



# Building Agriculture and Natural Resource (ANR) Career Pathways with GIS

WA GIS Association Conference  
Wed, May 20, 2026



# Presentation Agenda



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3:00 PM Introductions

- Name, title, organization
- A GIS workforce or training issue need that impacts you

3:10 PM GIS and ANR career pathways overview

3:20 PM Job trends and SOC code report

3:30 PM Career Connected Learning Example: Riverview School District

3:50 PM Q+A and feedback

# ANR Pathway Sectors



\*indicates pathway will be developed by 2027. \*\*indicates draft pathway exists. Other listed pathways have received statewide OSPI approvals.

## CTE Pathways Positively Impact Washington Youth Job Skills and Preparation:

- 92% of youth participants in CTE programs graduate from high school, vs. 86% of all students.
- In 2024, 94% of high school students received at least one CTE credit of hands-on career preparation.
- Students who complete more than one ANR CTE course earn higher wages after high school.
- Students who focus on ANR CTE pathways are more likely to earn a postsecondary credential.

*(Source: 2025 Education Northwest CTE Education in Washington State Report)*

# ANR Pathways Detail

<b>CTE Pathway</b>	<b>Statewide Equivalencies</b>	<b>Funding Source</b>
Forest Management	Science, English	CCW Round 7
Restoration Ecology	Science, social studies	CCW 8
Education through Outdoor Learning	English	CCW 9
Aquaculture and Fisheries	Science, math	CCW 11
Urban and Community Forestry	Science, math	Spokane Conservation District: USDA Forest Service Inflation Reduction Act UCF Grant
<b>Geographic Information Systems (GIS)</b>	<b>TBD: Science, English?</b>	<b>CCW Sector Leader</b>
Agriculture and Natural Resource Mechanics	TBD	CCW Sector Leader

# Urban and Community Forestry Career Pathways



# GIS CTE Pathway Design Process



## **Each framework sequence:**

- Aligns to industry needs, K-12 standards, and dual college credit
- Includes 180 hours (1.0 credit) of hands-on high school instruction
- Link to worksite visits and employer mentorship
- Aligns with professional learning network and teacher resources
- Leads to Industry Recognized Credential (Esri Fundamentals)

## **Writing team includes "Five lenses":**

1. High school teachers teaching the concepts
2. Colleges with relevant natural resource programs
3. Tribes
4. Employers
5. Office of the Superintendent of Public Instruction (OSPI)

# GIS Pathway Writing Team



<b>Name</b>	<b>Title</b>	<b>Organization</b>	<b>Lenses</b>
<b>Alex Besemann</b>	GIS Analyst	Colville Confederated Tribes Fish and Wildlife Department	GIS, flood hazards
<b>Amanda Helland</b>	CTE Teacher	Sageview High School, Pasco School District	Teaches GIS, environmental and Earth science
<b>Amy Dawley</b>	Eastern WA FieldSTEM Coordinator	PEI	Non-formal education, community and K-12 partnerships
<b>Cesar Stoddard</b>	Senior GIS Analyst	Pend Oreille County	Emergency management
<b>Clare Sobetski</b>	Youth Education and Outreach Program Manager	WA Department of Natural Resources	Public industry, workforce development, hosting GIS community of practice for WA teachers
<b>Daniel Cuevas</b>	GIS Consultant	GIS Consultant, former Pierce/Tacoma PEI FieldSTEM Coordinator	GIS, environmental planning, community development, education
<b>Dani DeMarco</b>	Teacher	Lake Quinault School District	Tribal education, Samish Indian Nation; natural resources
<b>Else Washines</b>	Education Manager	Yakama Nation	Education, GIS, math, tribal member
<b>Heather Spalding</b>	Associate Director, Green Jobs	Pacific Education Institute	Workforce development, education, ANR
<b>Hugo Moreno</b>	Co-Director	South Central WA STEM	Workforce development, employer partners, education
<b>Josh Shelton</b>	GIS Manager	Pend Oreille County	
<b>Leah Brueggeman</b>	Assistant Professor	Washington State University Dept of Crop and Soil Sciences	Teaches GIS, soils, remote sensing
<b>Matt Ike</b>	GIS Program Manager	Yakama Nation	Tribal employer and member
<b>Rick Hamilton</b>	CTE Teacher	Newport High School, Newport School District	Teaches GIS, ag biology, computer science, robotics
<b>Sarah Kowalski</b>	Environmental Scientist II and Geospatial Professional	Environmental Science Associates	Works in WA and nationally with private sector

# GIS Pathway Timeline

Date	Activity
Tues, April 7th, 3:35-5pm	First GIS Advisory Meeting
Tues, April 14th, 10-11:30 AM	ANR Statewide Roundtable (Zoom)
May 27th-28th	Writers meet at ESD105 (Yakima)
Summer	PEI framework reviews
Fall	Online reviews
Tues, Sept 29th, 3:30-5pm	Final Advisory meeting (Zoom)
TBD	Submission to OSPI




**PEI** PACIFIC EDUCATION INSTITUTE  
**Statewide Roundtable**

**Building Career Pathways to Agriculture and Natural Resources**

Tuesday, April 14<sup>th</sup> from 10-11:30 ([Zoom](#))

Join employers, educators, and Career Connect Washington to explore successful career-connected learning models from across the state. Receive updated ANR industry job data from Educational Service District 105 and Employment Security Department partners, plus lessons learned over five years developing a successful job prep program at Riverview School District/WANIC Skill Center.

Contact [greenjobs@pacificeducationinstitute.org](mailto:greenjobs@pacificeducationinstitute.org) to receive a calendar invite



Washington Network for Innovative Careers  
 Northwest King County Skill Center



# GIS Career Connected Learning Example: Riverview School District

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