

**Delaware Direct Watershed Partnership Meeting**  
**Tuesday, October 5, 2010**  
**9:00 am to 11:30 am**  
**Delaware River Waterfront Corporation**

**1-Welcome and Introductions:** See attendee list at end of notes.

The meeting focused on the ecological restoration along the Delaware Direct waterfront, including how restoration can fit into riverfront redevelopment and recreation plans. Summaries of presentations and meeting discussions are provided under items 2-4 below. The full presentations made by Lance Butler and Paul Racette are posted at [http://www.phillywatersheds.org/del\\_working](http://www.phillywatersheds.org/del_working).

**2-Report on Monitoring Along the River Front; Ecological Communities Focusing on Fish Findings,** Lance Butler, Philadelphia Water Department (PWD)

Lance summarized the findings of two fish surveys conducted in 2009; one in the reach between Pier 53 and Pier 70 and the second for the area around Southport. PWD found the presence of high values resources including:

- A diverse fish community, with 20 different species, including resident and migratory fish.
- Species “of concern” including Blue-back herring, Alewife, American shad and Atlantic Menhaden

Based on findings of “young-of-year” and juvenile fish, PWD concluded that in addition to offering areas for forage and refuge, these urban pier structures and shoreline may be providing spawning habitat. This indicates the potential for a sustainable urban fisheries corridor, with a dollar value that can be associated with a recreational fishery.

Lance also noted that annual trends (2004 to 2009) on the Fairmount Park fish ladder (on Schuylkill River) are showing a big jump in fish passage (went from 7,000 of 40,000 total fish), and that this should continue to go up with improving water quality. Fish ladder improvements were completed in 2008.

Lance also reported on PWD riverfront wetland survey work conducted in 2007-2008, noting that the surveys revealed approximately 30-40 locations of wetland enhancement or creation potential based on existing shallow mudflats, totaling 60-100 acres.

Lance reported on recent Partnership for the Delaware Estuary (PDE) surveys conducted in urban Schuylkill and Delaware River areas that found the presence of rare freshwater shellfish (shells or live specimens) such as *Lampsilis cariosa* (Yellow Lamp mussel), *Leptodea ochracea* (Tidewater mucket), and *Ligumia nasuta* (Eastern Pond mussel).

Lance summarized some of the implications of these fish and shellfish findings, such as:

- Increased potential for fishing
- Increased economic value of the waterfront property
- Waterfront planning should balance development interests with protection of this high value resource
- Potential increased level of mitigation required for intertidal or open water takings
- Philadelphia contains some of the limited areas of opportunity for freshwater tidal wetland enhancement or creation; these may occur in Philadelphia through mitigation takings from development, such as airport expansion.

Jessica Sanchez commented that the Delaware River Basin Commission (DRBC) is considering the revision of designated use and the associated water quality standard to be based on propagation rather than on maintenance of migratory fishes. She recommended that the fish findings be submitted to DRBC for inclusion in the State of the Estuary report.

View/download Lance's presentation at [http://www.phillywatersheds.org/del\\_working](http://www.phillywatersheds.org/del_working).

## **2-Ecological Restoration Opportunities along the North Delaware River Greenway, Paul Racette, Pennsylvania Environmental Council (PEC)**

Paul provided an overview of PEC work along the proposed North Delaware River Greenway in Philadelphia, including implications for wider urban waterfront restoration work. The presentation focused on the following:

- Brief Regional Perspective:
  - Interface of urban waterfront restoration into PDE's Regional Restoration Blueprint.
  - Interface with land trails (East Coast Greenway) and water trails (Tidal Delaware Water Trail).
- Philadelphia North Delaware Riverfront:
  - Ecological restoration assessment and prioritization work.
  - Examples of prioritized sites including wetland and riverbank restoration.
- DuPont Clear into the Future ecosystem services feasibility assessment.
- Bridesburg ecological restoration preliminary design.
- Next steps: Portfolio of restoration opportunities.

Bridget Keegan of Penn Praxis noted that any sites that have potential for inclusion on the Philadelphia Parks and Recreation plan for 500 new acres of parkland should be brought to the attention of PennPraxis. PennPraxis (Andrew Goodman) is now preparing a report that will summarize potential additions to City parkland. The report will be used by Parks and Recreation as an action plan and they move forward with their park acquisition goals.

Amanda Benner of Philadelphia Horticultural Society (PHS) suggested that consideration be given to the re-use of materials on a site for restoration or park development. This can help reduce restoration costs (e.g. less off-site disposal).

Lance Butler recommended that the effort by the Delaware Department of Natural Resources and Environmental Control (DNREC) to collect bathymetry and bottom substrate data be extended down river to the central Delaware for use in prioritization and design work.

View/download Paul's presentation at [http://www.phillywatersheds.org/del\\_working](http://www.phillywatersheds.org/del_working).

**3-Update on Assessment of Ecological Restoration Opportunities and Other Public Realm Spaces along the Central Delaware River**, Sarah Thorp, Delaware River Waterfront Corporation and Molly O'Neill Robinson, The OLIN Studio  
Central Delaware: Molly Robinson

Molly first described the Sustainable Site Initiative framework being applied to the Philadelphia Central Delaware Master Plan. Sarah followed with details on projects along this waterfront area that address development, trails, and ecological restoration. Their presentations are not yet finalized for public release; a public meeting is scheduled for October 19th. Please contact Sarah at [sthorp@delawareriverwaterfrontcorp.com](mailto:sthorp@delawareriverwaterfrontcorp.com) regarding the availability of the full presentations.

The presentations are briefly summarized below.

Molly provided an overview of the Sustainable Site Initiative (SITES):

- It provides a framework to balance ecology-driven and economy-driven design and development.
- Its objective is to systematically incorporate ecological functions and performance into riverfront development.
- It is a four step process including:
  - Goal setting
  - Measuring baseline conditions
  - Setting targets
  - Implementation

Molly then summarized ecological goals proposed for the central Delaware, and associated baselines and targets:

**Goal 1: Human health and well-being.** **Baseline** indicates large gaps in park service areas, limited community access to river, absence of healthy food sources, and limited mass transit available. **Proposed targets:** Provide 5-minute pedestrian access to neighborhood amenities, including neighborhood parks every half mile along the riverfront. Overall, increase access to the river and natural systems.

**Goal 2: Stormwater quality and quantity.** **Baseline** indicates 61 percent impervious surface cover along the central Delaware. **Proposed targets:** Reduce impervious area footprint. Small percentage of this can be gained from new parks. This strategy requires coordination with PWD to disconnect new development from the stormwater system and intercept runoff via new green infrastructure.

**Goal 3: Air quality.** **Baseline** indicates urban heat island effect (higher temperatures due to impervious surface heat sink). This contributes to ground level ozone creation and associated public health impacts, as well as increased energy demand to cool buildings. **Proposed targets:** Mitigate urban heat island effect through creation of more park areas, and reduce unhealthy air days through temperature reduction and reduced emissions from building cooling equipment. Also look to sequestration of greenhouse gases in constructed wetlands.

**Goal 4: Habitat.** **Baseline** indicates about 3 percent tree cover along the waterfront and patchy habitat areas. In the water, potential wetlands are unprotected from wave action. **Proposed targets:** Increase tree cover to 30 percent or more, to gain benefit for habitat as well as air quality/health, stormwater, and building energy saving goals. Establish riparian continuity across riverbank gradient, from low marsh, to high marsh, to adjacent uplands. Look for opportunities to extend this riparian buffer inland (e.g. areas along northern and southern portion of waterfront have potential for wider riparian zones both in the water (south) and back from the water's edge (north)).

Approaches for **implementing** above goals are being integrated into the riverfront master plan. Variety of implementation tools exist that include modifications to buildings, streets, and surrounding landscapes. Guidelines for implementing these tools need to be built into the overall master plan and into site specific development guidelines.

Sarah Thorp completed the presentation by showing how the Sustainable Site Initiative concepts are being applied. Her presentation included:

- Footprints of existing public spaces along the waterfront including the “walksheds” of the park.
- Proposed locations of new riverfront parks with green street connections to neighborhoods (e.g. rhythm of parks every one-half mile or every 10 minutes).
- What buffers widths from river's edge are required to achieve specific wildlife benefits (e.g. fish species requiring about 100 feet of buffer while a bald eagle requires over 600 feet).
- Some of the best opportunities for habitat restoration (e.g. along the southern piers (for wetlands) and north near the Leigh Viaduct (for an upland park)).
- Proposed trails that can provide access to and along the waterfront, including multi-use trail, bike trails, and pedestrian river-front access trails.
- Examples of proposed redevelopment sites and how ecological restoration can be integrated into development plans.
- The need to leverage public investment with private development in order to see implementation occur.

### **Questions and discussion points that followed Sarah's presentation include:**

Glen Abrams and Marc Cammarata discussed **CSO outfall re-location**. There is the opportunity for 1 or 2 outfall re-locations projects along the waterfront. Important to know locations of outfalls in relation to how they may impact redevelopment and habitat restoration projects. PWD will need to coordinate this with partners. In some cases this may involve extending rather than eliminating CSO's (e.g. if CSO transfer has big impact on new receiving location).

Jessica Sanchez of DRBC recommended that environmental and educational programming be integrated into the riverfront redevelopment process. Allow for public comment in order to integrate address new development with existing neighborhood character.

Barbara McCabe of Parks and Recreation Department noted that there are many Park and Recreation facilities in area. She supported an effort to connect these existing resources with the new plans to develop and restore the river front.

Marc Cammarata echoed this comment in relation to connecting green street corridors with the open space network. It is important to identify green street connectors where PWD can invest in stormwater projects. Sarah concurred, noting the goal of linking up PWD green street priorities with streets in the master plan that have a riverfront open space features.

Marc also noted that we need to consider how to address Interstate I-95 connections to the river front. This is a pressing issue; how to link I-95 connections (e.g. 50 stormwater pipes between highway and river). How many of them could be trails and/or incorporate green infrastructure? Sarah Thorp responded that the Master Plan needs to go public, and that we can then go PennDOT to ask about linkages between I-95 and the Master Plan parks and open space.

It was noted that the Army Corps of Engineers is looking for partners (non-federal sponsors) for riverfront restoration projects. Marc suggested that this is the way to go with wetland work; work with the Corps as they are most familiar with the wetland permitting issues. PWD can offer non-federal match (25%). Need to approach Army Corps and interested Congressional representatives (a November meeting to be scheduled).

### **4-Updates from Other Partnership Stakeholders**

The Race Street streetscape design from 2<sup>nd</sup> Street east to Columbus Boulevard is moving forward; there was an October 5<sup>th</sup> evening meeting for the public to review the updated design. Contact Alice Edgerton of PHS for details ([aedgerton@Pennhort.org](mailto:aedgerton@Pennhort.org))

The Delaware Avenue Extension work at Allegheny Avenue is proceeding forward with a goal of construction in 2011 (to meet TIGER funding deadlines). The street will

include green stormwater management infrastructure (contact Paul Lonie for details at [plonie@drcc-phila.org](mailto:plonie@drcc-phila.org))

The next meeting of the Delaware Direct Watershed Partnership will focus on the following proposed topics:

- Green business and the new stormwater rate structure (some examples of stormwater retrofit credit projects).
- PennDOT and the I-95 connections to waterfront development
- Sarah Low of Parks and Recreation can present on their urban forest initiative.