

Conservation education in the Portland-Vancouver area

Final report and archive from The Intertwine
Conservation Education Task Force

May 2011



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List of Terms

Conservation Education helps people of all ages understand and appreciate our natural resources and how to conserve those resources for future generations. Through structured educational experiences and activities targeted to varying age groups and populations, conservation education enables people to realize how natural resources and ecosystems affect each other and how resources can be used wisely.

Environmental Education refers to organized efforts to teach about how natural environments function and, particularly, how human beings can manage their behavior and ecosystems in order to live sustainably. In practice, “Environmental education” is usually used interchangeably with “sustainability education.” The state and national conversation is more focused on environmental/sustainability education than on conservation education.

Environmental Literacy encompasses the following dispositions and skills: (a) ecological knowledge; (b) verbal commitment; (c) actual commitment, or environmental behavior; (d) environmental sensitivity; (e) issue identification and issue analysis skills; and (f) action planning.

Intertwine all of the parks, natural areas and trails of the Portland, Oregon and Vancouver, Washington metropolitan region. Currently 1,250 miles of designated bicycle and pedestrian trails, 12,000 acres of developed parks and 24,000 acres of publicly-owned natural areas.

Intertwine Alliance is the broad coalition of hundreds of organizations working to build and protect the region’s network of parks, trails and natural areas and to create opportunities for residents to connect with nature.

Intertwine Provider is any public or private program to teach conservation of resources, sustainability of this region and/or ecology of any portion of the bioregion of the Portland, Oregon and Vancouver, Washington metropolitan region.

Intertwine User is an individual, group, family, institution or other collective that visits, studies or otherwise engages with the any part of The Intertwine.

Stewardship is “the responsible use (including conservation) of natural resources in a way that takes full and balanced account of the interests of society, future generations, and other species, as well as of private needs, and accepts significant answerability to society”. (published by Worrell and Appleby)

OUR SHARED VISION FOR CONSERVATION EDUCATION

The Vision

Our region boasts an impressive array of urban wildlife and high-quality outdoors opportunities. These opportunities are laced together in The Intertwine: the network of parks, trails and natural areas enjoyed by residents across the region. Yet, national trends indicate that the time people spend outdoors is in steep decline, ecological literacy is dropping, levels of childhood and adult obesity are increasing at alarming rates and children are experiencing upwards of seven hours per day in front of screens.

As a region, we possess the collective capacity to address the challenge of what Richard Louv has called “nature deficit disorder” through our dynamic system of conservation education activities. The Intertwine Conservation Education Task Force (Task Force) proposes a vision, unrestrained by current societal trends or disparities within our system, to energize and align efforts in the region.

The Task Force envisions a future where ***everyone shares a lifelong connectedness with nature***. To realize this vision, the conservation education sector is called to engage head, heart, and hands in actively ***knowing, valuing, and stewarding this place we love***.

Education is vital to realizing this vision and improving the livability of this region as well as supporting the success of The Intertwine Alliance. We imagine the day when:

- everyone enjoys easy access to nature and natural resources,
- our residents are scientifically and ecologically literate, inspired with curiosity and motivated by our knowledge
- environmental education is fully-integrated with formal, school-based learning, and
- our community sustains a system of conservation education is maximized through collaboration and supported with substantial resources, both financial and technical.

A Call to Action

We are all partners in conservation education. Every sector of society; from business to private foundation, from government agency to non-profit, from family to community has a stake in creating our shared future. With smart investments and intention, we can create access to nature for all families, in all neighborhoods, region-wide. With this shared vision, each partner plays a vibrant and important role in building a future where everyone knows, values, and stewards this place.





THE ROLE OF THE INTERTWINE CONSERVATION EDUCATION TASK FORCE

About the Intertwine Conservation Education Task Force

The Task Force was formed to provide direction for the conservation education “petal” of The Intertwine Alliance.

Nominees for the Task Force were solicited

broadly, both thoughtful individuals and representatives of organizations. A work group selected task force members based on the diversity of sectors and experiences they represent and on the commitment of the nominee to explore the following questions:

- Why should the Portland-Vancouver Metro region participate in conservation education?
- What is the purpose/value for conservation education?
- Do we need to develop a business case to advance conservation education in the region?

The Task Force met five times from January to May 2011. They also met in project-specific subgroups, participated in site visits with participating conservation education providers and deliberated online and in person. The members interpreted their charge as; identifying and characterizing the issues facing the regional conservation education sector, drafting a vision unrestrained by those challenges, recommending a leadership body to implement activities to address those challenges, and creating a draft baseline of indicators from which to measure success toward our vision.

Membership of the task force included:

Cheryl Bland, classroom teacher, Ron Russell Middle School, David Douglas School District | Rex Burkholder, Metro Councilor | David Cohen, Executive Director, Friends of Tryon Creek | Dave Einolf, business owner, Endeavor EHS, LLC | Stephen Hatfield, Stewardship Director, Forest Park Conservancy | Regina Hauser, Director, Natural Step | Sybil Kelley, Center for Science Education, Portland State University | Mike Mercer, Executive Director, Northwest Earth Institute | Nancy Pollot, Connecting People with Nature regional team member, U.S. Fish and Wildlife Service | Traci Price (Chair), Consultant and former Chair of Oregon Environmental Literacy Task Force | Janet Schmidt, REI Inc | Douglas Tsoi, Partners for a Sustainable Washington County Community | Scott Welch, Global Corporate Relations Manager, Columbia Sportswear Inc | Rick Zenn, Senior Fellow, World Forestry Center

The following sections recap the work of the Task Force and include a set of recommendations for next steps.

THE CASE FOR CONSERVATION EDUCATION

Why should society invest in conservation education?

There is no shortage of research describing the benefits gained through time spent in the natural world. Whether one engages in rigorous outdoor play like kayaking or biking or quieter activities like picnicking or bird-watching, experiences that put us in contact with the natural world carry the potential to increase academic achievement, lower stress levels, improve child development, and contribute to better physical and emotional health in all residents.¹ To this end, conservation education creates the access for Intertwine users to dedicate more time to activity outdoors.

Sense of urgency

Despite the known benefits of outdoor play and nature-based education, participation in outdoor activities and nature-based recreation are declining both nationally and locally in urban as well as rural environments.² Furthermore, outdoor play behaviors have changed between today's generation of children and their parents' generation, with more time spent in organized activities and less on exploration and discovery³. As behaviors are shifting and time spent in the outdoors declining, adolescents' level of concern about environmental issue is dropping⁴. The implications of these trends are wide-reaching and influence multiple spheres of community health and well-being, directly and indirectly.

Coping with ADD: The Surprising Connection to Green Play Settings

According to the Centers for Disease Control and Prevention (CDC), ADD/ADHD is a serious public health problem that impacts approximately 9% of children aged 4-17 years. An increasing amount of evidence is showing that exposure to natural environments can mitigate a child's attention disorder. Authors of a 2001 study analyzed this concept by surveying parents to compare their child's attentional functioning when engaging in leisure activities in indoor vs. outdoor settings. Results included that children had better attentional functioning after activities in greener settings. The greener the setting, the less severe the symptoms of the child's attention disorder.⁵

¹ Maller, C., Townsend, M., St.Leger, L., Henderson-Wilson, C., Pryor, A., Prosser, L., and Moore, M. (2008). "The health benefits of contact with nature in a park context: A review of relevant literature." Deakin University and Park Victoria.

² Pergams, O. R. W., & Zaradic, P. A. (2008). "Evidence for a fundamental and pervasive shift away from nature-based recreation." *Proceedings of the National Academy of Sciences of the United States of America*, 105(7), 2295-2300.

³ England Marketing. (2009). Childhood and nature: a survey on changing relationships with nature across generations.

⁴ Wray-Lake, L., Flanagan, C. A., & Osgood, D. W. (2009). Examining trends in adolescent environment attitudes, beliefs, and behaviors across three decades. *Environment and Behavior* (May5).

⁵ Taylor AF, Kuo FE & Sullivan WC (2001). *Environment and Behavior*, 33(1):54-77.

At the same time that participation in meaningful outdoor play is in decline, 21st century behaviors are putting children and adults at risk, including unprecedented levels of obesity and chronic disease, declining air and water quality, and climate change, to mention but a

Neighborhood Greenness and 2-Year Changes in Body Mass Index of Children and Youth

A retrospective cohort study appearing in the December 2008 issue of The American Journal of Preventive Medicine followed low-income children ages 3-16 years for two years. Authors calculated their change in BMI and measured the amount of green space in each child's neighborhood using satellite images. After adjusting for potential variables such as age and gender, it was found that higher greenness was associated with lower odds of increased change in BMI (OR: 0.87, 95% CI: 0.79-0.97). Authors suggested that efforts to get children outside and engaged in healthy behaviors should be promoted as a means to help combat childhood obesity.⁷

few of the current challenges. According to the National Poll on Children's Health, obesity in children has risen by 50 percent over the past two decades with 17 percent of all children now considered obese.⁶ Consequently, children are at direct risk of other chronic conditions such as high blood pressure, high cholesterol levels, orthopedic problems, and sleep disorders, with the occurrence of Type 2 diabetes as the most prominent of these problems. Undeniably, the region is called to collectively address these issues with holistic, well-aligned solutions including improving access and effectiveness of outdoor opportunities.

Approaching conservation education collectively, as a region intent on engendering a sense of knowledge, value, and stewardship for the natural world, provides a potent lever to reverse these disturbing trends.

Success in conservation education drives success of The Intertwine

Residents of the Portland-Vancouver region live in a metropolitan area characterized by neighborhoods, employment, and natural environments connected by a world-class network of trails. They have told us that they value opportunities for all people to access and enjoy these amenities. Many residents agree that the region's diverse communities of native flora and fauna species enrich the community and improve livability.

However, human behaviors that are destructive and unsustainable persist, and we face challenges to restore ecological functions in large-scale natural areas as well as coordinating voluntary sustainability efforts such as recycling or home-scale backyard landscaping choices. Some of our most revered urban natural areas, such as Forest Park, are at risk due to lack of investment in their ecological health. Often, public agencies lack the revenue to adequately maintain our urban natural areas, or to provide major upgrades to existing parks in order to meet the needs for the estimated one million new residents the

⁶ The Institute of Medicine (2005). Preventing Childhood Obesity: Health in the Balance.

⁷ Bell JF, Wilson JS, Liu GC (2008). *American Journal of Preventive Medicine*, 35(6):547-533.

region is expected to gain over the next 25 years. For example, at the current rate of investment the trails network will not be complete for another 190 years.

The Intertwine Alliance intends to address these shortcomings, thereby building the greatest systems of parks, trails, and natural areas in the world. The Alliance strives to achieve this in two ways by; 1) accumulating new resources for the sector and 2) reaching the public in new ways. Success toward this mission cannot be realized without residents who know, value, and steward our parks, trails, and natural areas. Conservation education is the vehicle for translating this ethic into a way of life for the region's residents. Conservation education efforts create an intimate collaboration between parks and natural resource agencies and users sharing a deeper knowledge about the region's ecology. Conservation education efforts engender a sense of the value of natural systems in participants, which is a key step in the behavior change process. This creates the conditions and incentives for behavior changes that will result in a deeper concern for and stewardship of The Intertwine.

CONTEXT

Our current conservation education system; a web of opportunities

From parks providers to watershed councils, from school classrooms to the Oregon Zoo, the Metro region is rich in conservation education resources. Intertwine users benefit from a vibrant web of over 300 agencies, businesses, and organizations that provide a wealth of formal and informal conservation education opportunities ranging from on-the ground experiential education, to classroom-based programs on waste reduction from the National Forests to OMSI, as well as outdoor school and other creative resources. There are many and various opportunities for funders and volunteers to support programs that meet their personal and organizational interests.



Is there a conservation education problem?

By and large, existing conservation education offerings have emerged organically, in response to local needs and available resources, and have done so with little regional coordination or strategizing between organizations. Consequently, offerings vary significantly in the scope and scale of their content, target audiences, and overall effectiveness. Providers across the spectrum are vocal in their desire to optimize collective efforts, yet rarely have the time or resources to align programming to leverage opportunities. One of the results of this is a system characterized by a high degree of

competition for limited funding resources. The system also serves as its own incubator of new talent, with much sharing of volunteers, interns, AmeriCorps and other service organization members (when available). In 1991 a group of stakeholders from across the region convened to establish a metro-wide vision for environmental education. Their final report, compiled by Dave Yamashita, Metro, outlined a framework of recommendations for creating a thriving conservation education sector. Twenty years later, Metro reconvened a team of environmental education professionals to discuss progress since the 1991 vision. Their observations brought to light both the successes and shortcomings of the work of the last decades.

During the discussions cited above, the richness and vibrancy of the conservation education sector were apparent. Despite the lack of infrastructure to optimize collective efforts, the organic web of conservation education providers has made significant accomplishments toward many of the recommendations. Nonetheless, the need for system-wide infrastructure and capacity to hold reviews and regional conservation education conversations, more than once every twenty years, seems even more necessary.

WHAT CONSERVATION EDUCATION OPPORTUNITIES DO WE HAVE?

The system

In its variety, the current system of conservation education has served as an incubator of opportunity. By participating in a common system, Intertwine providers and users would have the opportunity to develop a collaborative strategy to optimize resources, leverage support, and ensure growth and sustainability of cumulative efforts. This process will create synergy and garner critical mass for the sector. Outcomes will be prioritized, fundable, and more easily accessed across all demographics. The result will be a “system” of conservation education that is greater than the sum of its parts.

Implementation of this strategy will require a broad inventory of providers, programs, and services. Mapping the inventory geographically will not only highlight patterns, desired and inadvertent redundancies, gaps in service delivery, but also will identify opportunities for collaboration. The mapping will allow providers and users to capture and optimize current efforts.

Leverage points

Current momentum on national, state, regional and local levels indicates the possibility for leverage points. Collaboration with federal and state initiatives that have developed conservation education mandates, such as the Oregon No Child Left Inside Act, provide opportunities for new partnerships.



Locally, PSU's Cradle to Career initiative identifies a continuum of benchmarks toward life-long learning. Similarly, the Science Technology Engineering and Math (STEM) Center development is helping two Westside school districts link to better educational outcomes. Both these efforts are opportunities to link conservation education to formal education for this region as part of high-visibility, high-impact efforts.

Statewide, *The Oregon Environmental Literacy Plan: toward a Sustainable Future* calls upon educators to come together under a common set of objectives to embrace a full-spectrum of environmental education inside and outside of the classroom.

Federally, efforts like No Child Left Inside and the America's Great Outdoors Report further encourage this work. For the first time ever, the U.S. Education Department's Fiscal Year 2011-2012 budget includes support for environmental education and programming. Even the public health industry is promoting time outdoors as an integral piece of healthy living and recognizing the connection between these lifestyle habits and an urban infrastructure that supports them; in this region, that infrastructure is The Intertwine's system of parks, trails, and natural areas.

Expanding the choir; creatively connecting new audiences to nature

Realizing the Task Force's vision for conservation education will require providers to expand their influence to a regional level to more effectively reach new and diverse audiences and address gaps in program delivery. This will require creative community outreach tools and involve an expanding spectrum of community stakeholders in order to create access to nature and participation in outdoor activities.

These tools will likely include tried-and-true methods that connect people to nature such as community-based restoration and volunteer stewardship in addition to new tools such as



emergent technology to connect a younger generation of screen users to nature. As an example, GIS-type applications will soon allow park users to report infestations of garlic mustard while hiking in Forest Park. This is but one of the many new tools needed for stewardship and engagement to reach higher levels necessitated by the environmental and social challenges we face.

Creating a clearinghouse of “the riches”

Creating an easily accessible clearinghouse of opportunities, research and resources for conservation education providers and users is a necessary first step. Both informal and formal program providers will benefit from professional development resources, best practices, and published literature that keeps practitioners abreast of current research. The public will have a place to go to find region and neighborhood specific opportunities for

involvement. This clearinghouse could manifest itself in a physical space, on the internet, and/or in a regional publication and can be a literal or figurative “place” where providers can connect. As the system grows, the Task Force envisions these resources decentralizing into regional hubs for information, skills and resource sharing.

WHAT ARE NEXT STEPS FOR CONSERVATION EDUCATION IN THE METRO REGION?

Recommendations from the Task Force

A regionally coordinated and sustainable approach to conservation education that optimizes resources and impact demands a leadership mechanism capable of supporting and measuring progress toward our vision. The Task Force recommends a long-term Conservation Education Council, of up to 11 members, with rotating terms of service, and calls on various organizations to nominate members and accept this charge.

The Conservation Education Council will implement a plan to address current gaps in the sector, including centralized monitoring of established metrics as well as regular analysis and report out of the state of conservation education in the region against those metrics. Through a singular and unified voice, they will be charged with raising the visibility and quality of program offerings and increasing access to resources that support sustaining and growing conservation education efforts in the region. They will build a robust foundation of regional support and will serve as lead advocates for the conservation education petal with connections to all petals of The Intertwine Alliance.

The Conservation Education Council will benefit from broad-based, multi-sector membership. Recruitment for the Council is to be drawn from the following fields:

<i>Higher Education</i>	<i>Private business</i>
<i>Government Agencies (federal, state, regional, county, local)</i>	<i>Formal Education (early childhood education, K-12, charters, ODE, P20, STEM)</i>
<i>Faith-based organizations</i>	<i>Funders</i>
<i>Student-led groups</i>	<i>Health care professions</i>
<i>Conservation education providers/users</i>	<i>Natural resource managers</i>
<i>Community leaders and organizations (particularly that lead underserved and/or low-income communities)</i>	<i>Elected officials (also might find their place in an advisory council)</i>

The Conservation Education Council will garner feedback from all stakeholders to ensure a deeper, working knowledge of the sector and appropriate representation of its needs and success. By design, membership will ensure crucial capacities including strategic planning, program and resource development, and marketing and media skills are present and that essential overlays, such as gender, age/experience, cultural diversity, and geographic equity, drive outcomes that truly represent and meet the needs of all Intertwine users.



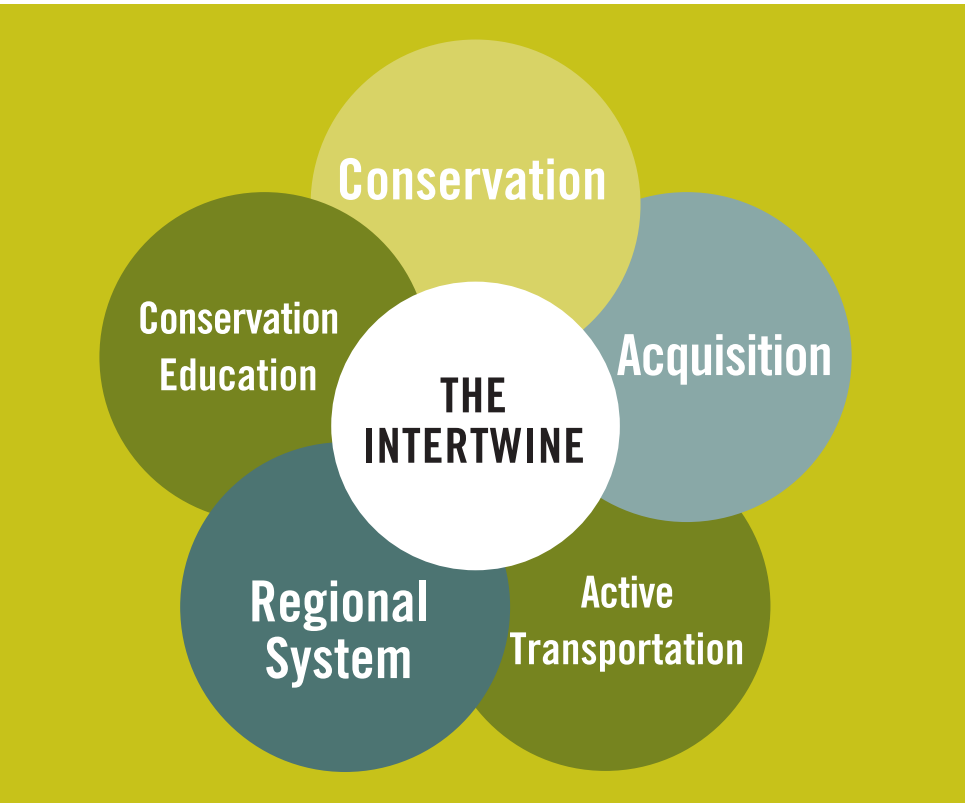
What will 2011 hold for conservation education?

One early project the Conservation Education Council may wish to take on will be to organize a regional summit to advance the dialogue about how to achieve the vision. The summit will provide time for attendees to celebrate efforts to build momentum around these ideas, honor recent successes, communicate their ideas for regional conservation education priorities, share and solicit input on draft indicators for measuring regional success, share skills, create opportunities for involvement, and learn from practitioners with programming, communications and funding expertise. This summit could most logically take place spring 2012. The sector would then be called together in advance to assist with the planning of this event.

Conclusion

The case for conservation education is clear. The need is urgent. The development of The Intertwine Alliance creates a platform which helps support the success of this regional effort. In response, the Conservation Education Task Force has established a vision and call to action that invites all partners and affiliates of conservation education to join in the task of creating a future where ***everyone shares in lifelong connectedness to nature; where we engage head, heart, and hands in actively knowing, valuing, and stewarding this place we love.***

To realize this vision, the task force is inviting key partners in the conservation education sector to take this effort to the next level by developing and supporting a council of leaders to implement a shared regional vision. The success of this leadership body will be driven by high-quality committees, supported by all sectors, and populated by the region's strongest conservation education leaders.



The Intertwine Alliance Conservation Education Task Force invites all partners and affiliates of conservation education to join in the task of creating a future where everyone shares in lifelong connectedness to nature; where we engage head, heart, and hands in actively knowing, valuing, and stewarding this place we love.

