Our reflections on the information about the Milwaukee Estuary that we have obtained, the informed stakeholders we have consulted, and three examples of efforts underway to advance its remediation have prompted suggestions for moving forward. We frame them on the moral virtues of prudence, justice, pride of place, reciprocity, moderation, generosity, humility, and courage.

Prudence: Informed Decision-Making

There is an urgent need for an increase in reaching out to the community in order to educate residents of Milwaukee about the importance of the Estuary. The ecological, economic, and political importance and relevance of the Estuary and its remediation must become ingrained in the minds and hearts of Milwaukee residents at the very beginning of their education. This requires exercise of the virtue of prudence from public and private school administrators in integrating information regarding the Milwaukee Estuary into grade school, middle school, and high school lesson plans and learning outcomes. Learning, accumulation, and implementation of this practical wisdom does not just occur, however, in the classroom. Wisdom occurs through empirical knowledge that is gained by experiences, and educators must also be prudent in scheduling field trips and activities centered around the various aspects of the Milwaukee Estuary as an ecosystem that we as members of it should be concerned. The Urban Ecology Center has been active in increasing experiential learning opportunities by planning canoe tours, monitoring different plants and insects with community members, and offering free and low-cost classes for adults and children. These examples exhibit applications of prudence.
Twenty-six years have passed since the Milwaukee Estuary was designated as an Area of Concern by the EPA. Yet significant strides need to be made to ensure the remediation of the Estuary and its eventual delisting of its AOC status. This will require a significant amount of practical wisdom in making sure that the projects in the Remedial Action Plan are happening in a timely and effective manner and that the best information is collected and analyzed for the most intelligent implementation plan possible. The WDNR has at this point, shown practical wisdom by outlining their progress and different stages on the projects of the RAP, whether or not these projects have been completed.

Governments have the responsibility to serve their citizens, and one of the main ways that they can do this is through collecting and sharing information on issues that relate to them. In the 21st century, one of the most effective avenues in sharing information is through the Internet and other information technologies. The websites of the WDNR and EPA must be streamlined to make and clarify information regarding the progress that is being made in remediating the Estuary, the problems that are stalling its remediation, and opportunities for stakeholders to be involved. People who go to these sites should be able to easily access the information they need about the Estuary’s remediation.

Justice: Involvement of Underrepresented Communities

We know that the populations that are most adversely affected by the environmental degradation of the Milwaukee Estuary reside in close proximity to or within the area, and many are also adversely affected by poverty and a lack of economic opportunity. Clearly, they are stakeholders in the Estuary’s remediation, yet they have the least voice in government decision-making. They are overlooked by their alderpersons,
state senators, and federal representatives, and they are often overlooked by government stakeholders such as the Wisconsin Department of Natural Resources and the US EPA who are charged with remediating the Estuary. Thus, there is a clear need for the virtue of justice to be demonstrated in relation to these communities. The opportunity for underrepresented groups such as African Americans, Hmong, and Latinos in Milwaukee to have a voice in the implementation of the projects going forward in the Remedial Action Plan is essential. Government officials need to understand that they will not have a complete and thorough plan unless they involve and listen to the needs and concerns of the populations that will be most affected by decisions that are made. Seeking representatives of these affected communities to serve among the Stakeholders Delegation will bring about justice on interracial levels. So also will designating on the Stakeholders Delegation a representative of future generations.

Pride of Place

Pride in one’s home, our Milwaukee Estuary ecosystem, requires the celebration, recognition, and respect of the human place and role within it. A deep sense of appreciation for the Estuary should follow pride in it. All stakeholders and all Milwaukeeans must cultivate a sense of belonging, a pride of place in the Milwaukee Estuary. The prevalent detachment may be the result of immigration of Europeans to Milwaukee within the last few hundred years and the migration of people to live in Milwaukee without having a sense of belonging for a long time to the area. Native American peoples such as the Menominee and Potawatomi have this sense of belonging. They had sacred burial mounds in the Milwaukee Estuary.
This sense of connection with and belonging to a place is essential for the survival of modern peoples. We must look to the Estuary as our source of water, the element of life. We must remember the importance of these waterways for food, recreation, transportation, and commerce. We need to look to Estuary as an indicator of the social and psychological well being of all that make up the ecosystem.

With this enlightened sense of belonging, we should begin to care about and for all that make up the Estuary and world around us. A view of Milwaukee as home changes the way people interact with the Estuary. There should be educational efforts to foster having pride in belonging to the Estuary so Milwaukeeans will be active in making sure that the gifts that lie in the ecosystem will be maintained and sustained for generations to come.

Reciprocity

Within the Milwaukee Estuary, humans need to cultivate a sense of reciprocity by cooperating with our fellow beings, all types of life, the land, and the water to ensure remediation is mutually beneficial. This necessitates approaching the Estuary through the ideals of Aldo Leopold. Humans must acknowledge we are integral parts of the Milwaukee Estuary and ought to engage cooperatively with the other parts in a reciprocal manner. Doing so requires equal sharing and balancing of the “gives and takes” in the ecosystem.

Since times of high industrial activity in the Milwaukee Estuary, humans have existed in an unbalanced state of flux with the rest of the environment. Milwaukeeans have taken energy and water from the waterways and returned toxic waste, garbage, and invasive species. The balance in the Estuary ought to return to an equilibrium and
ecological homoeostasis. Education of ecological and personal reciprocity must be fostered in the school systems (both public and private) from an early age.

As members of the biotic community as Leopold envisioned, humans must become conscious to their total dependence for their quality of life on all other living and non-living parts of the natural environment. Its degradation parallels the degradation in human thinking and understanding. Groups involved with the Rotary Arboretum are working to restore this balance by giving back to the natural plant communities. As a part of this community, we will only receive that which we send out into the estuary. Now is the time to change the one-way interactions of the past. It is time to live integrally with other parts of the Estuary and to demonstrate our reciprocity with them.

Moderation

We recommend wise and moderate use of funding and materials by all stakeholders and remedial parties. Projects and remedial efforts ought be planned intelligently and executed with moderation to avoid waste. Time is of the essence when it comes to the wounded Milwaukee Estuary. Using what is not needed creates waste and impacts the environment. Therefore, we call on all stakeholders to use available materials in moderation, and parties executing remedial efforts to use their funds and materials wisely, efficiently, appropriately to avoid wastefulness. Further, inadequate planning and execution is a waste of stakeholders’ time that deters people from working on remediation efforts in the future.

One example of the virtue of moderation in action is Groundwork Milwaukee’s approach to spending and scaling up when necessary to save funds, material resources, community in kind contributions and time. In addition, all of the stakeholders involved in
the remediation of the Milwaukee Estuary must be extremely conscious of their individual consumption of ecological goods from the Estuary, so as to make sure that they do not exceed the basic requirements of living. All agents, from Milwaukee residents, to businesses, to firms, to government organizations must apply the virtue of moderation to assure that they are living with minimal impact for the betterment of the Estuary and all the entities that constitute it.

With all of the problems that exist in the city of Milwaukee, some of these problems that stem from unequal distribution of wealth can be solved through a more simple way of living. Simplicity in living would improve the situations of many. Living simply requires less materials goods. That contrasts with their overuse and abuse that has degraded the Milwaukee Estuary. We call for all of the residents of Milwaukee to collaborate across their communities to develop a more sustainable way of living that can be less harmful to the Estuary. One way is through developing and fostering programs of urban agriculture.

Generosity

Another virtue that we recommend continuing in efforts to remediate the Milwaukee Estuary is generosity. From our research we have discovered a level of generosity between organizations with in-kind contributions and support and this in encouraging. Nevertheless, we recommend a heightened attitude of generosity between stakeholders offering skills, knowledge, talents, energy, time in remediating the Estuary. We also encourage stakeholders to be generous in their contributions and/or monetary funding towards remediation. Since many firms and industries surrounding the Milwaukee Estuary have a stake in the remedial action plan, they should be generous in
their actions by voluntarily contributing to funds needed to implement the remedial action plan. Thereby, they will benefit for the greater good. Generosity is a good characteristic to demonstrate in a city-wide collaboration to remediate the Milwaukee Estuary at a high level of quality.

Humility

Humility requires humans to recognize our place in the Estuary and accepting responsibility for the ecological problems that we are facing today. All stakeholders in the Estuary ought to acknowledge our parts in causing the problems and accept responsibility for its remediation. We need to recognize our shortcomings humbly and graciously and help create and engage in programs aimed at remediating the situations we have caused. This necessitates showing respect for the Milwaukee Estuary and acknowledging the awesome power of the ecosystem on which we all depend.

Humans need to recognize their roles in the Milwaukee Estuary. We are simply one part of a larger system, an interconnected web of relationships. We play a part and are entirely dependent upon the Estuary. We must also remember the ideas of holism—that the whole is greater than the sum of its parts. In this web of existence, we need to think about the importance of the fish, wildlife, and plant species and their interests. We need to change the anthropocentric view of Milwaukee society. Removing this human-centered perspective requires humility in all Milwaukeeans to accept their ecological niche, their role in the Estuary. We must recall that the spawning of the sturgeon is just as important as the continuation of human industry and life. Via the GILS project, Groundwork Milwaukee is working to return balance to the Estuary with the creation of
wildlife habitat among the ecological dead zones of the hardened shorelines. Creating these habitats facilitates ecosystem improvement and in turn life flourishing.

Courage

Our last recommendation is for stakeholders to have courage to persist until the Estuary is remediated. Environmental restoration is a relatively recent phenomenon that presents challenges not previously addressed by humankind. The environmental ills we have caused are difficult to repair. To learn by experience, we recommend that stakeholders harbor a sense of courage by taking risks. The Milwaukee Estuary presents complicated challenges that require courage to try restoration techniques that have not been used previously. We direct this call to action to all stakeholders, especially those executing remedial actions to have the courage to push boundaries with prudence.

One learns from failure, and playing it safe does not always bring speedy and efficient success. It takes courage to persist and have long term dedication for remediation projects. Courage is needed to fully heal our shared waters. All individuals should avoid sitting dormant. All should question the current status of the Estuary and have courage to make a difference by contributing to the on-going conversation and actions aimed at healing our wounded Estuary.