





Washington State

Environmental and Sustainability Literacy Plan

Executive Summary









Public Instruction



Education • Environment • Economy

July 2011



OSPI provides equal access to all programs and services without discrimination based on sex, race, creed, religion, color, national origin, age, honorably discharged veteran or military status, sexual orientation including gender expression or identity, the presence of any sensory, mental, or physical disability, or the use of a trained dog guide or service animal by a person with a disability. Questions and complaints of alleged discrimination should be directed to the Equity and Civil Rights Director at (360) 725-6162 or P.O. Box 47200 Olympia, WA 98504-7200.

Executive Summary

Washington State Environmental and Sustainability Literacy Plan

Prepared by Gilda Wheeler, Program Supervisor Education for Environment and Sustainability, Teaching and Learning Office of Superintendent of Public Instruction

Abby Ruskey, Executive Director
E3 Washington: Education, Environment, Economy
Environmental Education Association of Washington

Randy I. Dorn Superintendent of Public Instruction

Ken Kanikeberg Chief of Staff

Alan Burke, Ed.D. Deputy Superintendent, K–12 Education

Jessica Vavrus
Assistant Superintendent, Teaching and Learning

Executive Summary

The Washington State Environmental and Sustainability Literacy Plan (Plan) defines a 2021
 Vision of:

Excellent and relevant environmental and sustainability education for each student, in and outside of school, at all grades.

• The purpose of the Plan is to:

- Build on, contribute to implementation of, and leverage existing environmental and sustainability education programs and initiatives in Washington State.
- Ensure that students have ample opportunities to increase their environmental literacy and enhance their academic achievement and prepare for life and work through innovative, realworld, project-based learning.
- Ensure that Washington State is well-positioned to obtain private and public funding to support this important work.
- The Plan was developed and informed by a steering committee representing a broad range of education stakeholders.
 - The steering committee was comprised of elementary, middle, and high school teachers; school administrators and directors; teacher educators; regional professional development providers; informal educators; natural resource agency staff; state education agency content and assessment experts; students; parents; business leaders; and tribal and other community partners.
- The Plan includes history and background on environmental and sustainability education in Washington State.
 - The plan compels action towards an innovative 21st century education that Washington is uniquely poised to model.
- The Plan includes six forward-thinking and attainable 10-year goals.

GOAL 1 – Lifelong Learning and Community Connections

The community surrounding the K-12 system supports students' environmental and sustainability literacy. Environmental and sustainability education resources and opportunities are available to all and accessed by many people in Washington State, from the youngest children to senior citizens.

GOAL 2 – Learning Standards, Content Areas, Courses, and Instructional Materials School districts, schools, and teachers in Washington State have the necessary resources to support integrated environmental and sustainability education learning opportunities for each student.

GOAL 3 – Graduation Requirements

All students in Washington State have the opportunity to graduate from high school with proficiency in environmental and sustainability literacy and are prepared to continue their education and/or enter related careers.

GOAL 4 – Professional Development

A comprehensive environmental and sustainability education professional development program addressing the needs of informal and formal educators is developed and implemented in Washington State.

GOAL 5 – Assessment System

Multiple assessments, including summative and formative assessment processes, are used to measure students' environmental and sustainability literacy and inform teaching and learning.

GOAL 6 – Implementation and Funding

Obtain ongoing diversified funding to implement, track, measure, and manage the Washington State Environmental and Sustainability Literacy Plan.

• The Plan includes a "theory of change" for each goal area.

 The theory of change statement in each goal area articulates the underlying assumptions that were made as to why the strategies will achieve the desired goals and outcomes. The theory of change shows a causal pathway from action to outcome.

The Plan includes outcomes and key strategies in each of the six goal areas.

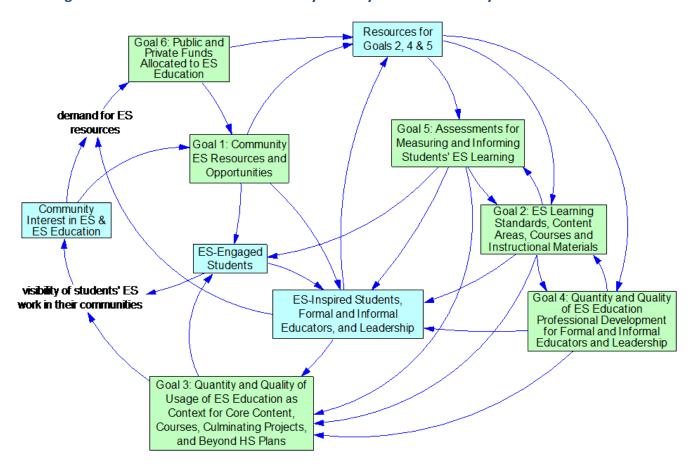
- To ensure that the Plan would be realistic, attainable, and transformational, the steering committee developed a set of criteria to guide the development of the Plan's outcomes and strategies.
- Upon completion and approval of the Plan, a detailed work plan will identify key leaders, steps, methods of measurement, and a timeline to guide step-by-step adaptive management and achievement of the outcomes and strategies.

• The Plan includes the use of Systems Thinking perspectives and tools.

- The Plan reflects the efforts of the E3 (Education, Environment, Economy)¹ initiative to link educators and systems thinkers in order to bring environmental and sustainability education to scale.
- A systems thinking perspective can help decision-makers better understand the system and its complexity resulting in resilient, responsive, and effective policies.

¹ E3 Washington: Education-Environment-Economy is the leading initiative of EEAW which is in the process of transitioning its organization name to "E3 Washington."

Washington Environmental and Sustainability Literacy Illustrated as a System²



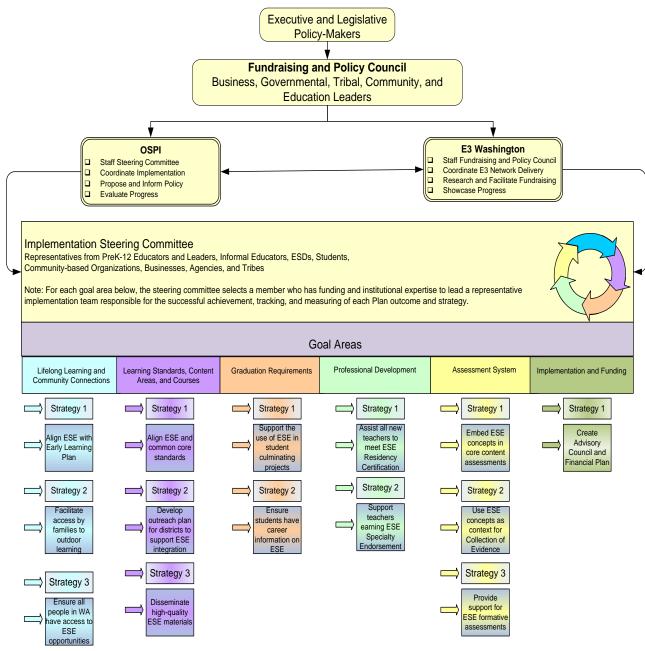
Legend: The causal loop diagram represents the Plan's comprehensive high-level "theory of change" strategy. The arrows indicate causal relationships, that is, a change in the value of the variable at the tail of an arrow "causes" a change in the value of the variable at the head of that arrow. The boxes signify variables that have a significant degree of persistence over time; they tend to maintain their values and not change significantly over short periods. The green boxes are persistent variables related to the above-stated goals, and the blue boxes are other persistent variables that are important for understanding the plan's theory of change. See Appendix D for a more detailed explanation (reveal) of the causal loop diagram.

² Causal loop diagrams are from the field of system dynamics, a perspective and a set of conceptual and simulation tools for strategy analysis. Using existing knowledge, causal loop diagrams show why social and physical systems behave the way they do. They help people build progressively richer understandings of dynamic problems, and anticipate weaknesses in strategy initiatives over time. They portray a 'feedback' perspective - the realization that tough dynamic problems arise in situations with multiple pressures and perceptions that interact to form loops of circular causality, rather than simple one-way causal chains.

Washington State Environmental and Sustainability Literacy Plan



Leadership Roles for Funding and Implementation



Strategies listed are examples for the purpose of this structure chart. For each strategy, the respective goal area team will map the priority actions that will leverage all others, the responsible stakeholders, and a timeline to achieve each strategy in order to scale environmental and sustainability education in PreK-12 education.

Acknowledgments

The Washington State Environmental and Sustainability Literacy Plan was developed by OSPI and EEAW/E3 Washington with major support and input from the following Washington State educators and leaders of whom we are extremely grateful.

Steering Committee:

Georgia Boatman

Regional Science Coordinator, ESD 123

Ayana Cleveland

Student, Washington State University

Steve Coleman

Science Teacher, High Tech High, Quincy School

District

Tom Condon

Science Teacher, Komachin Middle School, North

Thurston School District

Ellen Ebert

Science Director, OSPI

Maria Flores

Facilitator, Center for the Improvement of Student

Learning, OSPI

Sarah Gage

Executive Coordinator, Biodiversity Projects,

Recreation and Conservation Office

Dolores Gibbons

Educational Consultant, McKinstry

Chuck Gibilisco

Watchable Wildlife Education Specialist, Dept. Fish &

Wildlife

Debra Hawkins

Director, Classroom Assessment Integration, OSPI

Effenus Henderson

Diversity Director, Weyerhaeuser

Tom Hulst

EEAW Board Director

Edward Benote Hill

Program Manager, Creatives4Community / Seattle

Tilth

Denny Hurtado

Program Specialist, Indian Education, OSPI

Susan Johnson

Director of Early Learning, OSPI

Beth Kelly

Learn and Serve Supervisor, OSPI

Ben Klasky

Executive Director, IslandWood

Martha Kurtz, PhD

Director Center for Excellence in Science and Mathematics Education, Central WA University

Cheryl Lydon

Statewide ESD Math-Science Director, 9 Regional

ESDs

Rick Maloney

Director, Washington State School Directors

Association

Susan Milan

Teacher, South Whidbey Elementary, Whidbey Island

School District

Dennis Milliken

Supervisor, STEM Education, OSPI

Paul Newton

Systems Engineer, Boeing Research & Technology;

EEAW Board Member

Lisa Rakoz

Program Supervisor, Health and Fitness, OSPI

Bob Sotak, PhD

Director, Curriculum and Instruction, Everett Public

Schools

Abby Ruskey

Executive Director, Environmental Education

Association of Washington

Kathe Taylor, PhD

Policy Director, WA State Board of Education

Margaret Tudor, PhD

Executive Director, Pacific Education Institute

Jessica Vavrus

Assistant Superintendent, Teaching and Learning,

OSPI

Mark Watrin

Regional Science Coordinator, ESD 112

Gilda Wheeler

Program Supervisor, Sustainability and Science, OSPI

Mike Wierusz

Director, One Earth Solutions and Teacher, North

Shore School District

Elaine Wood

Science Assessment Specialist, OSPI

Office of Superintendent of Public Instruction
Old Capitol Building
P.O. Box 47200
Olympia, WA 98504-7200

For more information about the contents of this document, please contact:
Gilda Wheeler, OSPI
E-mail: Gilda.Wheeler@k12.wa.us
Phone: (360) 725-4976

To order copies of this document call 1-888-59-LEARN (I-888-595-3276) or visit our Web site at http://www.k12.wa.us/publications

Please refer to the document number below for quicker service: 11-0023

This document is available online at: http://www.k12.wa.us/EnvironmentSustainability/default.aspx

This material is available in alternative format upon request. Contact the Resource Center at (888) 595-3276, TTY (360) 664-3631.



Office of Superintendent of Public Instruction
Old Capitol Building
P.O. Box 47200
Olympia, WA 98504-7200
July 2011