IMPLEMENTING PLACE-BASED STEWARDSHIP EDUCATION ACROSS THE LANDSCAPE

GREAT LAKES
Stewardship Initiative

The Great Lakes Stewardship Initiative (GLSI) is one of largest efforts in North America to establish and support place-based stewardship education (PBSE) in K–12 schools and communities. It was launched in 2007 by the Great Lakes Fishery Trust, which committed more than $10 million over ten years (2007–2017) to support the GLSI's work.

The GLSI's goal is to develop knowledgeable, active stewards of the Great Lakes and their ecosystems. To accomplish this goal, regional hubs across Michigan enact three strategies in their service areas: place-based education, sustained professional development for teachers, and school-community partnerships.

Collectively, GLSI hubs serve schools and communities in urban and rural areas, suburbs, and small towns. The terrain and natural features, the economy, the culture, and the built environment vary from community to community. Some schools are located short distances from the shores of one of the Great Lakes that surround Michigan; some are far inland in wooded or agricultural areas; and some are situated in densely built environments.

In "The Benefits of Place-based Stewardship Education," we reviewed the published literature and summarized what is known about the potential benefits of place-based stewardship education and the circumstances that favor or limit its use. In this paper, we explore how those potential benefits and circumstances have affected the experience and practice of the GLSI hubs.

This paper is part of a larger effort by the GLSI that produced a set of guiding principles for PBSE and a collection of case studies of exemplary PBSE, intentionally distributed across urban, rural, suburban, and small-town contexts. See these products and the paper about potential benefits of PBSE at greatstewards.glstewardship.org.

Implementing Place-Based Stewardship Education Across the Landscape

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OUR INQUIRY AND METHODOLOGY

After nearly a decade of effort by the GLSI to establish place-based stewardship education across the Michigan landscape, we wondered, "Does PBSE look different in the city, the suburbs, and the countryside?" "Are there persistent differences in the motivations to use PBSE in different place types—for example, in cities versus rural communities, or in suburbs versus small towns?" "Are the opportunities for or barriers to PBSE the same or different among place types?" These questions are the focus of this paper.

We interviewed designated leaders and staff of the GLSI's nine regional hubs. We asked them what benefits—whether achieved or merely desired—motivate their schools and partners to engage with them, and what factors they have observed to work for or against a robust implementation of PBSE. We also asked the hubs to characterize the educational culture in the K-12 schools they serve and the environmental culture in their communities. Throughout these inquiries, we looked for direct and indirect evidence that the city, suburban, small town, or rural place type is associated with different motivations, cultures, and constraints or opportunities for PBSE.

To help hubs prepare for these interviews, we developed and distributed a checklist of potential PBSE benefits, contextual supports for PBSE, and contextual constraints for PBSE, drawing on our paper, "The Benefits of Place-based Stewardship Education."[1] Hubs were asked to review and mark these checklists in advance, and to consult them during their interviews, particularly when we asked them what motivates engagement with PBSE and the hub, and when we asked about factors that work for or against a robust implementation of PBSE. Six hubs shared their completed checklists with us after their interviews, which provided us with a second—if incomplete—source of data.

The interviews were transcribed and coded for key emergent themes. To determine whether the response patterns were sensitive or insensitive to place type, we considered the judgment of the hub speakers themselves, but also considered the contexts in which individual hubs work.

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[1] Marckini-Polk, Lisa, Patricia Jessup, and Mary Whitmore. 2016. *The Benefits of Place-based Stewardship Education.* Lansing, MI: Great Lakes Stewardship Initiative. Available at http://greatstewards.glstewardship.org/wp-content/uploads/2017/01/BenefitsofPBSE_Final.pdf.

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INTERVIEW FINDINGS

HUBS' OBSERVATIONS OF EDUCATIONAL CULTURE, AND OPPORTUNITIES AND CONSTRAINTS FOR PBSE

Hub representatives described educational cultures that varied across and within their service areas, and, at times, identified factors they felt influenced those educational cultures. They also noted forces that function as opportunities and constraints on PBSE, some of which are related to the structure of K-12 education in their regions.

Important themes emerging from these parts of our discussions were:

- Test pressure and performance measurement drives educational culture in the traditional public schools of many communities. An associated collection of practices and philosophies is a powerful constraint on the initiation and expansion of PBSE
- Educational cultures can be very different in traditional public schools versus charter and private schools
- Underlying attitudes in the broader community about the value of education are impactful and varied
- Educational culture reflects and is entangled in the broader economic experience of a community and in the community's infrastructure for education

In the following pages, we explore these themes in greater detail.

Performance Pressure in Schools

When asked about the educational culture in the schools and communities they serve, four hubs focused on one or more of a constellation of factors—comprising content standards, performance measurement, standardized testing, and teacher evaluation—that we categorize as "performance pressure." One or more of these factors emerged even more frequently across the GLSI hubs during discussions about characteristics that support or constrain the practice of PBSE in different school settings: seven hubs— the greatest number endorsing any single constraint on our list—indicated that performance pressure functions as a constraint on PBSE. Hub staff described these factors as "huge," as absorbing all the energy in professional learning for teachers, and even as "unethical" due to the inordinate amount of time consumed by testing. As one hub representative explained, where emphasis on testing is strong, it can constrain interest in PBSE:

> "[Standardized testing] is a very real concern tied with evaluations and paychecks and everything else nowadays. When I bring up some of these [PBSE] opportunities at the principal meetings, the principals are interested. They're curious, but at the same time they're not jumping out of their seats saying, 'Bring this to my school...' There's sort of this looming question mark of how will this ultimately translate into adequate yearly progress, or test scores."

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Educational Culture in Traditional Public Schools Versus Charter and Private Schools

A few hub representatives distinguished between traditional public schools—which these hubs saw as being fully immersed in testing, standards, and teacher evaluation—and charter and private schools, which they thought were less overtaken by these concerns.

For one of these hub staffers, "the division among citizens [about education] is demonstrated through the growth of charter and private schools." This hub representative went on to say that charters and private schools are predisposed to consider PBSE:

> *"I think they have a lot more flexibility and maybe value this as part of their mission. The charter and private schools believe in this type of education and are committed to it."*

This concept was echoed by staff of a second hub, who drew sharp distinctions between the missions of traditional public schools and private schools or charter schools:

> *"I would say a bunch of our [participating] schools actually have an ethical vision and mission, or environmental stewardship is in their mission or vision, or community engagement is. It's very rare, I think, for public schools to have missions that have any teeth. It's much easier to be a values-focused private school than a values-focused public school, even though that shouldn't be the case."*

This hub representative went on to describe several public charter schools working with the hub that also demonstrate the "values focus" just described as "rare" in traditional public school settings.

Attitudes about Education in the Broader Community

When asked about the educational culture in their schools and communities, some hubs focused on community attitudes about education. One hub representative noted the very supportive educational culture that exists in her region. This supportive culture presents an opportunity to implement PBSE across schools and grades, because the schools have the trust of the residents.

> *"We have very small schools, very small districts and so that can be very, very helpful for kids. Kids don't get lost here as they do in a bigger district because everybody knows everybody... I would say we have a very, very supportive culture here."*

Although the hub representative quoted above works in a very rural setting, being in a rural area does not necessarily lead to an educational culture that supports PBSE. There can be a range of attitudes about education among residents of a rural area, as noted by a representative of another rural hub.

> *"We have families that ... see no need for their kids to get a job, get an education. Then we've got a lot of families that work really hard, that have high aspirations for their kids, are really proud of what their kids are able to accomplish ...excited that their kids are excited about the possibility of college or a tech school... Again, we have that broad spectrum that you have in any school and what our education*

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culture is like. Our communities still rally around the sports, for the most part, more than they do academics."

Another hub spoke about differences in the degree of cohesiveness shown by communities regarding their educational systems:

"In our connected communities, where the parents and the community and schools are connected, their visions are … better aligned and everybody knows what's going on, and they tend to really embrace this work. Because the community, the parents, the schools, the kids, they all see it as together, and they see it in a really positive light. I think in some of our more impoverished districts, there's less strong connections between all of those players, and so there's not always as much understanding of what's going on in those places. I'm overgeneralizing when I say that, because we have pockets of amazing hope and beautiful things, so this is not in all cases."

The Influence of the Economy and Educational Infrastructure on Educational Culture

Two hubs—one rural, one urban—discussed the intermingling of economic realities and educational outlook and culture in their parts of Michigan. Representatives of the rural hub noted that their educational infrastructure is much different than that observed in more populated places. Whereas cities and suburbs tend to have a variety of honors programs and other "diverse" and "advanced" specialty offerings for students, rural communities served by this hub offer no such programs; and whereas cities and suburbs tend to have access to universities and colleges, students in most rural areas must leave their region to attend a university. What rural places can offer, however, are dual enrollment programs at strong, local community colleges. The rural hub's representatives speculated that their region's cultural emphasis on work readiness is an outgrowth of what they have and can offer—and what they do not have and cannot offer—in terms of the local economy and educational systems.

Representatives of the urban hub, speaking of their city's deep and persisting economic distress, felt that "a failing economy" affects everything in the community—including social, educational, and environmental factors. Economic challenges have affected the school district's financial stability and resulted in wave upon wave of personnel reductions and relocations, as well as movement of students to other districts via schools of choice. In the view of this hub's staff, these realities give rise to an area-wide emphasis on improving quality of life that influences the priorities and actions of schools, local organizations, and residents alike, and is operative in the realms of education, environment, and society. At first glance, this focus on improving quality of life might be perceived as a potential opportunity for PBSE. In reality, however, these circumstances have significantly constrained the practice of PBSE, primarily because of a resulting instability of personnel the schools.

Other Notable Opportunities and Constraints for PBSE Related to K-12 Systems

Emphasis on STEM, project-based learning, or inquiry-based learning
Some hubs noted on their checklists that several approaches to teaching and learning are compatible with PBSE, and that schools and districts using or emphasizing these approaches may be

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more motivated to consider PBSE as well. These approaches include STEM curricula (5 hubs), inquiry-based learning (5 hubs), and project-based learning (4 hubs). Two hubs commented during their interviews that they associated problem-based learning with suburban districts.

Lack of funding for transportation

Five hubs indicated on their checklists that a lack of funding for transportation to community-based PBSE sites was an important constraint on participation by schools. To some extent, the costs of transportation are a barrier to PBSE in almost any community. But because suburban, small-town, and rural schools are more likely to be sited close to nature (and thereby incur minimal transportation costs), this constraint may be of particular importance for urban schools.

Overall, in our discussions with hub representatives about educational culture, we found neither implicit nor explicit evidence that educational culture is closely associated with place type. That is, educational culture is not systematically reflective of urban, suburban, rural, or small-town contexts. To the degree that hubs identified factors they associated with variation in educational culture, they talked about such things as traditional public versus private or charter school structures; national forces related to standardized testing, standards-based education, and teacher evaluation; and community culture and economics.

HUBS' OBSERVATIONS OF ENVIRONMENTAL CULTURES AND PRIORITIES, AND OPPORTUNITIES AND CONSTRAINTS FOR PBSE

Hubs were also asked to characterize the environmental cultures and priorities of the communities they serve and, where relevant, if they felt that any notable variations were related to place type and/or to some other feature of communities.

Key themes emerging in these discussions included:

- Values regarding appropriate uses of the natural environment are highly diverse and culturally mediated, with some seeing the environment as a resource to harvest, some seeing the environment as a treasure to be protected, some seeing the environment as an asset to be managed, and yet others seeing the environment as a source of danger or a locus of injustice
- Access to natural areas varies across place, functioning as an opportunity for some and a constraint for others. Variation in access influences implementation of PBSE and the accompanying professional development for teachers
- The ability to attend to environmental issues and concerns can be constrained by poverty

Values and Views about the Natural Environment

Perspectives on the appropriate uses and inherent value of the environment vary by place type.. Below, we summarize hubs' observations about environmental views and values for each of the place types in which the GLSI works.

Rural perspectives

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In rural areas, various perspectives about the environment emerge, including a sense of being connected to nature, the environment as a source of recreation and enjoyment (e.g., hunting and fishing), and natural resources as a source of livelihood. These, in turn, lead to a focus on conservation and preservation of resources—although there is tension between preservation and consumption, particularly when people are making a living through consumptive activities such as logging, mining, and commercial fishing. At the same time, there is an awareness of the importance of caring for natural resources to maintain an economic base. This mix of perspectives impacts how PBSE is conducted: hubs and schools have to acknowledge the tensions that exist between conservation and consumption and try to find a balance that works in their situation. We review these rural values here.

Recreation. In rural areas, nature is seen as a place for many types of recreation. There is a "diversity of interest" that includes both consumptive and non-consumptive activities. As one hub representative noted, "Hunters are also bird watchers."

> *"[In] the rural area, there is a hunting/outdoor recreation/do stuff in your backyard, have a bonfire, and you notice the fireflies and the moon and all that."*

> *"There's folks who would be sort of what we consider conventional environmentalists, and then the folks who look at the environment from a slightly more harvest mentality, and that's a different kind of stewardship than the sort of hands-off, enjoy wilderness for its own sake set of environmental priorities."*

Economy. In rural areas, the environment supports economic activities such as logging, mining, commercial fishing, and tourism. In these settings, the hubs have to be aware of tensions that exist between attempts to preserve the environment and the need for residents to make a living from natural resources. Two hubs addressed these concerns.

> *"In this culture, in this area, a lot of families depend on forestry. A lot of families send a family member over to North Dakota to work in the oil industry over there, fracking. Those people are the parents of our kids that are in [PBSE] projects. We have to tread pretty lightly sometimes on not being too gung ho environmental because a lot of mining and forestry provide economic resources for a lot of our families and our community. We have to be very cognizant of that, also, in the way that we portray our message... We have a big tourism focus up here, too."*

Hub representatives also noted that people in rural areas often expect to harvest and use natural resources, even if they don't do so for their work:

> *"I think the key is that people understand maybe a little bit better, not perfectly but a little bit better, their interaction with natural resources. They understand the importance of a diverse forest ecosystem, but they're also thinking about, 'I want a diverse forest ecosystem because I want to make a cedar swing and have an oak hardwood floor, and I need maple for my fireplace.' So they're thinking about, not just the ecological values, but the functional values of those resources too... Partly given to the poverty... I mean people putting deer in a freezer is part of your subsistence strategy."*

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Suburban and small town perspectives

Residents of suburban areas and small towns tend to consider nature as a source of enjoyment and an asset to be preserved. Connecting to nature, the restorative benefits of nature, and the role of nature in creating a good quality of life are important in these place types. At the same time, there is interest in development, and this may create tension when the impact of development is seen as potentially damaging to the environment. These views are reviewed in greater detail below.

Recreation. In suburban areas, there is more of a view of nature as being restorative, a source of enjoyment, and a place to engage in non-consumptive activities such as bird-watching, observing wildlife, or hiking.

> *"There's a gradient from [rural] to urban, and you don't in the suburban areas have as much of the hunting outdoor, the traditional conservation aspects."*

Preservation and stewardship. In suburban areas and small towns, the focus is more on preservation of the environment rather than the consumption of natural resources. This focus translates to include activities such as land and water conservation, which protects natural resources in the present and for future generations.

> *"Here, it's more conservation minded work. If people weren't interested in that they wouldn't come [to this area]."*

Living sustainably is an important part of stewardship in suburban areas and small towns. Teachers here often focus instruction on individual actions (e.g., recycling) that students can engage in to live more sustainably. One hub that works in various place types felt that this focus dominated in suburban areas, and there was less awareness of injustice in relation to the environment.

> *"I think in suburban communities there [are] more parental values around connecting to nature and living a 'green lifestyle.' Sometimes it's harder to go deep in a suburban community because a green lifestyle is associated with individual choices around consumption, and less around fundamental structural changes to the way the community operates."*

Another hub found that the suburban and rural communities around her urban center saw the environment through a resource-management and preservation lens, thinking about such things as place making, population growth and retention, quality of life, and storm water management.

Urban perspectives

In urban areas, hubs gave voice to various, distinct cultural perspectives on the environment. One of these views focused on issues of justice and remediation, and was shared by hubs working in urban areas that have experienced economic hardships and widespread environmental degradation. A second perspective was focused on revitalizing urban environmental resources to enhance quality of life. This perspective was shared by one hub serving a very economically depressed metropolitan area. A third hub described a culture of environmental leadership in a relatively healthy urban center. We describe these views further in the sections below.

Justice and remediation. The focus here is the damaged urban environment—often tarnished by soil and water pollution, a general decline of older housing and building stocks, and a consequent need for community revitalization. In such places, the environment is associated with poor health and

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limited well-being of residents. One of the GLSI's hubs that serves an urban population has adopted an ecojustice approach to PBSE, in which participants consider the structural changes needed to create more just outcomes for people and planet—at the same time. A second hub has explored some environmental justice themes in project work, where "environmental justice" signifies an exploration of how environmental benefits and burdens are distributed across people and communities. In both cases, examination of the environment does not occur in a human or ethical vacuum, but with awareness and concern for the human equity issues that coexist with environmental challenges.

> *"You have the incinerator. You have brownfields. You have abandoned tires. You have pollution in the water, unsafe water to drink… You have soil degradation, and so on. You have lack of food security. There are a lot of efforts to fight those things in the community, and that is a key part of the culture… It is a real consciousness of environmental degradation as it's impacted the city, and the understanding that in order to better people's health and wellbeing, then these issues need to be addressed… it's easier to see the rationale for why you want to engage in environmental improvements and also justice oriented environmental work, which ask the question, 'Why? Why in our community is this happening and not in the suburbs?'"*

Also associated with degraded environmental conditions is a sense that it is dangerous to be in nature; natural areas here are often isolated and are frequently sites for violent crime or drug-related activity. In addition, students here may be less accustomed to spending time outdoors and so may be uncomfortable in that setting.

> *"Nature has been seen as a dangerous place in [the city]. You're going into an area that is shielded from view, [that] can be dangerous, or at least is perceived as such. Or kids have not had experiences in nature and so they're nervous in nature…. That has a big influence on what your approach to place-based education has to be in urban areas."*

Revitalization. The staff of one hub working in a struggling urban area was aware of initiatives to revitalize the city's built land, to plan for interconnected green spaces, and to improve access to local food. These efforts, most of which presumably would be or are being led by professional planners, governmental officials, and/or local philanthropy, were felt to be influencing the environmental culture.

> *"In an urban context, a lot of it is about community revitalization. When you start looking at things like the green infrastructure implementation, like land use, and land redevelopment, and really in our area the food access and local food production, those are in our urban area parts of the environmental culture that you see a lot of movement and has seen a lot of advancement particularly over the last ten years."*

Environmental leadership. A third hub works in Michigan's second-largest city, a community noted for its environmental commitment.

> *"There's been a huge push for… infrastructure, investment, or how we build buildings—I think we have one of the largest number of LEED buildings… We always*

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build LEED buildings when we build buildings. It's a culture of environmental awareness. There's a strong environmental community, and that not only affects [the city], but all surrounding areas. There are businesses that have made a lot of money teaching other businesses how to be environmentally conscious in the area."

Variation in environmental culture across place type and time

Although we find that different environmental cultures exist in rural, suburban, small-town, and urban communities, this does not mean that all people within a community think alike:

"I think we have the whole range [of attitudes]. I think we have the serious tree huggers and then we've got a huge forestry industry going on and logging industry... We've got people who depend, somewhat, on fishing and that is their livelihood, and then we have the folks that are concerned with preservation at all costs and not necessarily understanding of balance in there."

Similarly, environmental culture develops unevenly, evolves over time, and responds to locally significant events and conditions:

"I think the other point that I would point out is that there's a diversity of community character... [Some say,] 'What can the environment do for me in terms of how I can use it?' and then there's also things like... where we're very cutting edge in thinking about some of these emerging issues of environmental impact, like micro plastics, and what are the ecosystem challenges of the future, or climate change."

Other Notable Opportunities and Constraints for PBSE Related to the Landscape

Here we consider additional factors noted by hubs that can affect whether and how PBSE occurs in various place types.

Access to natural areas

In rural areas, most students and families have easy access to the outdoors for recreation and enjoyment. In suburban areas and in small towns, too, green space is usually easily accessible. In contrast, in urban areas, natural landscapes can be difficult to find and access, and the condition of natural areas in urban communities can make them dangerous to visit. Although nature exists everywhere, many of the potential sites for PBSE in urban communities are so impacted by humans and development that standard environmental teaching and learning resources may not be nearly as useful there as they are elsewhere.

Teachers in urban areas often have less experience teaching in nature and comparatively less awareness of the natural areas within their urban environment. One hub explicitly builds a "recreation component" into its professional development to offer teachers outdoor experiences.

"[Urban schools] don't have access to natural resources the way that a suburban or even a rural school might... That's one of the reasons why we chose, for the last summer workshop that we conducted, [to conduct] it on the river trail throughout the entire day, so that teachers would recognize what are the benefits and the

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resources that we have right there within our city, rather than taking them outside of the city."

Unique natural features of the community

Several hubs observed that the unique features of a community are extremely important in determining the focus of PBSE and also help shape the area's environmental culture. For example, communities on the shores of a Great Lake have a vested interest in those shorelines, have ready access to water-based recreational opportunities, and have a front-row seat for Great Lakes preservation issues. By contrast, inland communities may be more focused on rivers, smaller lakes, forests, local parks, and drainage systems, while urban communities may place more importance on food security, energy conservation, brownfield remediation, and the availability of potable water.

Poverty

The extent of poverty in certain communities influences the work of their GLSI hubs. In the case of urban areas, the environmental degradation often found there is usually accompanied by poverty. Several hubs working in urban communities expressed the belief that poverty diminishes motivation to consider the environment. Although people in rural places have easier access to natural areas, poverty in these places may mean that they are suspicious of conservation efforts that may limit economic development, or recreational access. In both place types, the needs of families simply to survive can preclude their involvement in caring for the environment.

"I would say that one of the parts that we find in the urban school districts is it's hard to motivate yourselves. It's hard to work on problems that seem so distant to the real-life problems you're experiencing…"

"I might add there's kind of an economic consideration there, too, because of the poverty levels across a lot of the smaller towns. I think that does limit how far they're willing to take certain environmental actions or consider environmental culture when it's really about getting food on the table. Maybe that ties in slightly with… the harvest mentality. If a family's in extreme poverty, they're not worried about that hands-off approach. They want to know about the environment because it's one of the few things that they can do for enjoyment maybe, or maybe it's truly it's going to put meat in the freezer for the next six months."

MOTIVATIONS FOR INVOLVEMENT IN PBSE

One of the chief questions we wanted to explore in this paper was whether the motivations to get involved with a hub and with PBSE are similar or different in different place types. We assumed that motivations would generally be about gaining access to desired benefits—for example, higher student engagement, more robust learning, access to new audiences for one's nonprofit organization, or improving the school or organization's reputation in the community.

Discussing motivations with hub staff members was difficult at times, because their thoughts about what schools and partners *wanted* from PBSE sometimes appeared to bleed into what school and partners were in fact *getting* from their participation. Of course, over time, the motivations to persist

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in some activity will become more realistic than the motivations to engage in the first place, since people's experiences will have taught them how they benefit—and don't.

Below, we present hubs' impressions of what motivates various categories of participants to engage in PBSE.

Motivations Related to Students

Motivations related to students are discussed below and presented in declining frequency of mention by hubs.

Student engagement

Increasing student engagement was the most widely cited and discussed motivation for schools to become involved in PBSE. Hub leaders across the urban-rural spectrum reported on the importance of student engagement to the schools and teachers with whom they work (see box). Teachers and schools may see student engagement as a first step in learning—when students are engaged, they tend to connect with their peers, participate more actively in their own learning, show improved behavior, and stay in school. As two hubs serving urban and suburban schools noted, students with "behavioral issues, where they have consistent difficulties in getting them engaged in learning," and "students who have been labeled with learning disabilities" are students for whom PBSE "really works." One hub also observed that a notable increase in student engagement in PBSE during school hours has prompted new afterschool environmental programs, and "helps support our whole system" by creating student demand for PBSE.

> **Hubs' comments about PBSE and student engagement**
>
> "I think the first thing we both came to about what teachers are excited about PBE is the student engagement in school. For our particular kind of urban schools that are in deeply distressed economic situations where young people are dropping out at very young ages, that is a huge, huge benefit if they can engage their kids in school, make a connection to school."
>
> "It's engaging the whole class… I'm hearing a lot from our teachers how place based learning really helps in their classroom… bringing the kids together as a learning unit."
>
> "What I'm hearing loud and clear is student engagement, and that the kids are active in their learning… the sense that the kids are taking part in their learning. I guess the word engagement comes up again and again and again."
>
> "What I'm hearing from administrators [is that] they see students that wouldn't otherwise be engaged in science being engaged because of the work that they're doing; it's more relevant to them."

Developing students' sense of place and community attachment

This was cited as a motivation for schools to participate in PBSE by three of the four hubs in rural northern Michigan as well as two hubs that work across place types. It was not cited as a motivator by either of the two hubs working exclusively in urban and suburban locales, indicating that this motivator may be context-dependent to some degree.

One hub connected sense of place with small-town and rural Michigan, noting, "…that sense of place is really, really strong in my rural and my small-town districts." A second hub explained that in certain urban places, a sense of place and connection to community may not go hand-in-hand as motivators because, "You can have an improved sense of place and improved stewardship of that place and still not have an increased community attachment because the goals within this community oftentimes are to leave it."

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Academic achievement, critical thinking, and social-emotional development

Several hubs indicated on their checklists that academic achievement, critical thinking, and social-emotional development are motivations for schools to be engaged in PBSE. However, none of these were actively discussed in interviews.

Physical and mental health and well-being

Students' health and well-being was selected as a motivation for schools to take part in PBSE by hubs serving schools across place types. In conversation, health and well-being was called out by one hub as being particularly salient in urban areas.

> *"I will say my urban districts, they do also have a lot of the physical and mental wellbeing initiatives, tons of them. It's just that they realize—they very much realize that a lot of that is impacting their students."*

Civic-democratic competencies and attributes

Hubs reported that developing an understanding of the democratic process in one's community and how to be involved in that process is of importance to some teachers and schools. In some contexts, this is expressed as the desire for students to contribute to the community; in others, the emphasis is on youth playing a role in civic decision-making processes.

The interest in students contributing to the community was mentioned by leaders of two rural hubs. They noted that teachers are "very passionate about involving their students in the community and having their students do relevant work in that community." In contrast, a hub serving a cross-section of schools—but primarily urban schools—commented on the importance of youth involvement in civic action. City planners do not often include a "full force youth component connecting young people to those decisions about place, and planning for place, planning for revitalization." This means that local organizations—for example, a watershed coalition—must move their K-12 outreach efforts, including their work in PBSE, from "water testing to civic action," and focus on developing and supporting opportunities for students to "deepen their impact" in community decision-making.

Workplace skills

A few hubs spoke about other motivations for involvement in PBSE; for example, developing workplace skills such as teamwork and collaboration, and learning about careers.

> *"People would say 'soft skills,' or the 'life skills,' or the things like responsibility and showing up to class, or being ready and prepared to participate in class. Public speaking, teamwork, those things that aren't necessarily tested on but are important in life is the other value... I hear a lot of the interest in putting students in the field in the context of a career or with career professionals, so like the idea of students being able to tackle a project as if they were the foreman or the project leader and/or working side by side with, say, a scientist to do that job."*

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Motivations of Teachers

Students are not the only participants for whom PBSE is motivating. GLSI hub leaders have found that PBSE is also a means to motivate teachers, reengage them in the teaching and learning process, and allow them to focus on interesting topics and issues of inherent value. According to several hubs, teachers and schools may not have launched their PBSE work for these reasons, but are finding these as motivations to continue to implement PBSE.

Students' interest and enjoyment

Teachers benefit when learning is interesting and enjoyable for their students. Six of the hubs viewed students' interest and enjoyment as an important motivation for teachers. Hubs spoke to the interconnection of student and teacher engagement:

> *"Teachers are more excited about teaching. They're excited about the projects and their kids' excitement.... In the last year where... you're getting enormous cuts across the board, teachers losing jobs, and reorganization, and just a lot of chaos throughout the year where morale was very, very low in those districts, I had more than one teacher tell me one of the reasons that they were not looking for another position is because they were so excited still about what they were doing with their students around PBE. That's huge, right, when it's teacher engagement as well as student engagement and excitement."*

Teachers' interests and values

PBSE allows teachers to focus on and advance their personal interests and values related to education and the environment. Teachers working with one hub were described as "not too excited about teaching within the classroom; they like to get kids outside." Teachers may become involved in PBSE because they, themselves, have a "spark" of interest in the environment. The GLSI hub can encourage such teachers to try new activities and instructional strategies they might not have tried without the hub's support. The hub can also support teachers as advocates within their schools and district, whereby teachers might, for example, take the lead in forming cross-grade teams of teachers. All of this works together to develop in teachers a sense of empowerment, which ultimately benefits both the school's internal environment that supports student learning and the physical environment and community in which the school is situated.

Other benefits

Other factors that hubs believe to motivate teachers to practice PBSE (primarily expressed by hubs in connection to urban schools) included the opportunity to belong to a supportive professional community of teachers; rekindle excitement in teaching; avoid layoff; advocate against budget cuts that affect PBSE; and observe students excel in unanticipated ways.

Motivations of Schools and Districts

Those schools and districts that choose to engage in PBSE are finding that PBSE can be of benefit to their schools and districts. There were five motivators that hub leaders endorsed, to varying degrees, as being salient for schools and districts that participate in PBSE.

An integrated option to address numerous standards and youth development priorities

A representative of an urban hub noted that PBSE allows teachers to address numerous and robust

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standards and curricular priorities in an integrated fashion. Similarly, a representative of a rural hub noted that a "benefit for the schools and the districts is that integration—place-based ed really fosters integration, and we really have pushed our teachers to look at that, and looking at that going cross curricular."

PBSE may be especially attractive to schools and districts that offer programs in STEM (Science, Technology, Engineering, and Mathematics) and STEAM (Science, Technology, Engineering, Arts, Mathematics).

> *"In our conversations with administrators… where a lot of interest comes from is [from] their STEM coordinators and their curriculum coordinators. It aligns well for them with those ideas of the whole STEM and STEAM. Actually, that's urban as well as suburban and rural, the STEM and STEAM alignment."*

One hub felt that suburban districts are particularly predisposed to view experiential, project-based learning (including PBSE as practiced by the GLSI) as a robust learning opportunity for students:

> *"Where the suburban schools have more—that's where you tend to see more of the academic service learning push, the problem-based learning approaches. They see the PBE connections as a way for them to have robust [learning], particularly in the project and problem-based learning or the ASL projects. They do see a strong connection there."*

Access to grants, funders, and recognition
A few representatives of hubs serving rural schools felt that access to funding was an important part of the appeal of PBSE:

> *"It has definitely been a bonus in submitting for other funds, to be able to state that they are engaged in place-based education through GLSI hub. It's helped open doors."*

> *"I think even the idea of having a robust project that is connected with school improvement goals and learning expectations, but also tied to the community and community partners and whatnot, having those projects that are robust in that way are appealing to funders. It reaches across a lot of different levels of interest for funders."*

Teacher engagement and satisfaction
Four hubs (serving suburban, small town, and rural place types, but not urban) endorsed teacher engagement as a motivator for school districts. Such districts see involvement in PBSE as a way to offer their teachers opportunities for meaningful, satisfying teaching and professional growth, and, by extension, as a way to increase teacher development and retention.

> *"A lot of them see increased teacher motivation as one of the largest benefits of this work, and then—because of the increased student motivation, and there's a lot of increased teacher motivation in their work, so the teachers feel really empowered in our program, which is the really important part."*

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Increased awareness of the school in the community and stronger connections with partners, volunteers, and parents

Greater awareness in the community of the conditions, needs, and efforts of the schools, and strengthened connections with partners, volunteers, and parents are both motivators for schools districts that relate to these schools' participation and visibility in the broader community. These motivators were selected by hubs serving diverse place types, but all were from the southern, more urbanized half of the state. In some instances, hubs reported that increased student engagement through PBSE has led to student retention in urban districts where students have other school options.

> *"For certain schools and districts that recognition piece is a big thing …. Getting that recognition for the projects they're doing really makes a difference."*

> *"They talk a lot about student motivation, and they also talk a lot about the public press, the positive public press they get from doing this work out in their community. They talk a lot about student motivation, and the changes in student behavior."*

> *"Greater presence in the community is definitely something we hear a lot. I know there's a couple of superintendents that are specifically interested in really bragging about place-based education projects as a way to tell all of the amazing things that their schools do… I think schools feel like it's a better way to put their school out in the community in a positive way."*

> *"The urban schools are making this commitment to make sure that all their students have equal opportunity and equal advantage in terms of these community-based programs and doing these fun things that go beyond traditional education."*

Motivations of Partner Organizations

One of the key principles of strong school-community partnerships is that they offer benefits to both parties. With that understanding in mind, hub leaders were asked to identify what, in their experience, were important motivations for community partners to engage in PBSE. As with discussions about motivations for schools, hub representatives were provided with a checklist to spur their thinking, and most referred to that checklist in the course of our interviews.

Informing and engaging new audiences in the work of the organization

Many partner organizations are committed to fostering environmental stewardship as part of their mission, or are working on projects that require stewardship or conservation actions or outreach to youth. Hubs had much to say about partner motivations related to this theme, and we review these comments below.

Gaining access to schools. Many environmentally focused organizations struggle to gain access to schools. As a hub serving rural schools put it, many organizations have ideas and programs, "but they have no way to actually connect with the school, so these projects are a direct way to do that." In a similar vein, a hub serving urban schools sees itself as "the bridge, because a lot of our community partners can't get into the schools without assistance or the contacts," and teachers are unsure who to call or uncertain that someone from the organization would be willing to come to their

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school. The trusting relationships that hubs have developed with schools provide a "gateway" for building relationships between schools and community organizations.

> *"Sometimes [partners are] mandated to connect with schools and teachers, or have it as part of their projects or an ongoing grant. Finding a way to make that connection and ease that connection [to schools] is really a benefit to them. Having the hub there to help negotiate some of that is something that [partners] appreciate, because working with schools can just be hard."*

One hub that serves schools in several place types noted the desire of large organizations to make personal contact in the schools, and also contrasted gaining access in large, bureaucratic districts to gaining access in smaller districts.

> *"Community partners are trying to connect in a personal way with the schools because they recognize that their agencies can be too large or bureaucratic, and they want to put a personal face on the work that they do with schools and with their communities... [In metropolitan areas,] they don't have as many smooth and direct ways of getting connected with schools because it's so large. Where in the rural areas they're all connected because it being a smaller community, so the connection is more direct."*

Engaging students in the organization's mission. Partner organizations often play a role in conservation or natural resources management, and wish to both educate students (and perhaps their parents) and engage them in the day-to-day work of the organization.

> *"For most of the organizations that we work with, [stewardship] is a goal of the organization, so we're helping them [accomplish] their goal."*

> *"If you flip it through the place-based education strategy... then it becomes more than an education mission for me. It's about our healthy coastal ecosystems mission, or our invasive species mission, because students are helping us to address other priorities that we have as an organization... It doubles the value, right?"*

> *"Building a...generation of stewards who are much more informed and...also informing their parents and community...has been [one of the] greatest assets to the community partners."*

One hub that works extensively with a local parks program shared that the parks are hoping not only to engage students with the parks, but also to build students' sense of investment in them.

> *"Connecting the kids to the parks is just a way for them to be empowered to utilize the park and say that these are mine. 'These are mine, and in my community, and I can do things to make these things better,' and that just makes them a knowledgeable voter later on. The more connections you can have with kids in schools, and the more partnerships that you can do, the more support you have for parks later on. That's probably the biggest thing, is that the parks are there for them to use at all times."*

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Building awareness of the organization. For some partners, working on PBSE efforts with schools and students helps to build awareness of the organization and its work. Participation can provide "free advertisement in a really positive way," or is a "highly impactful way of… getting your voice and your mission and your organization" recognized in the community.

One hub serving schools in a small town spoke at some length about the opportunities a hub network provides to partners seeking exposure. For example, one partner was a new small business that installs native plants and rain gardens. Through school-based work, this new business placed signs in school gardens around town and sent home information and literature to parents. Through attending events sponsored by the hub, the business additionally built its networks to include nonprofits, governments, and other businesses that can use its services.

Another hub emphasized that PBSE provides an opportunity for a community organization to inform and educate parents through students, noting that some funders expect local groups working on certain issues or concerns to perform this type of outreach as part of their work on the environment.

Lastly, another hub noted that some partners, although not explicitly engaged in environmental stewardship, nonetheless support PBSE as a way of improving their community and reinforcing their reputation within it:

> *"Even the businesses that we work with as caterers… or… there's tons of partners that have provided a hundred dollars in in-kind supplies of nuts and bolts and PVC pipes and lumber and stuff, mulch… We've got tons of departments of public works in communities that have given it, and the reason is they just want their name out as being community-minded. They're giving it because they believe their goal and purpose is in supporting the good work of kids and the teachers that support the kids… they want people that know what they do and support them."*

Creating capacity to address issues and opportunities that exceed the capacity of the partner organization

Participation in PBSE also can help organizations and agencies address issues and opportunities that exceed the capacity of the partner organization. For example, representatives of a hub serving rural communities described how students not only took responsibility for two recreational areas, but also modeled good stewardship behavior to the community. These facilities had been deteriorating, with "an immense amount of litter," or becoming "a party spot and really quite a mess." Local government officials observed that residents were more likely to attend to students asking them to keep the area clean and dispose of litter responsibly than they were to obey government officials making similar requests.

Another hub noted how a city and conservation district, working together, involved students in a green infrastructure plan that would have been infeasible without the support of students:

> *"It's resulting in a multi-year way for the city to be able to meet its green infrastructure implementation goals, for the conservation district to meet the needs of what it was trying to do with working with kids…expanding…[the] PBE project beyond [its] original scope [and enabling] the school to work with these partners."*

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As another hub noted, some issues demand public vigilance, and some local organizations see PBSE as a way to broaden awareness of these issues—beyond local agencies and institutions—and prepare everyday citizens to play a role in environmental stewardship:

> *"It's one thing to pull garlic mustard, and that's well and good, but [PBSE is] also putting people, including kids, on the lookout for the next really nasty stuff that's coming in."*

Networking with other organizations

Involvement with a school's PBSE efforts provides a way for community partners to network with one another. The prospect of expanded professional connections motivates some partners to get involved in PBSE.

> *"We have those dinner and dialog events. The community part, I know that their response is that they love them. They always say, 'This is so great.' The teachers love 'em, too, because they get to talk to the community partners, but the community partners get to learn what each other is doing. They get to meet each other. There's not really a forum for that otherwise."*

This networking of community-based organizations with each other and also with schools, which is made possible largely through the infrastructure of a GLSI hub, also creates possibilities for people—whether from a school or a local organization— to think more expansively about ways to pursue their mission:

> *"To be a community partner organization where the focus is place-based education requires that the community partner is willing and interested in being in a very trusting, reciprocal relationship with the teacher, and in our case [with] the hub. In some cases, and over time, [we see] more of a transformational relationship where we're growing together into something that's better and different than how we individually existed before. I think that energy, that feeling of transformation, it's a lot of what fuels our hub, specifically, of transformation and growth and being able to become an organization. Maybe individuals... feel that this is a space of growth for them, where normally, if they were just in their organization, there would be more constraints."*

Access to grants, funders, and recognition

One hub noted that while funding may not be "their primary motivation" for participating in PBSE, for many local organizations funding is tight. Being part of a coalition supported by a GLSI hub can create opportunities for these partners to garner resources that would otherwise not be available.

Another hub offered an interesting example of recognition as a motivation to participate in PBSE. Although "political stumping" might not be what schools are expecting or wanting in a partner, this hub noted that an elected official who was also a resource person for PBSE found that participating in PBSE in that capacity was useful for his re-election. In this instance, the hub saw an added benefit for students, who learned about civic participation.

Service to benefit the community

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While in every hub and every place type, PBSE projects benefit from the contributions of "unaffiliated partners"—a mother with volunteer time or a grandfather with a tractor—hubs noted that in rural communities, partners often support an effort simply to benefit the community, the school, and the kids doing the work.

> *"I think the rural partners might be a little different because there's not a ton of them and it's like, Joe down the road that's got a boathouse... it's that kind of thing. It's more of a smaller community, and everybody knows everybody and they're just doing it to benefit the community and just be a really nice guy... It's a little different than suburban."*

> *"A difference that we discussed was that in the rural it was more apt to be an individual than in the urban/suburban where they are dealing with an organization or more formal entity."*

> *"It seems when we're working with schools that are in the rural areas, they have a direct link to these community partners so that when they're doing a project, it is that kind of thing that's, 'Okay let's talk to Joe Smith 'cause he's got a backhoe,' or 'Let's talk to so and so, because he's got plants.'"*

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IMPLEMENTING PLACE-BASED STEWARDSHIP EDUCATION ACROSS THE LANDSCAPE—SUMMARIZING THE ROLE OF PLACE AND OTHER FACTORS

In this paper, we have attempted to catalogue the features of context that support and constrain the use of PBSE, and the motivations that drive teachers, schools, and partners to engage with regional GLSI hubs in the practice of PBSE. Additionally, we examined whether PBSE varies in any systematic way as a function of urban, suburban, small-town, or rural place type.

Our paper is exploratory insofar as it relies on the insights of hub staff, who look at PBSE through their own lenses and work in institutional contexts that may influence their perspectives. However, the perspectives of the hubs have been informed by several years of effort to establish flourishing PBSE programs in varied contexts. Their significant experience in this field is an important and relatively rare source of insight.

Our chief conclusions are:

Educational factors that influence PBSE are not typically tied to specific place types. We find, generally, that educational culture, and opportunities and constraints for PBSE associated with the K-12 system, are independent of the urban, suburban, small town, or rural context. Certainly, the dynamics of education vary greatly from place to place. But our exploration suggests that these variations do not neatly track with the place type of a community. Rather, across all place types, schools engage with PBSE as a means of fostering student engagement in learning; because teachers enjoy teaching when students are engaged in learning; to address numerous content standards in a multidisciplinary, integrated manner; to distinguish themselves for grant makers or community residents; and because the approach dovetails with other teaching and learning emphases (e.g., STEM). Across all place types, when performance pressures are heightened and the climate is rife with stress associated with evaluation and standardized test scores, capacity for and execution of PBSE is constrained. Educational culture is seen to vary by building and community, and some see variation in such cultures among different types of schools (traditional public, charter, or private).

A few motivators for K-12 schools to be involved with PBSE appear to be more commonly found in one place type than in others. For example, some people associated PBSE with health and wellness due its use of outdoor learning; and health and wellness initiatives are believed to be more common and of greater appeal in urban areas. Conversely, building a sense of place and attachment to the community was viewed as a motivation for K-12 schools in suburban, small-town, and rural areas, but generally not in urban areas. These variations, however, appear to be differences of degree and not of kind.

Community organizations' motivations for engaging in PBSE efforts with schools are not generally tied to specific place types. Hubs perceived partner organizations to be motivated by the chance to expose new audiences of students and parents to their work and mission; to take on projects not possible without student capacity; to gain access to grants, funding, and recognition; and, less commonly, to network with other organizations in their field. Hubs serving rural populations noted

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that, because of the familiarity of community residents with one another, it is very common in rural PBSE to draw on partners who engage when asked, simply to benefit their community.

Many aspects of environmental culture and environment-related push-pull factors for PBSE appear related to place type. Views of nature and the environment have different character in different types of places. Hubs working in some urban areas spoke of the environment as a source of danger owing to degradation and pollution, or of outdoor areas as often being isolated and scary. These hubs noted that urban students (and teachers) typically have less experience and comfort in nature. Because of environmental challenges in these urban areas, environmental advocacy is often linked with social concerns, including justice and anti-poverty measures. In other urban areas, the culture views nature as an asset to be marketed and woven through the city as "green" infrastructure, a necessity like "grey" infrastructure. Suburban environmental culture, as viewed by GLSI hubs, emphasizes the restorative aspects of nature as well as "green" lifestyles, community aesthetics, and non-consumptive outdoor recreation. Finally, in rural areas, nature is a source of livelihood and subsistence, as well as a place for consumptive recreation including hunting and fishing. Small towns can incorporate aspects of each of these as they often merge an urban form (e.g., city lots) with rural features (e.g., easy access to undeveloped lands).

Of course, there are people with each of these outlooks in every type of place, as people move and bring their perspectives on the environment with them. Thus, these cultural distinctions speak to prevailing perspectives, not all perspectives. Comparatively easy access to outdoor sites suited to PBSE is considered an opportunity for PBSE in non-urban areas, and the lack of such access is a constraint for PBSE in urban sites.

Other environmental factors that affect the nature and shape of PBSE are not tied to place types, but rather to the broader landscape. For example, PBSE that is situated on the shores of Lake Michigan may be quite different from PBSE undertaken in an inland, agricultural community. Poverty is believed by several hubs to constrain interest in environmental issues and concerns, and while less common in Michigan's suburban areas, it is found in all place types.

A summary of these factors is presented on the next page. Those new to PBSE or considering a project in a new type of community may benefit from reviewing the cross-context findings (top) and the context-specific findings (bottom) for the specific place type in which their work may be situated.

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K-12/Community/Environmental Factors and Place Types

Widely recognized motivations, constraints, and cultural concerns related to PBSE that appear independent of place type

- Schools are interested in student engagement
- Schools value the opportunity to pursue numerous standards in an integrated, robust manner
- Teachers appreciate a learning model leading to high student enjoyment
- Partners value the opportunity to engage and inform PBSE participants in their organization's work, and to build awareness of its mission
- Partners and schools value access to grants, funders, and recognition
- Partners see opportunities to bring increased capacity to bear on efforts that exceed capacity in their organizations
- PBSE's compatibility with STEM initiatives and inquiry-based teaching and learning is motivating to schools and districts with these emphases
- An educational climate emphasizing standardized testing and performance measurement constrains interest in and capacity for PBSE
- Mission-driven or values-based educational cultures support PBSE
- Lack of transportation budget constrains interest and capacity for robust PBSE in schools

Motivations, constraints, and cultural concerns related to PBSE that appear sensitive to place type			
Consider in urban locations	Consider in suburban locations	Consider in small towns	Consider in rural locations
- Environment culture may reflect a view of the environment as being degraded, dangerous, or part of city infrastructure - Mingling of environmental and equity concerns, particularly where environments are degraded and poverty is widespread - Limited access to nature in some locations - Schools may be interested in PBSE's potential connections to health/wellness efforts	- Environmental culture emphasizes preservation, aesthetics, personal identity, solace, non-consumptive recreation - Frequent access to green space - Building student sense of place/community attachment may be motivating for schools - Project-based learning may be underway and offer a foundation for PBSE	Environmental culture can mirror or meld urban, suburban, and/or rural, depending on history and settlement pattern (city lots, suburban developments, rural pattern) Building students' sense of place/ community attachment, and workplace skills, may be motivating for schools	- Environmental culture emphasizes consumptive recreation (hunting, fishing) and economic uses of natural resources - Generally good access to nature - Building student sense of place/community attachment, workplace skills, may be motivating for schools - Individuals who simply want to help the community, schools, or students are more common as partners in this setting