-Private Partnership Programs

US Economic Development Administration Build Back Better Regional Challenge

This program provides large-scale funding ($25-100 million) for regional economic transformation projects. Ideal for initiatives that combine workforce development, infrastructure, and innovation in climate-resilient industries. While the current round is closed, future opportunities are anticipated.

American Rescue Plan Good Jobs Challenge

Administered by the EDA, this program funds workforce training programs aligned with industry needs. Particularly relevant for programs developing talent pipelines in clean energy and environmental sectors. Grants range from $5-25 million.

Foundation and Corporate Opportunities

Bezos Earth Fund Climate Justice Challenge

Recently announced initiative focusing on climate resilience and environmental justice. Grants support programs that combine community development, education, and climate action. Funding amounts vary based on project scope.

W.K. Kellogg Foundation

Offers grants supporting education and workforce development with an emphasis on racial equity and community engagement. Environmental programs that incorporate economic development are eligible. Typical grants range from $250,000 to $3 million.

Rockefeller Foundation Climate Solutions

Provides funding for innovative approaches to climate challenges, including workforce development and community resilience programs. Emphasis on scalable solutions that can be replicated across regions.

Technology and Innovation Funding

Microsoft AI for Earth

Provides grants and technical resources for projects using artificial intelligence to address environmental challenges. Can include educational and workforce components. Grants include both financial support and Azure credits.

Google.org Impact Challenge on Climate Innovation

Supports breakthrough technologies and approaches to accelerate climate action. Educational institutions and workforce development programs incorporating innovative climate solutions are eligible.

Specialized Environmental Programs

Wildlife Conservation Society Climate Adaptation Fund

While primarily focused on conservation, includes funding for programs that combine environmental protection with community development and education. Grants typically range from $50,000 to $250,000.

Environmental Defense Fund Climate Corps

Offers partnership opportunities for hosting fellows and developing climate-focused projects. Can include workforce development and educational components.

Regional Economic Development

Pacific Northwest Economic Region (PNWER) Initiatives

Supports cross-border collaboration on economic development, including environmental and workforce programs. Offers networking and partnership opportunities for accessing multiple funding streams.

Cascadia Innovation Corridor

Public-private partnership supporting regional development in the Pacific Northwest. Focuses on sustainable development and innovation, including workforce training programs.

State-Specific Programs

Washington State Innovation Cluster Accelerator Program

Administered by the Department of Commerce, supports development of innovation clusters including clean technology and environmental services. Can include workforce development components.

Washington State Department of Natural Resources Urban Forestry Grants

Supports projects combining environmental improvement with job training and education. Annual grant cycles with awards typically ranging from $10,000 to $75,000.

Educational Institution Partnerships

National Science Foundation Research Experiences for Undergraduates (REU)

Supports active research participation by undergraduate students in STEM fields. Can be integrated with environmental and climate resilience programs. Typical award amount: $70,000-$120,000 per year.

Department of Energy Office of Science Graduate Student Research Program

Provides supplemental awards to graduate students for research at DOE laboratories. Particularly relevant for climate and environmental research programs.

Tribal Funding Opportunities

Bureau of Indian Affairs Tribal Climate Resilience Program

Supports tribal climate adaptation planning and workforce development. Annual funding cycles with various award categories ranging from $50,000 to $250,000.

Administration for Native Americans Environmental Regulatory Enhancement

Provides funding for tribes to develop environmental programs and related workforce capacity. Grants range from $100,000 to $300,000 annually.

International Collaboration Opportunities

Commission for Environmental Cooperation (CEC) Grants

Supports environmental collaboration between US, Canada, and Mexico. Can include educational and workforce components. Grant amounts vary by program.

Global Environmental Facility Small Grants Program

While primarily international, includes opportunities for local programs with global environmental benefits. Typical grants range from $25,000 to $50,000.

PROGRAMMING FUNDING SOURCES

State Funding Sources

Washington State Department of Early Learning

The Department offers Early Childhood Education and Assistance Program (ECEAP) grants supporting early learning initiatives. These grants can incorporate environmental education and natural world exploration for young learners. The program particularly emphasizes outdoor learning environments and nature-based curricula that align with Washington State Early Learning Guidelines.

Washington STEM Education Foundation

The foundation provides funding for innovative STEM education programs across Washington state, with particular emphasis on early learning through high school initiatives. Their grant program supports curriculum development, teacher training, and equipment for hands-on science and environmental education programs.

Washington State Recreation and Conservation Office

Through their No Child Left Inside grant program, the office funds outdoor environmental, ecological, agricultural, or other natural resource-based education and recreation programs serving youth. Grants range from $5,000 to $150,000 and require a 25% match.

NATIONAL FUNDING SOURCES

Early Learning Programs

Head Start Innovation Fund

This federal program provides funding for innovative approaches to early childhood education, including nature-based learning and environmental education programs. Grants support curriculum development, teacher training, and outdoor learning spaces that connect young children with nature.

W.K. Kellogg Foundation

The foundation funds early childhood education initiatives with emphasis on environmental stewardship and nature-based learning. Their grants support programs that integrate environmental awareness into early childhood development, particularly in underserved communities.

K-12 Education

National Environmental Education Foundation

NEEF offers several grant programs supporting environmental education in K-12 settings. Their Capacity Building Grants ($50,000 to $100,000) help organizations develop and implement environmental education programs. They also provide smaller grants for specific projects through their Environmental Education Grant Program.

Captain Planet Foundation

The foundation provides grants ranging from $500 to $2,500 for hands-on environmental projects for children and youth. Their ecoSTEM Resource Grants and ecoSolution Grants specifically support environmental science education initiatives.

Community Programming

National Fish and Wildlife Foundation

The foundation's Five Star and Urban Waters Restoration Program provides grants ranging from $20,000 to $50,000 for community-based environmental education and stewardship projects. Projects must include environmental education and community engagement components.

Environmental Protection Agency Environmental Education Grants

The EPA's program supports environmental education projects that promote environmental awareness and stewardship. Grants range from $50,000 to $100,000 and require a 25% match. Projects must include teacher training or community education components related to environmental issues.

NOAA Environmental Literacy Grants

These grants support programs that build environmental literacy and resilience to extreme weather and climate change. Funding ranges from $250,000 to $500,000 for projects that connect K-12 students and communities with environmental science education.

Institute of Museum and Library Services

IMLS offers grants supporting community environmental education programs through museums and libraries. Their Community Catalyst Grants ($50,000 to $150,000) and Museums for America grants support programs that engage communities in environmental learning and stewardship.

ADDITIONAL RESOURCES FOR NATURAL WORLD PROGRAMMING

North American Association for Environmental Education

NAAEE maintains a comprehensive database of environmental education grants and provides regular updates on funding opportunities. They also offer capacity-building resources and professional development funding for environmental educators.

Garden Club of America

The organization offers multiple grants supporting environmental education and community gardening initiatives. Their Civic Projects grants support community programs that promote conservation and environmental awareness.

American Forest Foundation

Project Learning Tree offers GreenWorks! grants up to $1,000 for environmental service-learning projects that combine classroom education with hands-on experiences in nature and environmental stewardship.

Each of these funding sources has specific application windows, requirements, and focus areas. Organizations should carefully review current guidelines and deadlines when planning applications, as these can change annually. Many programs also require matching funds or demonstrate community partnerships, which should be considered in project planning phases.

SITE DEVELOPMENT AND INFRASTRUCTURE FUNDING

Federal Development Resources

Economic Development Administration (EDA) Public Works Program

Supports construction and infrastructure development for facilities that drive regional economic growth. Grants typically range from $500,000 to $5 million. Educational facilities that promote workforce development and innovation are eligible. Cost sharing/matching typically required at 50-80%.

Department of Education - Impact Aid Construction Program

Provides funding for construction and renovation of school facilities. Particularly relevant for projects serving high-need populations or incorporating innovative educational approaches. Grants can exceed $1 million for qualifying projects.

USDA Rural Development Community Facilities Direct Loan & Grant Program

Offers both loans and grants for essential community facilities in rural areas. Educational facilities qualify. Grants typically range from $50,000 to $3 million with loan amounts significantly higher. Match requirements vary by community size and median household income.

State Development Resources

Washington State Capital Budget - Building Communities Fund

Supports nonprofit organizations in acquiring, constructing, or rehabilitating facilities used for education, recreation, or social services. Biennial funding cycle with grants up to $2 million. Requires 25% matching funds.

Washington State Department of Commerce Building for the Arts

While primarily for arts facilities, can support multipurpose educational spaces that include arts programming. Grants up to $2 million for construction and renovation projects. Applications typically due in even-numbered years for the following biennial budget.

Washington State Recreation and Conservation Office

Administers multiple grant programs that could support site development:

- Youth Athletic Facilities Program for recreational components
- Land and Water Conservation Fund for outdoor recreation spaces
- Washington Wildlife and Recreation Program for educational outdoor spaces

Regional Development Resources

Puget Sound Regional Council - Regional Transportation Funding

Provides funding for transportation infrastructure that could support campus accessibility. Includes pedestrian and bicycle infrastructure grants. Projects must align with regional transportation plans.

King County Green Building Grant Program

Supports design and construction of facilities meeting green building standards. Emphasis on energy efficiency and sustainable design. Grant amounts vary based on project scope and green building certification level.

Private and Foundation Infrastructure Support

Murdock Charitable Trust Capital Grants

Specifically for Pacific Northwest organizations. Supports construction, renovation, and capital equipment purchases. Grants typically range from $250,000 to $1 million. Requires substantial matching funds.

Boeing Corporate Contributions

Provides capital support for STEM education facilities in Washington state. Grant amounts vary, but typically require matching funds and demonstrated community support.

Gates Foundation Capital Projects

While highly competitive, offers significant funding for innovative educational facilities. Focus on projects demonstrating potential for regional impact and scalability.

Specialized Development Funding

New Markets Tax Credit Program

Provides tax credit incentives to investors for equity investments in certified Community Development Entities, which can fund facility construction in qualified low-income communities.

C-PACER (Commercial Property Assessed Clean Energy + Resilience)

King County program enabling private financing for clean energy and resilience improvements in commercial buildings. Can fund energy efficiency, renewable energy, and resilience measures.

Environmental Protection Agency Environmental Education Grants

While primarily for programming, can include limited site development components when tied to environmental education objectives. Grants typically range from $50,000 to $100,000.

Sustainable Infrastructure Resources

Washington Clean Buildings Performance Standard

Provides incentives and technical assistance for meeting building energy performance standards. Can support energy-efficient design and construction.

Washington State Department of Enterprise Services Energy Program

Offers technical assistance and funding opportunities for energy-efficient building design and construction. Includes access to energy service performance contracting.

Living Building Challenge Incentive Program

Available in some jurisdictions, provides incentives for buildings meeting Living Building Challenge certification. Can include zoning departures and other development incentives.

Alternative Financing Mechanisms

Community Development Financial Institutions (CDFIs)

Organizations like Craft3 and Enterprise Community Partners offer specialized financing for community facility development. Terms often more favorable than traditional financing.

Public Development Authorities (PDAs)

Can serve as development partners and accessing public financing tools. Examples include cultural districts and innovation partnership zones.

Municipal Bonds

Tax-exempt bonds for qualifying educational facilities. Requires partnership with eligible government entity but can provide significant capital at favorable rates.

CREEC

CLIMATE RESILIENCE & ENVIRONMENTAL ECONOMIC CAMPUS

RECOMMENDATIONS

The Climate Resilience and Environmental Campus (CREEC) represents a visionary approach to environmental education and economic development in South King County. At its core, the initiative recognizes that addressing climate challenges requires both technical expertise and deep community engagement.

The campus design creates a seamless educational pathway beginning with early childhood. Young children develop environmental awareness through daily interaction with nature in specially designed learning spaces. As students progress through K-12 education, they engage in increasingly sophisticated environmental science work, from monitoring weather stations to conducting research alongside scientists. This hands-on approach makes abstract concepts tangible while building practical skills.

CREEC's workforce development strategy addresses a critical gap in environmental sector employment. The campus serves as a bridge between education and industry, offering specialized training programs, industry certifications, and direct connections to employers. This integrated approach ensures that training aligns with actual workforce needs while creating multiple entry points to environmental careers.

The initiative places particular emphasis on environmental equity and justice. South King County's diverse population has historically faced disproportionate environmental burdens while having limited access to environmental benefits. CREEC directly addresses these disparities through programs that ensure equal access to environmental resources, protection from environmental risks, and meaningful participation in environmental decision-making.

The economic impact extends beyond direct employment in environmental sectors. By investing in green infrastructure and environmental improvement, the campus helps attract sustainable businesses while reducing long-term infrastructure costs. The focus on innovation and technology transfer creates opportunities for new business development, particularly in clean energy and environmental monitoring sectors.

Community integration remains central to the initiative's success. Through public lectures, family learning programs, community science projects, and environmental festivals, CREEC makes environmental education accessible to the broader community. Resources for home sustainability projects help community members apply environmental solutions in their own lives.

The campus design emphasizes flexibility and adaptation, recognizing that environmental challenges and solutions will continue to evolve. Advanced research facilities support ongoing innovation, while strong industry partnerships ensure that training programs remain current with emerging technologies and practices.

By creating this comprehensive ecosystem for environmental learning and innovation, CREEC positions South King County to lead in developing solutions for climate resilience and natural resource management while creating economic opportunities for local residents. The initiative demonstrates how thoughtful investment in environmental education and workforce development can drive both ecological sustainability and economic prosperity.

The success of CREEC will ultimately be measured by its impact on both environmental and economic outcomes in South King County. Through careful attention to equity, community needs, and workforce

development, the campus can help create a more resilient and prosperous future for all residents while addressing critical environmental challenges.

CLIMATE RESILIENCY

South King County should pursue a multi-faceted approach to climate resilience that integrates business development, infrastructure improvements, and workforce preparation. Key recommendations include:

1. Modernize infrastructure with forward-looking adaptive designs rather than relying on historical data patterns, particularly focusing on dual-purpose facilities like parks that can manage flooding while serving community needs.
2. Establish comprehensive climate workforce development programs with multiple entry points and strong support services (transportation, childcare, multilingual training) to ensure equitable access.
3. Create integrated resilience systems linking public health, transportation, and utilities, including neighborhood-level resilience hubs.
4. Leverage the region's location and industry base to attract climate-conscious businesses by promoting the area's climate preparedness as an economic advantage.
5. Coordinate actions between government, business, and community partners to implement these changes effectively.

ENVIRONMENTAL ECONOMICS & EQUITY RECOMMENDATIONS

Based on the analysis of environmental equity in the Federal Way growth hub of South King County, the following recommendations emerge:

Infrastructure and Transportation

- Expand green infrastructure in industrial areas and underserved neighborhoods
- Improve public transportation access, particularly in connection with the upcoming 2025 Federal Way Link Extension
- Develop more equitably distributed parks and green spaces
- Update aging stormwater systems in areas with higher concentrations of renters

Business and Economic Development

- Create tax incentives for companies adopting sustainable practices
- Establish grant programs specifically for minority-owned businesses implementing environmental improvements
- Develop green job training programs targeting underserved communities
- Address the significant revenue gap between minority-owned and White-owned businesses through targeted support programs

Housing and Community Development

- Implement robust affordable housing strategies, including community land trusts and inclusive zoning policies
- Create programs to help vulnerable communities prepare for climate impacts, including home hardening assistance
- Develop multilingual emergency communication systems for environmental hazards

Community Engagement and Leadership

- Establish environmental equity advisory committees with meaningful decision-making authority
- Create multilingual outreach programs to ensure all communities can participate in environmental decisions
- Develop comprehensive training programs to enhance community leadership skills and technical knowledge
- Simplify funding mechanisms to make them more accessible to community groups

Policy and Enforcement

- Require equity analysis for all major infrastructure projects
- Strengthen enforcement of environmental regulations in historically burdened areas
- Implement equity-based budgeting tools for environmental projects
- Create frameworks for better coordination between different community groups and government agencies

Environmental Health and Safety

- Address air quality issues along major transportation corridors, particularly in the "diesel corridor"
- Improve access to environmental health information for communities with limited English proficiency
- Develop targeted programs to address food security and urban agriculture opportunities
- Create specific measures to protect vulnerable populations from climate change impacts

These recommendations emphasize the need for a comprehensive approach that combines economic development with environmental protection while ensuring benefits reach all community members equitably. Success will require sustained commitment from government agencies, businesses, community organizations, and residents working in partnership

Environmental Education Recommendations

Funding and Resource Allocation:

- Address the $450 per-student funding gap between South King County and north King County for environmental STEM programs
- Increase grant-writing capacity to secure more federal environmental education funding
- Expand corporate partnerships to match north King County's average of 3.8 partnerships per school (compared to current 1.2)
- Develop more equitable distribution of environmental testing equipment and specialized teaching resources

Educational Programming:

- Create age-appropriate climate education pathways from early childhood through high school
- Implement solution-focused rather than problem-focused teaching approaches to prevent eco-anxiety
- Integrate local contexts and community engagement into environmental education
- Incorporate diverse perspectives and traditional ecological knowledge into curriculum
- Expand multilingual support for environmental education materials (currently only 15% available in languages other than English)

Infrastructure and Access:

- Address transportation barriers to environmental learning centers
- Improve digital infrastructure to support environmental monitoring and data analysis
- Update school computer labs to run current environmental modeling software
- Expand access to GIS and environmental mapping tools beyond the current 35% of schools

Professional Development:

- Increase professional development funding to match the $2,200 per teacher provided in north King County
- Expand environmental science teaching specialist positions to match the 1:1,200 student ratio of other districts
- Provide training in emerging technologies and environmental monitoring equipment
- Develop cultural competency training for environmental educators

Partnership Development:

- Strengthen connections between K-12 schools and higher education environmental programs
- Expand paid internship and research opportunities for South King County students
- Create more pathways between community college environmental technology programs and industry
- Develop stronger relationships with local environmental organizations and businesses

Program Integration:

- Coordinate between existing environmental education providers to reduce duplication
- Create clear progression pathways through environmental education programs
- Develop shared environmental monitoring networks across districts
- Establish collaborative professional development programs between organizations

Support Systems:

- Implement early intervention systems to identify and support struggling students
- Enhance career counseling services focused on environmental and sustainability careers
- Develop mentor networks connecting students with environmental professionals
- Create support systems for students transitioning into environmental career pathways

Assessment and Accountability:

- Develop comprehensive tracking systems for environmental education outcomes
- Implement environmental literacy assessments across grade levels
- Monitor equity metrics in program access and outcomes
- Create feedback mechanisms for continuous program improvement

These recommendations aim to create a more equitable, effective, and comprehensive environmental education system in South King County while building pathways to careers in the environmental sector.

ECONOMY WORKFORCE

To strengthen the environmental economy and workforce development in the greater Federal Way economic footprint of South King County, the region should:

1. Expand green infrastructure development in high-growth areas while creating environmental business innovation zones and establishing green building incentive programs
2. Support environmental technology business development through targeted incentives for clean technology businesses and market-based environmental incentives
3. Invest in specialized workforce development programs aligned with environmental sector needs, including creating comprehensive technical training programs and industry-recognized certifications
4. Build stronger partnerships between research institutions and industry, encouraging cross-sector collaboration and establishing innovation zones
5. Develop demonstration projects that showcase environmental solutions and provide practical experience opportunities
6. Create a Climate Campus in South King County to serve as a centralized hub for environmental education and workforce development, connecting K-12 programs through higher education and career pathways
7. Strengthen community engagement through advisory boards, public education programs, and youth initiatives to ensure programs remain relevant to local needs and promote equitable access to opportunities
8. Establish sustainable funding mechanisms by leveraging diverse revenue streams including federal grants, state funding, private sector partnerships, and tuition revenue

These recommendations emphasize the importance of balancing infrastructure investment, business development support, and workforce training while maintaining a strong focus on community engagement and environmental justice

SURVEY RECOMMENDATIONS

Based on the survey results, here are the key recommendations:

Leadership and Governance

- Leverage the Chamber of Commerce and Education Sector's high trust ratings (4.2 and 4.1 respectively) by positioning them as primary leaders in the development effort
- Create a collaborative governance structure that emphasizes private-public partnerships while addressing the lower trust in government institutions
- Establish clear roles for state and local government that focus on their regulatory and infrastructure support capabilities

Site Selection and Development

- Prioritize Woodbridge Corporate Park for further evaluation given its high ratings across environmental (4.4), economic (4.3), and educational (4.4) criteria
- Develop comprehensive transportation solutions for all potential sites, particularly for Camp Kilworth and Dash Point Park which scored low on accessibility
- Consider creating satellite locations or partnerships with existing facilities to address transportation challenges

Educational Programming

- Implement comprehensive environmental education programs spanning early learning through K-12, supported by the 93.5% approval rating
- Develop career pathways and certification programs focused on climate science and sustainability
- Create partnerships with identified industry leaders (Boeing, Blue Origin, Virginia Mason, etc.) for workforce development programs

Industry Engagement

- Focus initial industry partnerships on software/information technology and construction/logistics sectors, which showed highest readiness ratings
- Develop targeted support programs to strengthen maritime sector engagement, given its lower readiness rating (3.1)
- Create industry advisory boards for each major sector to guide curriculum development and workforce training

Environmental Focus Areas

- Prioritize programming around the most frequently mentioned environmental concerns:
    - Sustainability and waste reduction
    - Water quality and coastal protection
    - Air quality improvement
    - Environmental justice initiatives

Community Engagement

- Establish regular community feedback mechanisms to maintain strong public support
- Create transparent communication channels about development progress
- Develop community-based environmental programs to address local ecological concerns

Economic Development

- Create business incubator programs focused on environmental and sustainability initiatives
- Develop partnerships with identified regional leaders in each industry sector
- Establish clear metrics for measuring economic impact and job creation

Implementation Strategy

- Begin with high-trust partnerships between the Chamber and education sector
- Phase development to show early wins and build momentum
- Create clear timeline for addressing infrastructure and transportation challenges
- Establish regular evaluation metrics to track progress and adjust strategies as needed

These recommendations align with the strong community support shown in the survey while addressing identified challenges and leveraging existing strengths in the region.

CREEC

CLIMATE RESILIENCE & ENVIRONMENTAL ECONOMIC CAMPUS

SOURCES

This study draws from authoritative sources including government agencies, industry associations, and research institutions. All data presented represents the most recent available figures as of December 2024. Market projections reflect consensus forecasts from multiple sources rather than sing-point estimates.

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THE VOICE OF BUSINESS
About the Greater Federal Way Chamber

Chambers of Commerce are recognized across the country as the collective voice of business functioning as a storehouse of information on current business trends. And like our colleagues, the Greater Federal Way Chamber is a business growth engine for the community.

An economic development-focused, membership-supported organization, the Greater Federal Way Chamber of Commerce is comprised of business enterprises, civic and community organizations, educational institutions, and public sector agencies.

Centrally located in the growth hub of north/south business corridor of South King County, the Chamber is committed to connecting and promoting inclusive economic development in the region.

As an advocate for its diverse economic base, the Chamber supports and enhances the talents and resources of business leaders to create a climate of economic growth and business success. With a strategic vision set by the business leaders on the Chamber Board of Directors, the professional staff at the Chamber works to promote and connect businesses of all sizes to economic success.

Rebecca Martin, CCE is the CEO of the Greater Federal Way Chamber. She is one of only 3% of Chamber executives in the United States to earn the Certified Chamber Executive designation from the Association of Chamber of Commerce Executives. She is the only Chamber CEO with the national CCE certification on the west coast of the US.

The Greater Federal Way Chamber also welcomes public/private partnerships to collect economic data, address business issues, identify areas that are barriers to success, and provide programming and education to support sustainability.

A full range of economic data and strategic assessments for business growth in the greater Federal Way region of the South Sound, are online at www.federalwaychamber.com

GREATER FEDERAL WAY
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