11 Estuary Education

Target Statement

By 2050, every K–12 student in the Hudson Valley receives meaningful classroom and hands-on education regarding the Hudson River and its watershed, ample research and training opportunities are available for citizen scientists and post-graduate students, and all communities have designated access points and programming for interested stakeholders and residents. This will expand science-based knowledge of the estuary and of the actions needed to conserve it. By 2030, at least five river education sites offer effective place-based programs, 80% of school districts are using river or watershed curricula at elementary, middle and high school levels, and decision-makers learn about key challenges and success stories related to watershed management. Those engaged represent a diverse audience which reflects the demographics of the region.

Summary

A Hudson River CRP begins with an improved understanding by the public, and decision makers, of the naturally occurring ecological features and values of the system. Accomplishing this requires Hudson River education and stewardship programs for the public, municipalities, waterfront businesses and all riverfront partners. Meaningful education programs are multidisciplinary, multimodal and multi-cultural allowing them to connect to a range of learners, learning styles and cultures. At the core of these education programs are field experiences that bring participants into direct contact with the estuary; there is no virtual substitute

for direct personal experience with the water, and no better way to build an understanding of the river, its benefits and its current condition. Along with public education, we also need to build and reinforce an understanding among our local adult decision makers that the river is an asset and a resource to their communities.

Providing education on and about the river requires access. Currently public waterfront access to the Hudson is present at all riverside communities except where it is not feasible. The sites vary in management structure and include state, county, municipal and non-profit facilities. Many, but not all, of these sites serve varied education and training audiences that include adults interested in the natural world, boaters needing water education, and teachers seeking professional development opportunities. Student groups include K-12 and undergraduate audiences learning about the estuary, research science students hoping to find a project about the estuary system and college students participating in service learning projects as they give back to the community.

Training opportunities for estuary residents are also important for education. They include sessions for planning and zoning board members on watershed protection, and sessions for workforce members looking for technical training on restoration or sustainable practices. To establish 'reach' and breadth in education offerings, partnerships will continue to be crucial. Many workshops and teacher training programs are offered through the collaborative partnership efforts of two or more groups that include the estuary program, other state or national agencies, universities and colleges, and research groups. Service providers and business partners are a growing sector in these partnerships, and, in some instances, will be best suited to provide the technical content and training. An evolving focus on sustainable planning, resilient shorelines, waterfront planning for sea level rise and green infrastructure projects has opened the door for new technical training and job force education. This growing need will continue to provide a unique opportunity for industry/research/education partnerships.

The environmental education community has been unwavering in its pursuit to ensure that every K-12 student in the Hudson River Watershed receives meaningful education experiences related to the Hudson River ecosystem and its watershed, and it has an on-going commitment to establishing that this objective is warranted and recognized as a long-term priority. This includes a need to evaluate and develop specific curricula and lesson plans, including materials, for specific access locations along the river that cater to not only conditions of the site, but the anticipated users of the site. There is also a need to enrich research opportunities across the estuary to deepen our collective knowledge and understanding of the river while supporting locally developed scientists and cultivating highly engaged citizens. New information, applications and techniques are anticipated to emerge from this research and developing an effective curriculum that transfers this knowledge and expertise to practitioners, managers, and decision-makers may stimulate new solutions or approaches to long-standing problems.