

Equitable STEM Access

Statutory and/or Budget Language

\$500,000 of the general fund—state appropriation for fiscal year 2024 and \$500,000 of the general fund—state appropriation for fiscal year 2025 are provided solely for the office of the superintendent of public instruction to contract with a Washington-based nonprofit organization to promote equitable access in science, technology, engineering, and math education for historically underserved students and communities. The nonprofit shall provide a system of science educational programming specifically for migrant and bilingual students, including teacher professional development, culturally responsive classroom resources that are aligned with Washington state science and environmental and sustainability learning standards, and implementation support. At least 50 percent of the funding provided in this subsection must serve schools and school districts in eastern Washington. The nonprofit organization must have experience developing and implementing science and environmental science programming and resources for migrant and bilingual students.

Purpose

This funding supports efforts to make science, technology, engineering, and math (STEM) education accessible to historically underserved students in Washington State, especially migrant, bilingual, and Native students. The goal is to provide culturally relevant and standards-based education that recognizes students' diverse backgrounds.

Description of Services Provided

The Office of Superintendent of Public Instruction (OSPI) has partnered with EarthGen to offer educator supports and high-quality professional learning services, such as:

1. **Curricular Resources:** EarthGen provides educators with materials that celebrate students' cultures and encourage critical thinking through scientific exploration and community engagement.
2. **Collective Action:** EarthGen collaborates with educators and community partners to support student-led environmental projects, fostering a culture of sustainability in schools.
3. **Direct Professional Learning:** EarthGen trains educators to teach students about environmental issues using place-based and culturally responsive methods, ensuring lessons are relevant to local communities. The program's Advisory Committee, composed of long-term and new members, provided essential feedback on culturally responsive strategies. This collective input shaped EarthGen's curriculum design and professional development for educators across the state.



Criteria for Receiving Services and/or Grants

At least 50% of services must be provided in central and eastern Washington.

Beneficiaries in the 2023–24 School Year

Number of School Districts	1
Number of Schools	6
Number of Students	175
Number of Educators	7
Other	N/A

Are Federal or Other Funds Contingent on State Funding?

No

State Funding History

Fiscal Year	Amount Funded	Actual Expenditures
2024	\$500,000	\$394,503
2023	\$500,000	\$500,000
2022	\$500,000	\$497,073

Number of Beneficiaries Per Fiscal Year (e.g. School Districts, Schools, Students, Educators, Other)

Fiscal Year	Number of Beneficiaries
FY24	7 educators
FY23	172 Educators
FY22	112 Educators

Programmatic Changes Since Inception (If Any)

- Staff turnover, including at the executive level significantly impacted program implementation this year. Program retooling, retraining, and other efforts also reduced service numbers this year.
- As a result of staff turnover, EarthGen requested a contract modification to reduce their deliverables and their funding near the end of the fiscal year.
- Aligning program timelines with the school year and community needs proved difficult. The contract in FY24 was for six months, impacting the organization’s outcomes in terms of beneficiaries served this year.

Program Evaluation or Evaluation of Major Findings

Programs like the Monarch Mystery curriculum use real-world events, such as Monarch butterfly migration, to engage students in learning while reflecting on their own experiences. EarthGen developed culturally responsive units of study like Monarch Mystery and SWIMM, which align with the Next Generation Science Standards (NGSS) and WIDA English Language Development standards, along with the Environmental and Sustainability Education Standards. These materials respect the experiences of migrant and Indigenous students, emphasizing their contributions and perspectives.

Curricular Resources:

- EarthGen refined the Monarch Mystery curriculum to include culturally responsive instructional material for educators in instructing their students. This unit has a unit guide, slide deck for teacher instruction, worksheets and materials, an accompanying story reviewed and revised by Lupe Ledesma, and a student assessment. All materials included in the unit has been translated into Spanish by Luna Translation.
- EarthGen developed a curricular resource with a cohort estimated at 5 teachers from a school community in eastern Washington. To ensure that the SWIMM unit development aligned to authentic, standards-aligned classroom instruction, EarthGen requested and received feedback from educators serving:
 - The Coeur d'alene Tribe Fisheries;
 - South Kitsap SD
 - Cashmere SD
 - Moses Lake SD
 - Upper Columbia United Tribes

The statewide advisory committee continues to provide valuable insight and input into program goals and implementation. In FY24, EarthGen held three (3) advisory committee meetings.

- Advisory committee members include representatives from:
 - OSPI's Multilingual Education Program, Dual Language Program, Title I Part C Migrant Education Program, Elementary Education Content.
 - School district representatives from Wahluke School District (ESD105), Grandview School District (ESD105), and Brewster School District (ESD171).
 - Educational Service District Leadership participation includes ESD105 and 123 team members representing Migrant Family Engagement, Student Leadership, Academic Coordinator for Math and Science.
 - Institutions of Higher Learning Heritage University, Gonzaga University, University of Washington.

EarthGen conducted outreach through social media, newsletters, and their website to communicate about the Proviso and resources available through this funding.

The organization conducted limited training this year but will increase training opportunities for teachers in FY25.

Major Challenges Faced by the Program

The following challenges were addressed by the program this year:

- Aligning program timelines with the school year and community needs proved difficult. The contract in FY24 was for six months, impacting the organization's outcomes in terms of beneficiaries served this year.
- Participation from Indigenous members in the Advisory Committee was lower than expected, and outreach continues for more engagement from partners serving American Indian/Alaska Native students.
- EarthGen encountered varying levels of readiness among districts to adopt culturally responsive education methods, requiring a tailored approach for each community.
- Managing the diverse needs of the project with limited staff and resources posed challenges, particularly as the team worked to reflect the lived experiences of migrant and multilingual communities.
- Staff turnover and program retooling, retraining, and other efforts significantly reduced service numbers this year. As a result of staff turnover, EarthGen requested a contract modification to reduce their deliverables and their funding near the end of the fiscal year.

EarthGen adapted to these challenges with several adjustments:

- Refining Focus: Shifting communication with the Advisory Committee to emphasize culturally responsive pedagogy has better aligned with districts' needs.
- Training: EarthGen staff received training on culturally responsive approaches to improve their effectiveness in working with diverse communities.
- Adjusting Contracts: Revisions were made to focus on anti-racism and culturally responsive education requirements, adapting the scope of the project to better serve students.
- Expanding Capacity: EarthGen is working to hire staff with lived experiences that align with the needs of migrant, bilingual, and Native students, strengthening the program's capacity.

Future Opportunities

Next year, EarthGen plans to continue supporting teachers with new curricular resources and professional development, expanding partnerships across the state. This work aims to shape a new framework for bilingual environmental education, making it more inclusive and effective for all students.

For example:

- Scope and sequence and supplementary materials reviewed by:
- April Ashworth, Teacher at Brewster SD
- Jennifer Herdmann, Program Specialist -
- Community Engagement and Education with
- Cascade Columbia Fisheries
- Holly Kirkendall, Teacher at Columbia SD

The time and effort invested in planning and piloting high-quality professional learning and resource implementation with teachers in Washington state is poised to deliver quantitative benefits in FY25. Relationships built and deepened this year through the Advisory Committee are building a connective fabric for continuity and consistency in understanding culturally responsive education developed for, and with, the communities they are intended to serve.

The Bilingual Environmental Education (BEE) initiative is well-positioned to help educators implement these high-quality programs statewide. EarthGen's ability to adapt and refine their approach based on feedback highlights their commitment to providing meaningful, culturally responsive learning experiences. The program's deep work this year has laid a solid foundation for future growth and greater impact in supporting Washington's diverse student communities' teachers to best serve students.

Other Relevant Information

Bilingual environmental education materials aligned with science and English Language Development standards are beneficial across the state, especially in central and eastern Washington. Schools and districts seeking bilingual education resources will benefit from participation in the professional learning opportunities and resources provided by EarthGen.

The potential connection to and relevance of the Dual Language Seal of Biliteracy and this effort is notable. Washington's tribal language speaking programs have a direct connection to environmental education and bilingual environmental education materials.

Indigenous ways of knowing and doing science are paramount to providing culturally responsive education in central and eastern Washington.

Curricular resources created with program funds are posted in the [Washington Environmental Education Group of the Washington Hub Open Educational Resources Commons](#).

[EarthGen's Bilingual Environmental Education program staff and resources can be accessed through the EarthGen website.](#)

Schools/Districts Receiving Assistance

[Click here to see a list of all OSPI grant recipients in the 2024 Fiscal Year.](#)

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