The Promise of Civic Engagement for Environmental Issues: Synergy of Environmental Education and Civic Education
June 2020[1]

Introduction

In many ways, civic engagement is in the DNA of the field of environmental education. Environmental education builds the knowledge, skills, and motivation to help people of all ages make better personal decisions, become engaged in civic life, and build healthier communities that can better address the environmental, economic, and social challenges we face as a society. It operates at both the individual and the community level. Environmental education is built on the principles of sustainability, focusing on how people and nature can exist in productive harmony by addressing economic livelihood, social justice, and environmental quality.

At the same time, civic education provides learners with the knowledge, skills, and motivation to best position their engagement in governance and civic life. Civic education is most often addressed through the formal school system, focusing on the development of a "…fundamental understanding of the structure of government and the processes by which government passes laws and makes policy,"[2] and providing "…opportunities for students to engage in activities within the classroom that model what democratic processes look like, as well as opportunities to participate in the civic life of their communities and learn from this participation as a formal part of their coursework."[3]

Since learning about and protecting the environment is a deeply held concern for many youth, and a motivating factor for adults as well, environmental issues and concerns are one of the most popular contexts for civic education. This suggests that identifying and cultivating the synergy between environmental education and civic education would be beneficial to both fields.

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[1] This document results from discussions held at the *Learning from Each Other: Connecting Civic Engagement and Environmental Education Research Exchange* cosponsored by the North American Association for Environmental Education and Kettering Foundation, November 21-22, 2019. It was developed by Bora Simmons and Martha Monroe, with significant input from *Exchange* participants. For more information, please contact Bora Simmons: borasimmons@gmail.com

[2] Jonathan Gould, Kathleen Hall Jamieson, Peter Levine, Ted McConnell, and David B. Smith, eds. *Guardian of Democracy: The Civic Mission of Schools*. Rep. Philadelphia: Leonore Annenberg Institute for Civics of the Annenberg Public Policy Center at the University of, 2011. Descriptions of Civic Knowledge, Civic Skills, Civic Dispositions, and Civic Participation can be found on pages 16-17.

[3] Levesque, Elizabeth Mann, What does civics education look like in America? Brown Center Chalkboard, July 23, 2018. https://www.brookings.edu/blog/brown-center-chalkboard/2018/07/23/what-does-civics-education-look-like-in-america/

As a leader in environmental education, the North American Association for Environmental Education[4] (NAAEE) is seeking a deeper understanding of how environmental education can support and complement initiatives that are geared more broadly toward educating for civic agency, capacity, and participation. Articulating environmental education's role in civic learning and engagement requires an examination of how environmental education practices intersect with and complement civic education. Similarly, articulating civic education's role in engaging learners around environmental concerns requires an examination of how civic education practices intersect with and complement environmental education. For the purposes of this paper, we are calling this overlapping domain CEEI (Civic Engagement for Environmental Issues). This document articulates the foundation for this work by describing CEEI audiences, educators, instructional approaches, and learning outcomes. Over time, we expect that our understandings of CEEI theory and practices will deepen, and that this domain will grow, creating a fertile ground for new research questions and programs.

Some Helpful Definition (1)

Civic Engagement for Environmental Issues is a process that enables learners to become more knowledgeable and skilled in the resolution of environmental issues through community governance. Throughout CEEI, participants use foundational understandings of Earth's physical and living systems as well as understandings of civic institutions and structures (e.g., governance) in their investigations and deliberations. They engage each other in peer review, collaboration, and deliberation. Activities challenge learners to use and improve their critical thinking and creative thinking skills to evaluate, justify, and communicate their own views on environmental issues and possible ways to address them. Learners reflect on the intended and unintended consequences of their civic actions and actions taken by other individuals and groups and exhibit personal agency by making choices to bring about changes in their community, including changes in policies, that address environmental quality and long-term sustainability.

Environmental education (2) "…is a process aimed at developing a world population that is aware of and concerned about the total environment and its associated problems, and which has the knowledge, attitudes, motivation, commitment, and skills to helps individuals, communities, and organizations learn more about the environment, develop skills to work individually and collectively toward solutions of current problems and the prevention of new ones."

An Environmentally Literate Person (3) "…is someone who, both individually and together with others, makes informed decisions concerning the environment; is willing to act on these decisions to improve the well-being of other individuals, societies, and the global environment; and participates in civic life. Those who are environmentally literate possess, to varying degrees, the knowledge and understanding of a wide range of environmental concepts, problems, and issues; a set of cognitive and affective dispositions; a set of cognitive skills and abilities; and the appropriate behavioral strategies to apply such knowledge and understanding in order to make sound and effective decisions in a range of environmental contexts."

[4] NAAEE, as the professional association for environmental education in North America, promotes excellence in environmental education and has done so for over 40 years. NAAEE works to strengthen the field of environmental education and increase the visibility and efficacy of the profession. NAAEE's influence stretches across North America and around the world, with members in more than 30 countries.

Civic education (4) " …is imparting the knowledge needed for … informed participation in … democracy …developing the intellectual and practical skills that enable …[learners] to use knowledge effectively as they act individually and collectively in the public life of their democracy …encouraging the virtues that dispose …[them] positively to the ideals and principles of their democracy."

Civic engagement (5) "Civic engagement means working to make a difference in the civic life of our communities and developing the combination of knowledge, skills, values and motivation to make that difference. It means promoting the quality of life in a community, through both political and non-political processes."

Civic practices (6) "… activities that improve democracy and civic life by engaging –[people] and communities in addressing shared social problems. Civic Practices can include everyday acts of volunteer service, participation in social movements and electoral politics, service in government, campus-community partnerships, and work with non-governmental organizations."

Civic learning (7) **"…**to equip a … [population] with the knowledge, skills, and dispositions needed for active and engaged civic life."

Civic Life (8) "…the public life of [residents] concerned with the affairs of the community and nation as contrasted with private or personal life, which is devoted to the pursuit of private and personal interests."

(1) Given the political nature of the word citizen, we have purposely edited definitions and quotes to refer to residents and learners of all origins who are engaging in community decision making.
(2) UNESCO. (1980). Environmental education in the light of the Tbilisi Conference. Vendôme, France: Presses Universitaires de France.
(3) Hollweg, K. S., Taylor, J. R., Bybee, R. W., Marcinkowski, T. J., McBeth, W. C., & Zoido, P. (2011). Developing a framework for assessing environmental literacy. Washington, DC: North American Association for Environmental Education. https://naaee.org/our-work/programs/environmental-literacy-framework.
(4) Patrick, J. (nd.) Understanding Democracy, A Hip Pocket Guide. Annenberg Classroom. https://www.annenbergclassroom.org/resource/understanding-democracy-hip-pocket-guide/civic-education/
(5) Ehrlich, T. (ed). (2000). Civic Responsibility and Higher Education, Oryx Press.
(6) Jonathan M. Tisch College of Civic Life. (nd). Civic Practice, https://tischcollege.tufts.edu/civic-practice
(7) NCSS. (2013). Revitalizing Civic Learning in Our Schools. https://www.socialstudies.org/positions/revitalizing_civic_learning
(8) Center for Civic Life. (nd.) What are civic life, politics, and government? https://www.civiced.org/standards?page=912erica

The Focus of CEEI

Building capacity for civic participation in policy-level decision-making is at the heart of CEEI. For environmental education, opportunities to learn skills and participate in the resolution of issues often focuses on individual decisions and behaviors, such as home energy conservation or planting a butterfly garden. At times, collective action, where the greater impact of many people doing the individual behaviors necessary to recognize incremental change (e.g., waste reduction), becomes the focus. While the important roles and impacts of these types of individual actions are recognized, they are fundamentally different from collective action that addresses community policy and governance.

Environmental education has historic roots in helping individuals develop the knowledge, skills and dispositions necessary to engage in democratic processes and to participate in strategic

advocacy (such as boycotting a product or speaking at a public hearing[5]). Strategic advocacy tends to address solutions to community issues at the community level—advocating for bike lanes so individuals can choose to cycle to work, pushing government to restrict hazardous chemicals in products or waste streams, or compelling universities to divest from carbon-emitting industries. The nexus of environmental education and civic education addressed in this paper focuses on these community-level policy responses.

It should be noted, however, that promoting engagement in democratic processes and community decisions is not without challenges. In part due to the potential backlash from parents, administrators, and community leaders who might take issue with educators involving 6-12th grade students in community controversies, many classroom environmental educators invite students to participate in awareness-raising projects on local issues, such as writing a Public Service Announcement or creating posters. These are useful projects and can build communication skills, but they are less likely to help learners engage in community decisions or build confidence in learners' abilities to do so. They fall short. CEEI pushes both civic education and environmental education further into engagement in community-level decision-making. With CEEI learners develop the ability to understand who makes decisions, what influences the decision-making process, and what information might prove most impactful. This type of CEEI requires a systems perspective on community governance. It enables learners to gain skills for an effective democracy to flourish.

How to best help educators navigate the tightrope that divides education from advocacy will continue to be a topic of great interest, debate, and exploration[6,7]. It will likely turn on the preparation of the educator, the age and skill of the learners, the level of controversy and debate in the community, and the history of public engagement in the community. Of course, CEEI in the community context has its own set of issues and concerns. Practitioners may want to consider using the NAAEE Community Engagement: Guidelines for Excellence to lay a foundation for this work and assessing their readiness for CEEI.

CEEI Audiences

The field of EE has traditionally been characterized by a **focus on learners of all ages**—from early childhood to seniors – and works in all segments of society. For the purpose of CEEI, however, we recognize that children under 10 years may lack the cognitive and emotional development for addressing the nuances of many community controversies. They can, however, gain skills in discussion and exploration with issues, such as school-based issues, that

[5] Hungerford, H. R., R. A Litherland, R. B Peyton, J. M Ramsey, A. N Tomera, T. L. Volk. 1985. Investigating and Evaluating Environmental Issues and Actions – Skill Development Modules. Champaign, IL: Stipes Publishing.
[6] Hug, J. 1977. *Two Hats* from a Report on the North American Regional Seminar on Environmental Educator: A confrontation with the issues: Environmental Education for the Real World. Columbus OH: SMEAC Information Center. Reprinted in Engleson, D. C. 1985. A Guide to Curriculum Planning in Environmental Education. Madison WI: Wisconsin Department of Public Instruction.
[7] Ardoin, N.M., C. Clark, and E. Kelsey. 2013. An exploration of future trends in environmental education research. Environmental Education Research, 19(4): 499-520.

are proximal to their lives. Consequently, while preK-5 learners are developing foundational skills needed for civic engagement, the focus of most CEEI activities is on the following learners:

- ✓ **students**— in grades 6-12.
- ✓ **college and university students** who are the next generation of teachers, environmental professionals, business leaders, and others.
- ✓ **community members**, focusing on the individuals and groups most vested in and impacted by community controversies related to social equity, environmental quality, and economic prosperity.

It should be noted that implementing CEEI can be challenged by the current focus within K-12 formal education on meeting standards and passing tests. Out-of-school and nonformal programs that are common in environmental education circles hold opportunities for civic engagement. Adult programming may be equally promising through community education opportunities.

CEEI Educators

In order to address the needs of these learners, CEEI educators work in a variety of settings and often come to education through a range of pathways. This document is seen as a tool for an array of educators wanting to address civic outcomes in their practice:

- ✓ **formal educators, administrators and school boards** who teach in, create curriculum for, and administer programs for 6-12 grade students.
- ✓ **college and university educators who teach at both the undergraduate and graduate levels.**
- ✓ **nonformal educators** who help engage people and communities in finding solutions to environmental issues—from loss of biodiversity to climate change resilience. They work with children as well as adult learners to provide content expertise, support, and resources, through community centers, nature centers, museums, zoos, and nongovernmental organizations.

Instructional Approaches for CEEI

Across settings and audiences, successful implementation of CEEI instruction draws from a wide array of approaches and strategies many of which have been championed by environmental, science, and civic educators over the years. The following strategies are seen as core to CEEI:

Place-based education: Learners explore their local community, build relationships with local resource people, as they explore and understand their surroundings and develop knowledge and skills through direct experience with the environment and social issues.

Interdisciplinarity: Educators weave together aspects of environmental science, culture and history, policy and economics, and enable learners to practice reading, writing, speaking, and mathematical skills as they understand the local issues.

Systems Thinking: Learners use systems thinking, a cross-disciplinary approach to problem solving and understanding, to examine the real-world conditions we face. Systems thinking helps learners make sense of a large and complex world. Each part of a system can be understood separately. The whole, however, is understood only by understanding the relationships and interactions among the parts. Learners apply systems thinking to assess the effects of human choices on economic, ecological, and social systems, and to increase effectiveness of outcomes for all three systems. Understanding the system may be prerequisite to understanding power relationships in a community.

Power Mapping: Learners apply power mapping as a strategy to identify who has power in the community, and to determine what will move those individuals or institutions to action. Power mapping can help learners identify key allies, who may be in opposition to a proposal, who the influencers are, and communication strategies. The way power influences elements of a community is like tracking energy in an ecosystem. Understanding the system may be the first step to tracking power.

In addition to the core strategies described above, two instructional approaches are key to CEEI: *Deliberative Discussion* and *Action Civics*.

Deliberative Discussions

Deliberation is the process of weighing options prior to making a decision. It has a strong tradition in a variety of classroom contexts and subject areas, and with youth and adults. People differ on their ideas about issues because their opinions reflect different levels of knowledge (and belief in information) as well as different values. To create engagement at the community level requires that people have the skills to communicate about polarizing issues, respect differences, listen carefully, speak from their heart, and value diversity. Local issues have the potential to be contentious, which can raise challenges for educators. Developing skills in respectful deliberation, critical thinking, and communication can help learners explore multiple perspectives and value positions that can help build awareness and empathy with different positions.

While Deliberative Discussions can be used effectively with in-school issues to help build skills in respectful listening, addressing values, challenging assumptions, and courtesy at any age, it is suggested as an instructional strategy here to enable older students (grades 6-16) to focus on community issues. Deliberative discussions are also commonly used with adults in community forums that frame local and national issues to revitalize democratic citizen engagement. This process has been championed by the Kettering Foundation and National Issues Forums Initiative. According to NIFI, forums offer community members "… the opportunity to join together to deliberate, to make choices with others about ways to approach difficult issues and to work toward creating reasoned public judgment."[8] With the guidance of a forum moderator, participants:

[8] National Issues Forums (nd) https://www.nifi.org/en/about-nif-forums

1. Look at different ways of thinking about a problem
2. Exchange views with others
3. Weigh benefits and trade-offs of different approaches
4. Listen and reconsider in a safe environment

As a result of the deliberative forum, participants:

1. Gain a deeper grasp of the issue and its tensions
2. Develop insight into different points of view
3. Determine which tradeoffs they and the other participants are willing to accept—or not
4. Are positioned for individual and collective action, including providing guidance for decision-makers

Through CEEI, we suggest that careful framing of a community issue and meaningful deliberation should help invite engagement and launch interested learners toward civic action.

Case Study
A Catholic Parish Establishes Common Ground

Pope Francis' 2015 encyclical *Laudato Sí: On Care for Our Common Home* has catalyzed Catholics around the world to be more actively engaged in environmental issues, including the parishioners at St. Mary of the Crown Catholic Church in Carbondale, CO. At St. Mary of the Crown, an open forum was held to allow parishioners to come together, share their stories, their concerns, and establish common ground together before considering how to take action around climate changes.

Based on the results of the open forum, a deliberative forum focusing on *Climate Choices* was held with a small group of a parishioners and parish leaders. Parishioners reported that the forum helped to see ways they share perspectives, however, they also realized how much more complicated this issue is through listening to each other's stories. Many reported later that they appreciated coming together with other parishioners who also care deeply about the impacts of climate change. Prior to the deliberation, they reported, they were not aware of many others within the parish who also shared similar concerns.

<u>Common Ground Leads to Climate Action</u>

Following the *Climate Choices* deliberation, parishioners were enthusiastic about creating change within the parish to address the parish's impacts on climate change. Their willingness to act led to the creation of a Creation Care Team in partnership with the Catholic Climate Covenant, a national initiative. The small group met monthly for prayer, reflection, project work, and advocacy. Projects have included:

- establishing a parish waste reduction effort including co-mingled recycling and compost;
- hosting a Common Home Energy Efficiency Resources Weekend which invited parishioners to leverage local energy rebates, home efficiency improvements, and the low-income home efficiency program;
- celebrating St. Francis with an evening class and blessing of the animals;
- encouraging participation in Carbondale Hazardous Waste Collection Day;

- including Green Tips for Living in the weekly parish email;
- asking parishioners to write their legislator and asking him to join the House Climate Solutions Caucus and co-sponsor the Climate Solutions Commission Act.

Collectively, this work is raising the awareness of parishioners on the importance and faith-informed responsibility of taking action to address the causes and impacts of climate change.

The value of the *Climate Choices* deliberation at St. Mary of the Crown Catholic Church was greater than expected. Parishioners, who are not already engaged in many parish activities, participated and discovered other parishioners who like themselves care deeply about the impacts of climate change and other environmental issues. Building community, taking small and successful steps together, and moving toward solving important problems are ways educators can help communities lay a foundation for CEEI.

This case study was written by Sarah R. Johnson, Wild Rose Education, Carbondale, Colorado. It was first published in Simmons, B. (ed.). 2018. *Using Environmental Issues Forums (EIF) to Enhance Deliberation: Case Studies*. North American Association for Environmental Education, https://naaee.org/eepro/resources/using-environmental-issues-forums-eif

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Action Civics

Action Civics is the second key instructional approach for CEEI. Action Civics projects address policies enacted at the community level and develop civic knowledge through first-hand interaction with decision makers in their community. For younger students, the community of interest may well be their school. Starting with the school community, students learn how to conduct an Action Civics investigation. As they mature, students expand their investigations into the wider community. These projects are not designed to inform others about an issue, they are designed to help resolve the issue. The National Action Civics Collaboration has identified Action Civics as "a student-centered, project-based approach to civics education that develops the individual skills, knowledge, and dispositions necessary for 21st century democratic practice." [9] With a focus on participant voice, learning by doing, and reflection, participants in Action Civics:

1. **Examine Community -** Analyze the assets and problem areas in school, community, city, or nation
2. **Identify Key Issues -** Identify personally relevant issues, focusing on the most salient issue through a process of root-cause analysis
3. **Research -** Do primary and secondary research to find evidence for their issue and proposed solutions, map power in the community, and identify key decision makers
4. **Strategize -** Find community partners to work with, learn from, and develop strategy for action
5. **Take Action -** Take collective action on community issue

[9] National Action Civics Collaboration (nd). Why Action Civics. http://actioncivicscollaborative.org/why-action-civics/process/

6. **Reflect and Celebrate -** Reflect on process throughout, developing positive leadership skills and refining their practice; celebrate success at the conclusion of the project to gain a sense of completion and pride.

Case Study
Engaging in Community Action

The Earth Force 6-Step Community Action and Problem-Solving Process is a "How-To" guide to develop student-led action projects. Students at Lanier Middle School in Fairfax, VA, for example, have been using these steps to make positive changes in their school community for many years.

The first step is to carry out a variety of **environmental inventories (step 1**). The process begins with students studying the Chesapeake Bay Watershed. Lessons focus on its geography, the issues facing the watershed, the people who live there and more. Once they understand the regional context they defined the community that would be the focus of their project. In this case the students decided that the school grounds would define the boundaries of the community. Once they had identified their community they went on a watershed walk around the community. On this walkaround students were asked to identify strengths and issues they see locally. A group of students identified the number of empty water bottles on campus as a problem. The combination of exploring topics of personal experience and regional importance helps students select an issue they care about that is also something that requires community policy to solve.

After these initial environmental inventories, students **decide (step 2**) on an issue to work on. At Lanier, students self-select groups of three to six and they choose the issue they would like to address. In this instance, a group of students chose to tackle plastic water bottle use at their school while another group worked on rainwater management on school grounds.

Once the issue(s) is/are chosen (e.g., the overuse of plastic water bottles in the school), students collaborate and **conduct research on relevant polices and community practices (step 3**). Here students researched why their school had drinking fountains rather than water bottle filling stations. This research included speaking to local stakeholders such as the school administration and conducted some online research concerning costs and other problems. Once completed students decided that the primary barrier to the adoption of water bottle filling stations was cost. Based on their knowledge students developed a report where they explained the issue, organize their research, and explain why they believe changing the policy will solve the problem they have identified. These reports are then presented to the class, usually as a slide show and/or essay.

After doing a deep dive into researching the selected issue(s), it is time to **pick a strategy** to change the relevant policies **(step 4)**. After discussions with local watershed advocates, students decided their best option was to approach the school board with the offer to fund two filling stations as a pilot project. Once the pilot project was completed students would return to the administration with data to demonstrate the return on investment.

Now Lanier students put their plan into **Action (Step 5)**. During this step, students met with the Fairfax School Board and convinced the school board to fund 50% of two water bottle refilling stations as a

pilot. Students also met with the Principal and got permission to sell water bottles through the school store. The students then wrote several proposals to fund their portion of the filling stations. Once the filling stations were installed students tracked their usage on a monthly basis for the following year. At the Spring School Board meeting students presented their results and asked the Board to fund the retrofitting of their school with filling stations and commitment to incorporate filling stations into future designs. The board adopted both of their recommendations and installed nine filling stations in their school. Over the last three years the students calculate they have saved nearly 80,000 water bottles through their efforts.

The grand finale is a **celebration** and **recognition of students' work (Step 6)**. This is the time to discuss next steps and how to move forward as well as "what can we do to keep this thing going?" This is the time to let students reflect on their experience and celebrate their successes.

For more information: EarthForce.org, EarthForceResources.org.

Case Study

Community Educators Use CEEI Strategies to Begin to Adapt to Sea Level Rise

In Florida, Extension faculty who work at the University of Florida and agents who work in each county use various tools to engage communities in discussions, priorities, and support of community policies to address climatic changes. Coastal counties face threats to infrastructure from rising seas, and nowhere is this more apparent than in the Florida Keys. There, community development agent Alicia Bradigan-Betancourt supported the county agencies with a deliberative process to make decisions.

Extension agents led workshops from 2015-2017 using economics modeling tools paired with facilitation, deliberative discussion, and knowledge experts to engage Monroe County communities in planning for sea level rise impacts. Economic modeling software mimics floods from storms and sea level rise on community assets such as homes and businesses, then tallies the cumulative damages over time so communities can better understand the cost of adaptation. Each workshop series brought community members together for 3 sessions over 3 weeks. At the first session, maps were provided by Extension faculty to show low lying areas and to determine vulnerability. Participants discussed vulnerability, sea level rise projections, and possible actions. They selected four adaptation options and three sea level rise projections to model for economic impact. One option was "no action." Three "action" scenarios were selected: elevating and floodproofing buildings, building barriers close to the coast, and purchasing vulnerable properties through a voluntary buyout program.

At the next session, returning participants were provided economic data for each of the options developed with the software. Skilled facilitators and key experts helped participants deliberate the four options. For each action, costs were determined by using tax assessment data. Modeling parameters (projections and geographic) were established by workshop participants through a keypad polling process. For example, several sea-level rise scenarios were considered as well as adaptation measures such as home elevation and sea walls.

For the final workshop, the model was run with the four action scenarios, and the results were converted into cost-benefit ratios. Ratios greater than 1 represented an action that reduced more in damages than they cost to implement. The action that had the best benefit-cost ratio was elevating and floodproofing buildings. The model predicted for every $1.00 spent the avoided damages would range from $5.24 to $15.28, depending on sea level rise projections and construction costs.

After looking at the model results and participating in the group discussions, participants voted that elevating and floodproofing buildings was their most preferred option and supported pursuing sources of funding to help private property owners do so. Importantly, the modeling results and community engagement process enabled Extension faculty to provide the residents with the opportunity to participate in community planning.

The CEEI process helped community residents provide recommendations to their community leaders, but only after learning about their vulnerability, selecting reasonable options, providing key parameters, and considering the output of the economic modeling. It is the community who knows itself best and by organizing space and allowing discussions community educators can lead community action.

CEEI Learning Framework

Ultimately, environmentally literate individuals possess an important set of knowledge, skills, and dispositions that allow them to solve environmental problems and determine the best set of actions. Civic education is also often described in terms of the knowledge, skills, and dispositions needed for active and engaged civic life. An important question is, what is the critical overlap between the desired learning outcomes of environmental education and civic education that form the core of a CEEI learning framework?

By identifying this core, natural opportunities to connect and build synergy between environmental education and civic education can be identified. A targeted CEEI learning framework can be used to develop comprehensive, cohesive, and focused programs and curriculum. A CEEI learning framework can help highlight each component part and determine to what extent they are fully incorporated into CEEI practices.

To explore the critical overlap between EE and CE learning outcomes, two documents were examined: 1) NAAEE's *K-12 Environmental Education: Guidelines for Excellence* [10] which details performance expectations or competencies for environmental literacy at the fourth, eighth, and twelfth grade levels and 2) *Guardian of Democracy: The Civic Mission of Schools* which describes "three pillars of good citizenship: civic knowledge, skills, and dispositions."[11] Using

[10] A separate analysis compares environmental literacy with social studies standards, Exploring Synergy: Environmental Literacy and the C3 college, Career, and Civic Life Framework (2019).

[11] Jonathan Gould, Kathleen Hall Jamieson, Peter Levine, Ted McConnell, and David B. Smith, eds. *Guardian of Democracy: The Civic Mission of Schools*. Rep. Philadelphia: Leonore Annenberg Institute for Civics of the Annenberg Public Policy Center at the University of, 2011.

these two documents, rough intersections between Civic Competencies and Environmental Literacy Competencies were identified. Further analysis resulted in the creation of a CEEI Learning Framework, consisting of four domains (knowledge, skills, dispositions, and participatory action). Finally, a set of specific CEEI learner performance objectives, describing expectations for an individual graduating from high school, were developed for each of the four domains.

CEEI Knowledge:
CEEI is dependent on understanding the processes and systems that impact environmental decision-making, including human social, cultural, political, and economic systems. Individuals understand how changes in one system results in changes in another. They understand the reciprocal interrelationship between humans and the environment, including how human activities affect environmental quality and long-term sustainability at varying, interconnect levels (e.g., local, tribal, national, and global). They are able to identify and access information related to Earth physical and living systems as well as civic understandings related to the structure and processes of government (e.g., separation of powers, federalism, individual rights, and the role of government) prerequisite to making informed decisions about a particular issue. They use their knowledge to understand power relationships and policy options.

Individuals are able to:

- ✓ Identify and access information about Earth bio-physical systems and human social, cultural, political, and economic systems, including civic processes, prerequisite to understanding specific environmental and community issues. They consider information from different cultures, social groups, and traditions, including Traditional Ecological Knowledge.
- ✓ Describe how political, social, and economic systems at varying and interconnected scales account for, manage and affect environmental quality and community well-being. They describe examples of how policy, laws, incentives, and penalties affect people's behavior toward the environment and each other.
- ✓ Analyze how power relationships, political systems, and political decision-making, from the local to international levels, impact environmental quality and long-term sustainability.
- ✓ Analyze how economic systems and economic decision-making affect environmental quality and long-term sustainability at varying levels.
- ✓ Investigate power relationships in the community to identify key allies, opponents, and influencers.
- ✓ Analyze the functioning of public processes for promoting and managing change and conflict and can evaluate their effects on the environment.
- ✓ Give examples of the principles of justice, including environmental justice, and how they affect society.

CEEI Skills:
CEEI includes the abilities to define, learn about, evaluate, and act on environmental and other community issues that impact well-being. Individuals investigate these issues; consider evidence from differing ways of knowing, viewpoints and value positions; and evaluate proposed action plans, including policy options. They analyze the intended and unintended consequences of their own actions, actions taken by other individuals and groups, and actions that impact policy on long-term environmental, social, and economic sustainability.

Individuals are able to:

- ✓ Apply their systems thinking skills to investigate environmental issues, ranging from local issues to those that are regional or global in scope.
- ✓ Evaluate the consequences of a broad range of environmental changes, conditions, and policy options on environmental quality and long-term sustainability. They identify environmental justice and social equity implications.
- ✓ Identify and propose action plans, including plans designed to impact policy, and evaluate their likely effectiveness in specific environmental, cultural/social, political, and economic contexts. They identify ways that these action plans might affect different groups of people including possible environmental justice and social equity implications.
- ✓ Work collaboratively and cooperatively in the spirit of open deliberation, especially in contexts that bring to the surface deeply held priorities and values.
- ✓ Evaluate, justify, and communicate their own views on environmental and community issues, and possible ways to address them.
- ✓ Apply their research and analytical skills to systematically determine whether action is needed in specific environmental, policy, cultural/social, and economic contexts and whether they should be involved.
- ✓ Develop action strategies, including those designed to impact policy, based on their research and analysis of an environmental and community issues.
- ✓ Evaluate the intended and unintended consequences of their own civic actions, and actions taken by other individuals and groups on environmental and community policy.

CEEI Dispositions
Through participation in CEEI experiences, individuals develop a sense of personal and civic responsibility. They are willing and able to act on their own conclusions about what should be done to ensure environmental quality, social equity, and economic prosperity. They demonstrate self-efficacy and agency, understanding that what they do individually and in groups can make a difference.

Individuals are able to:

- ✓ Identify shared values and principles that unite the local community and analyze conflicting views about priorities, including policy priorities, when applied to environmental quality, social equity, and economic prosperity.

- ✓ Consider the assets and strengths of different cultures, races, sexual orientations, gender identities, social groups, religious traditions, classes, ages, abilities, language groups, and religious traditions in bringing about change that addresses environmental quality and long-term sustainability.
- ✓ Identify the societal values and principles underlying the ideas of environmental justice and social equity.
- ✓ Analyze what motivates people to participate in civic activities, especially activities designed to influence policy. Consider how people's values are tied to these efforts.
- ✓ Deliberate the ongoing tension between meeting individual desires and gains, working for the common good of society, and long-term sustainability.
- ✓ Describe the relationships between exercising their individual rights and responsibilities and addressing environmental quality and long-term sustainability.
- ✓ Exhibit self-efficacy and personal agency by acting individually and collectively to bring about change in their community, including change in policy, that addresses environmental quality and long-term sustainability.

CEEI Participatory Action:
Through CEEI, individuals gain direct experiences in participatory action taking. They are able to work individually and collectively, applying the knowledge, skills, and dispositions necessary for taking action that addresses environmental and community issues, including policy issues.

Individuals are able to:
- ✓ List civic actions that they, their family, and other community members can take to ensure environmental quality, social equity, and economic prosperity.
- ✓ Evaluate the broad environmental, social, and economic consequences of potential actions, including those designed to impact policy.
- ✓ Map power relationships in a community to understand their influences on community decision-making and action.
- ✓ Design and implement action plans based on their analysis.
- ✓ Analyze the environmental, social, and economic impacts of their personal and collective actions.
- ✓ Accept responsibility for recognizing the effects of their action and changing them when warranted.