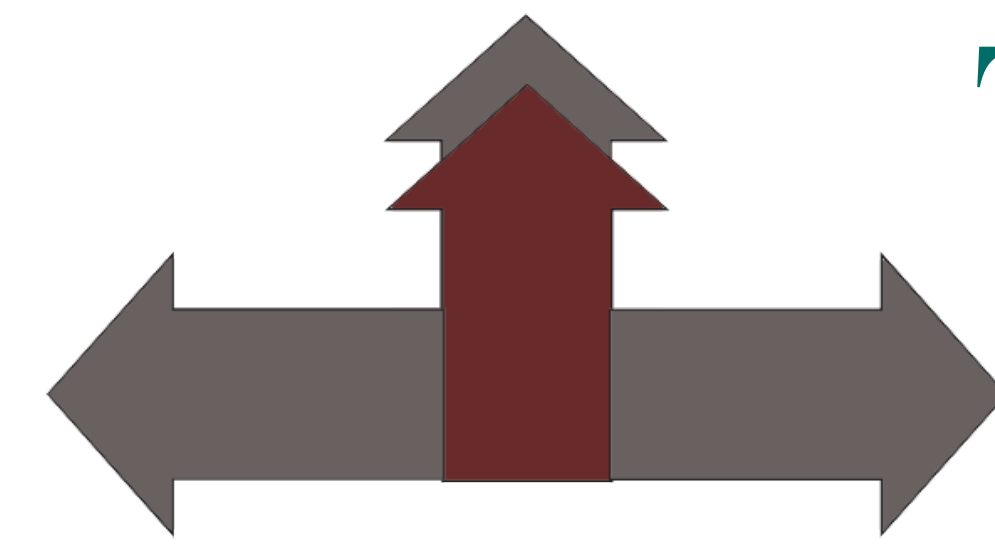


River that Flows

Fall 2021

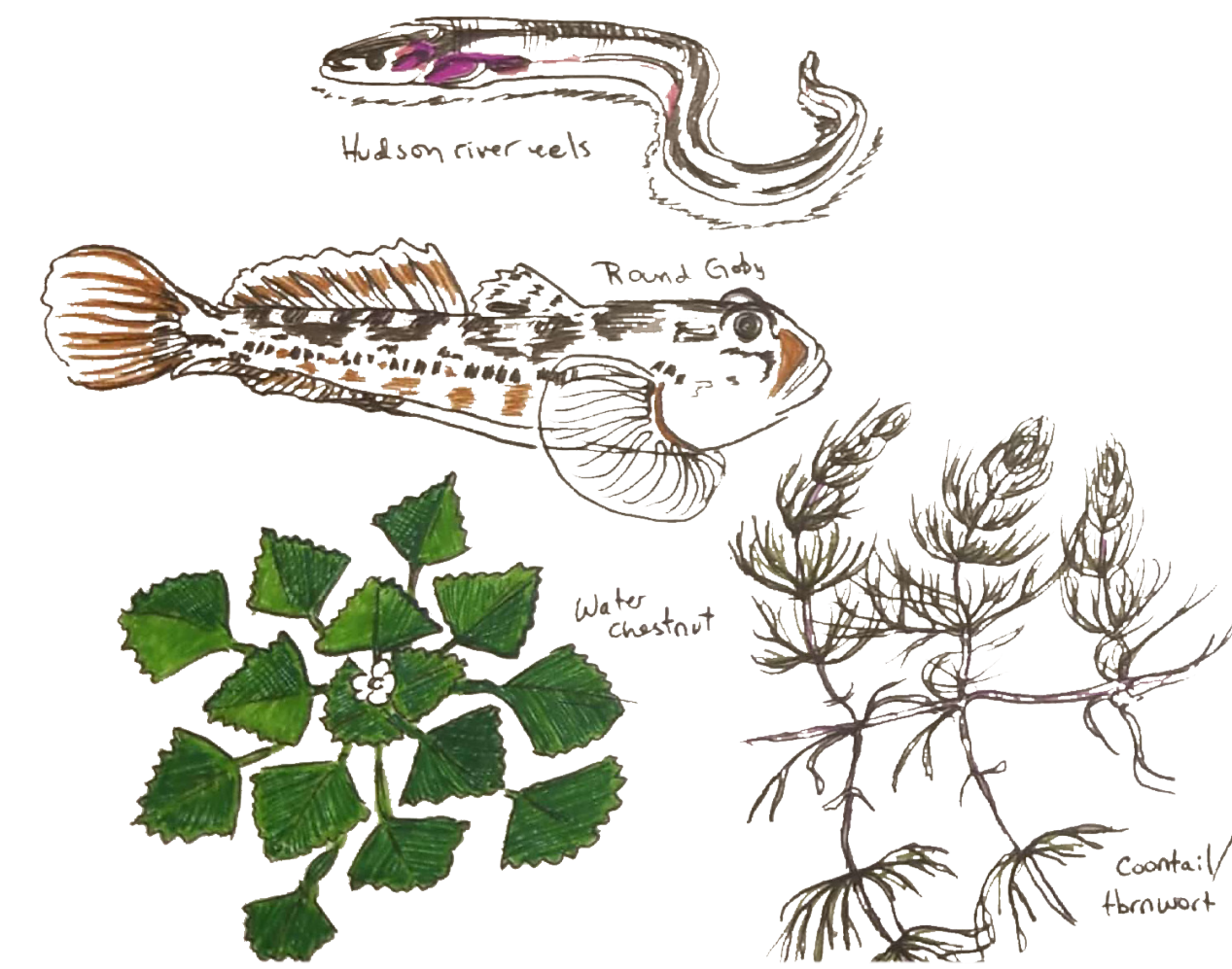
Three Ways

By Lauren Cruvellier



Observation

A series of programs and naturalization interventions designed to raise awareness of the situation of the Hudson River as well as its non-human inhabitants. Primarily focused around Fall Kill Estuary and Waryas Park, other interventions will soften human impacts on the waterfront through floating marshes, enhanced habitat in a way that also allows for human appreciation.



One of the largest efforts towards proper observation and awareness of the Poughkeepsie waterfront is the identification and clearance of many types of invasive species in the area and replacement with native species (represented on the left by the goby and water chestnut-invasive-and the river eel and coontail-native).

Activation

Primarily represented through the partial re-routing of Route 9 to Washington street, activating the waterfront also consists of social programming and employment opportunities surrounding the maintenance and functionality of the waterfront parks. Those involved would gain relevant skills related to their job and the promotion of bike accessibility and walkability will give a business/tourism boost in the area for the city to take advantage of.



Facilitating transportation via new, designated bike routes would open up the waterfront not only to recreation, but also for employment opportunities. The nature center would require many forms of maintenance or monitoring of the changing waterfront, as well as construction/repairs of the boardwalks and trails. These jobs could help those lacking in other, more conventional job skills to learn a craft or skill while also helping the community and their families. Necessary training would be provided, so there would be no minimum requirements for education level; only a willingness to learn. Just because Poughkeepsie would have a more naturalized waterfront does not mean that it must stop being a 'working' waterfront. The work just needs to change.

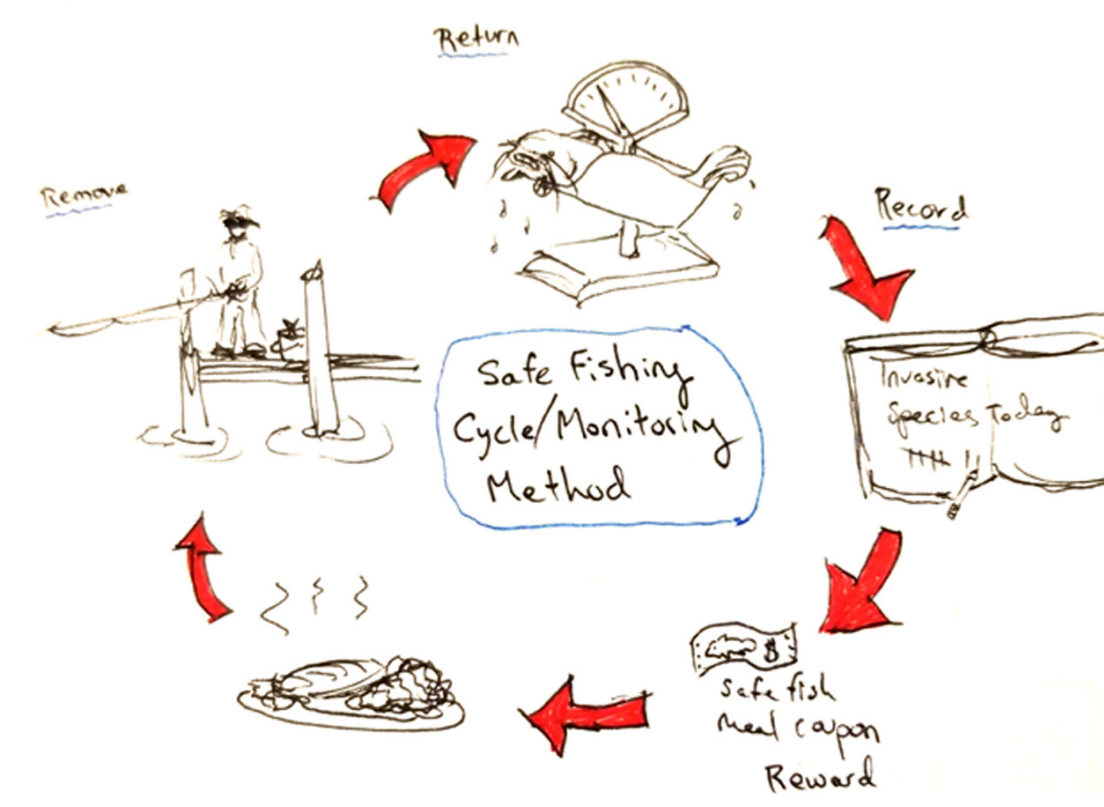
Celebration

For such a heavily developed waterfront, the history of its use and the residents living in the city cannot be over-emphasized. Opportunities for seasonal activities as well as space for festivals, musical events, and waterfront activities will be available throughout the year, with a highlight on the existing Oaxacan Guelaguetza. Along with the newly available sports facilities, the opportunity for public recreational activities and motivations to be along the water will be higher than ever



Programming of the Poughkeepsie waterfront plays an important part in activating the site and keeping it interesting for locals as well as making it a destination for visitors. The Farmer's Market that was held in the pavilion during the pandemic is a step in the right direction, providing not only a desirable area to visit but also a practical reason to go there. The pavilion would be one of the structures that would be kept in situ on the waterfront, although raising it higher to survive the incoming tides would be necessary to allow it to continue functioning properly.

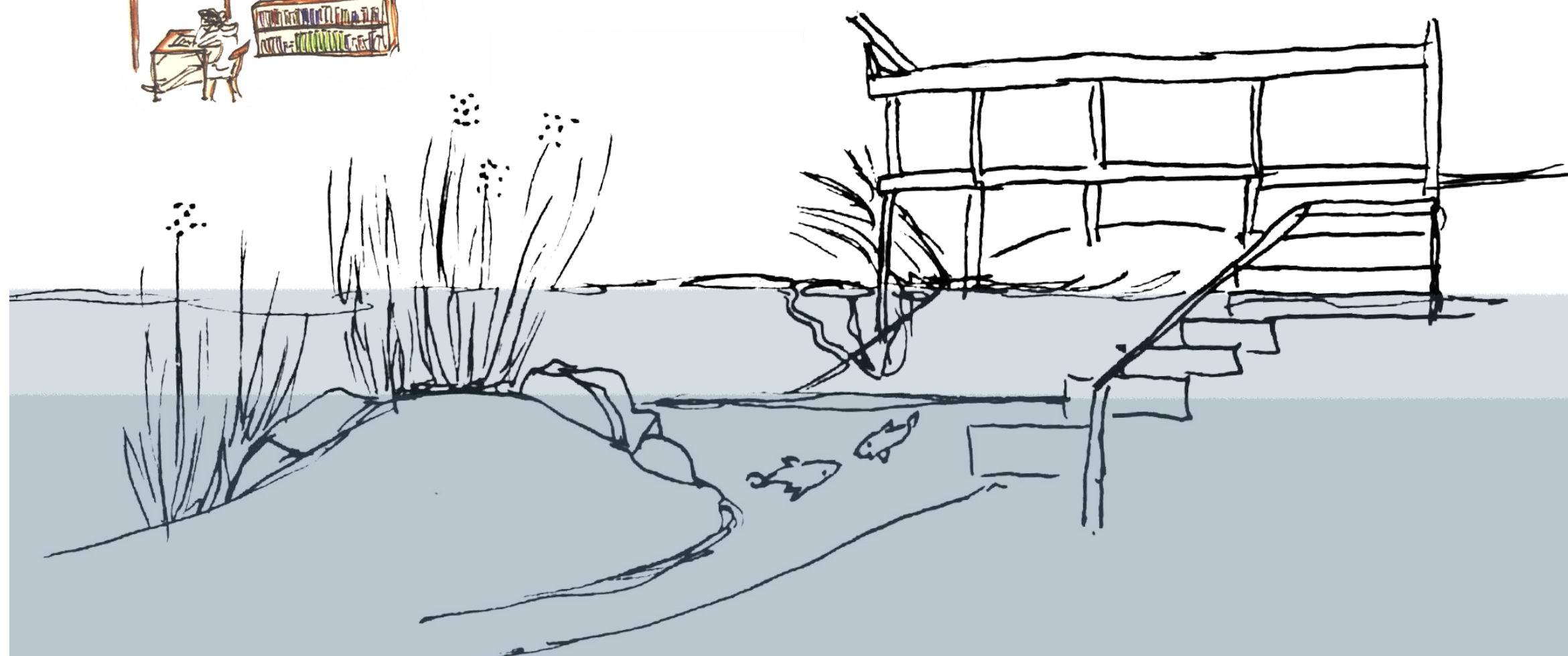
Part of this effort will be regular clearance and maintenance of the waterfront by workers, but other actions can be taken to involve the community, such as providing facilities to register fish caught in the Hudson. A bounty system set up for catching invasive species (example of exchange on the right) could help families that rely on the waterfront as a source of food or income without harming themselves or the local ecology.



A community center/nature center next to the Children's Museum in Waryas Park would allow monitoring activities to take place as well as a gathering place to promote learning about the natural environment that would hopefully return to the Poughkeepsie waterfront through collective efforts. Bird-friendly large windows would allow visitors to appreciate the Hudson waterfront in a way not seen in the area before.



In Waryas Park, the Community/Nature Center would have public facilities such as a reading room with free wifi as well as a cafe, but more importantly it would be a source of regular information about events on the waterfront, both natural and artificial, by way of a periodical (example right)



The new boardwalks and pedestrian paths would aim to be as public-friendly and as accommodating as possible, but for those who may not be able to handle the slope of Kaal Rock switchbacks, a short shuttle bus could span the length of the waterfront, especially on weekends, to help those who wished to get from Upper Landing to Delaval in a rush. Additionally, this shuttle can ascend the slope of Main Street back to the more level commercial area as well as to the new open parklands bordering it.

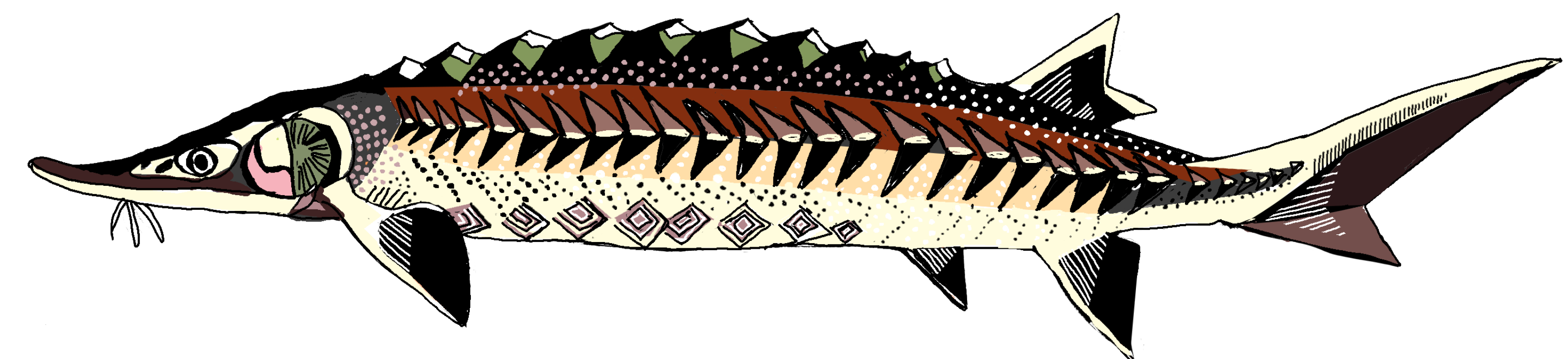


Clean-up artefacts

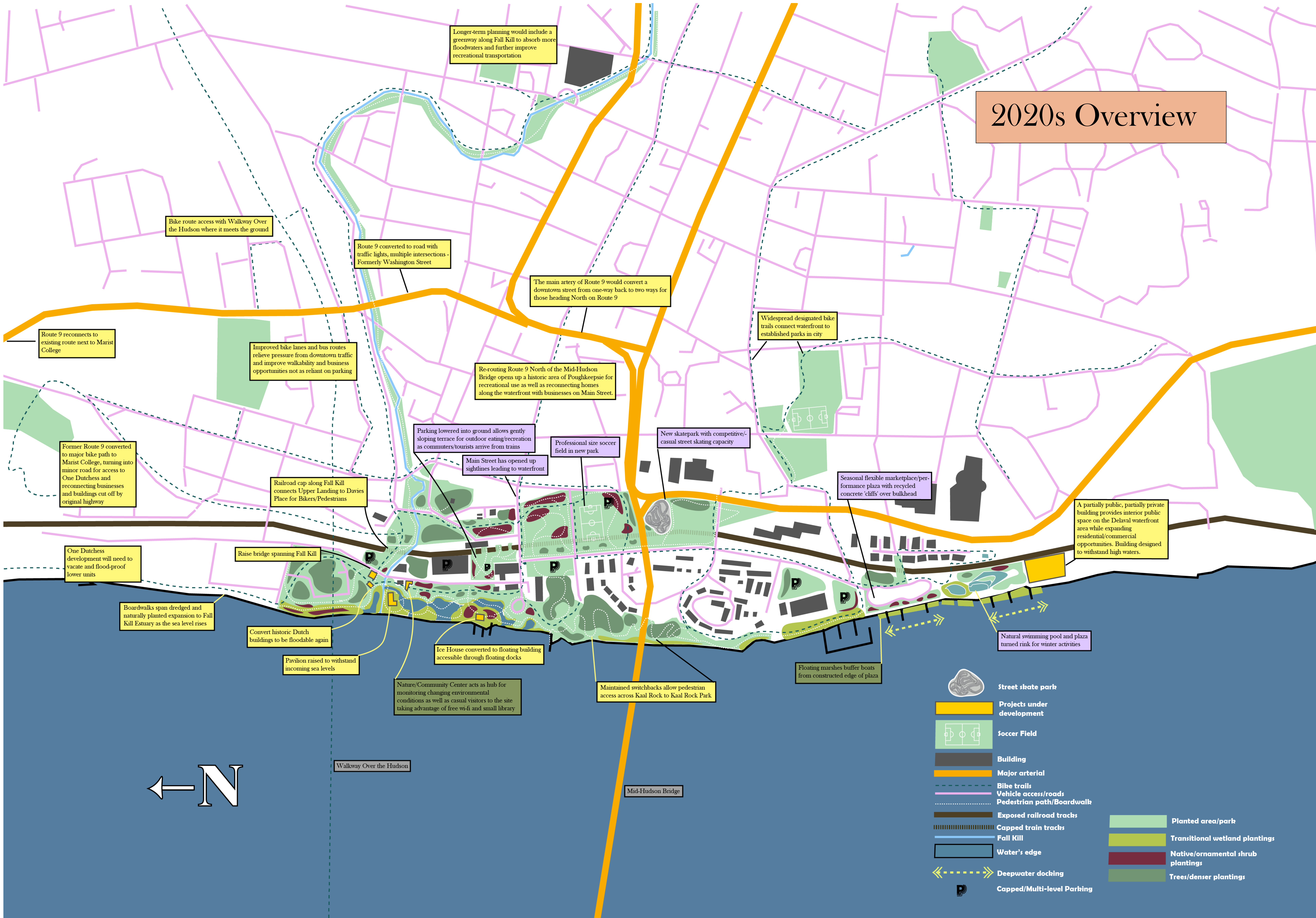


While often overlooked, a fascinating part of the Hudson River is its long history of occupation, from well before European settlers came into the area. A small part of the Community Center would have a dedicated artefact area with some of the most interesting/significant finds, both archaeological as well as scrounged on the beach, as well as information about the natural and industrial development of the area.

Engaging local artists from various cultural backgrounds will play a large part in celebrating the waterfront of Poughkeepsie. There are many blank walls and empty pavement where renderings of Poughkeepsie's natural and cultural heritage could engage with people moving around the space.

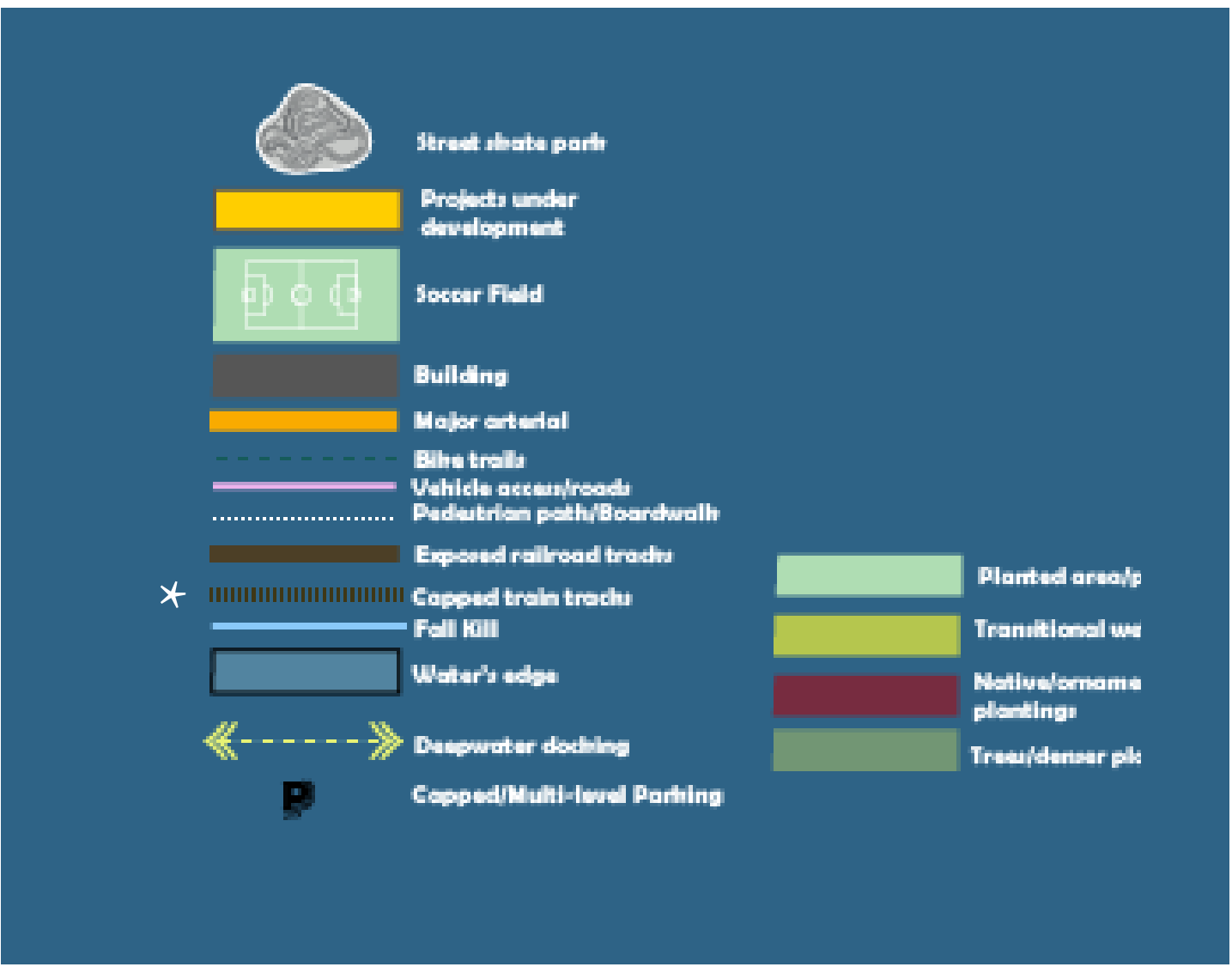


2020s Overview





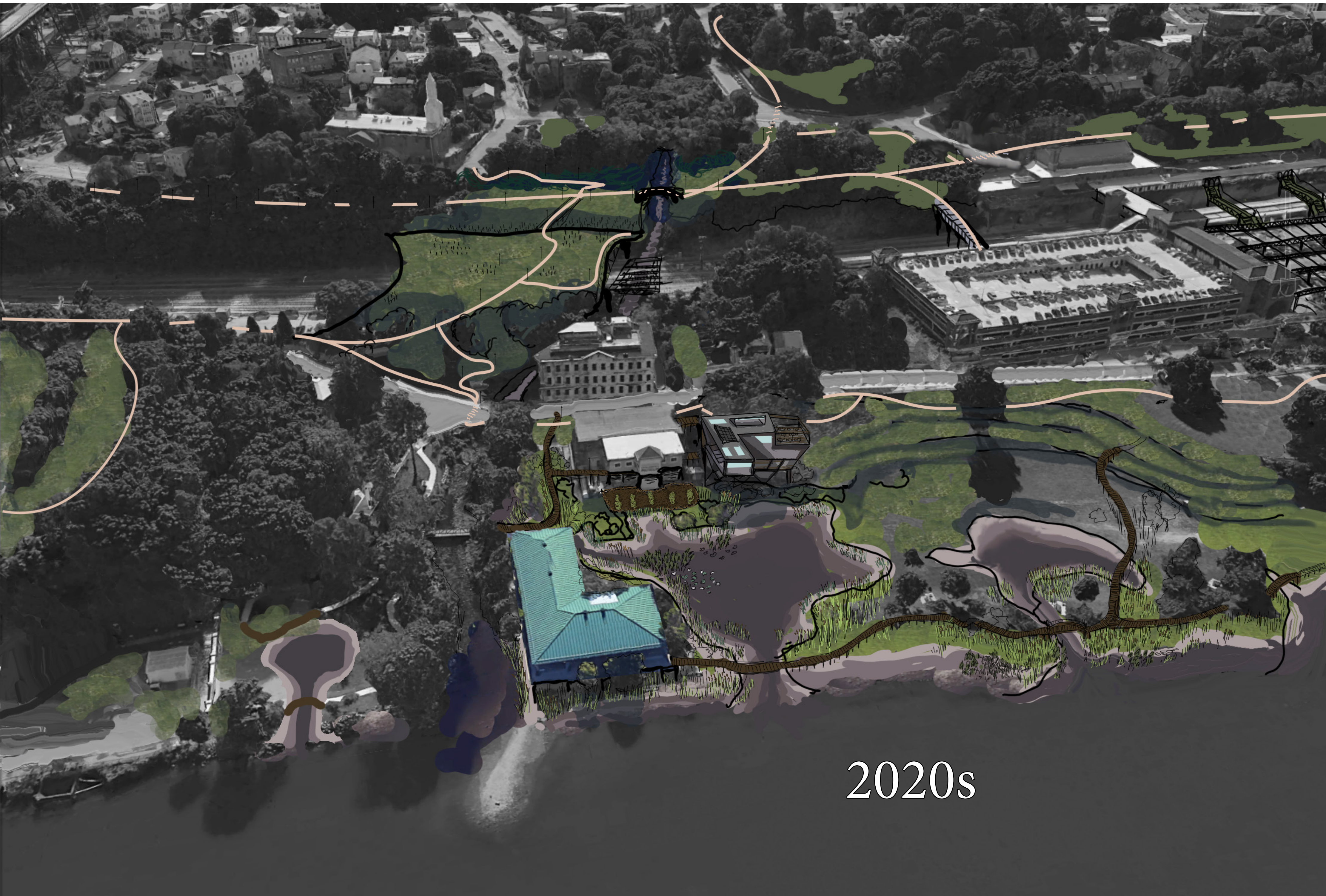
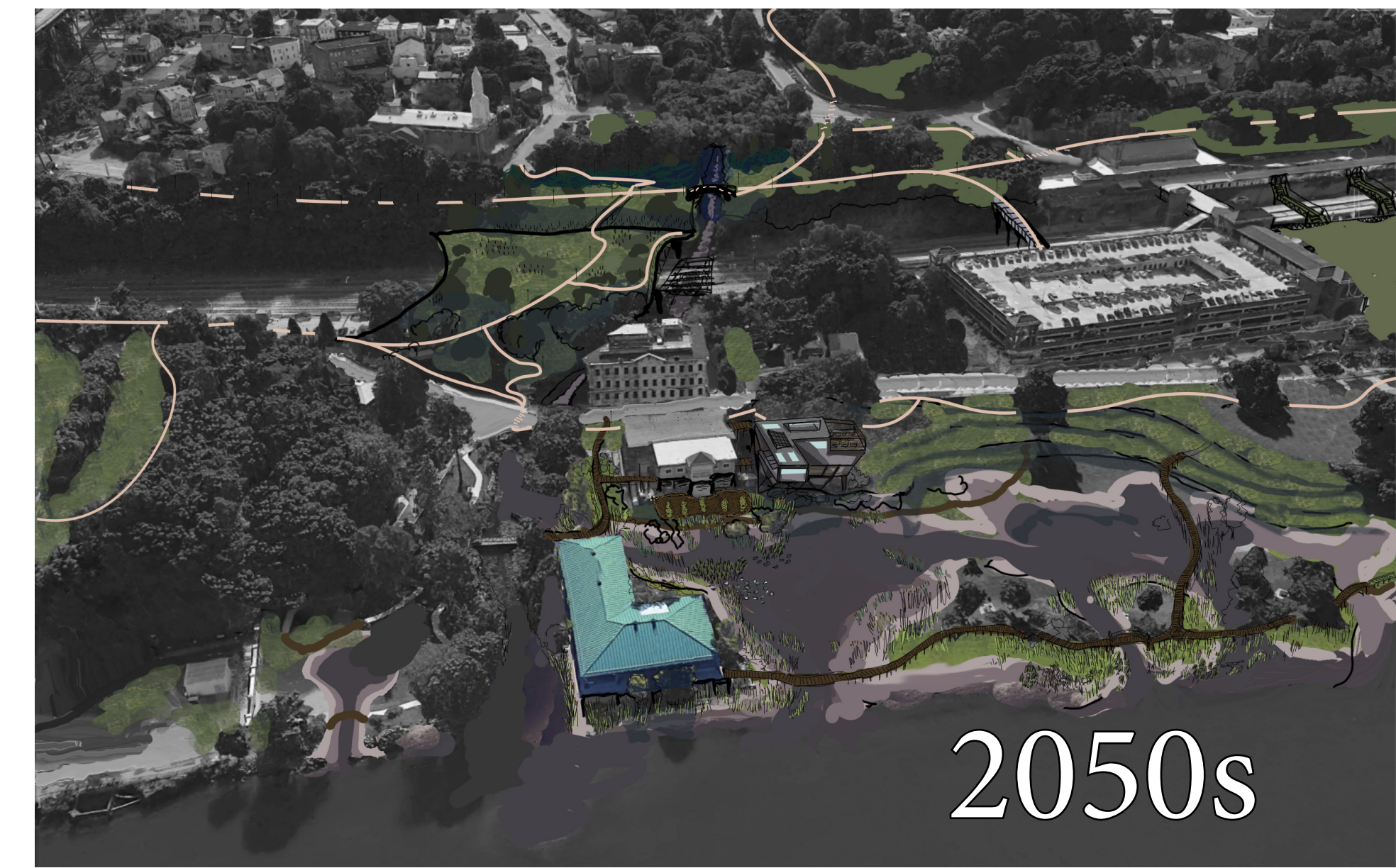
2050s Waterfront Changes



* Railroad caps, with the exception of the Fall Kill cap, would start from the Main Street overpass and continue South in phases. The area with the most potential to be opened up again is North of the Mid-Hudson Bridge, where Route 9 gets re-routed. Further South, many industrial/exclusive residential complexes make bridging the gap less significant for

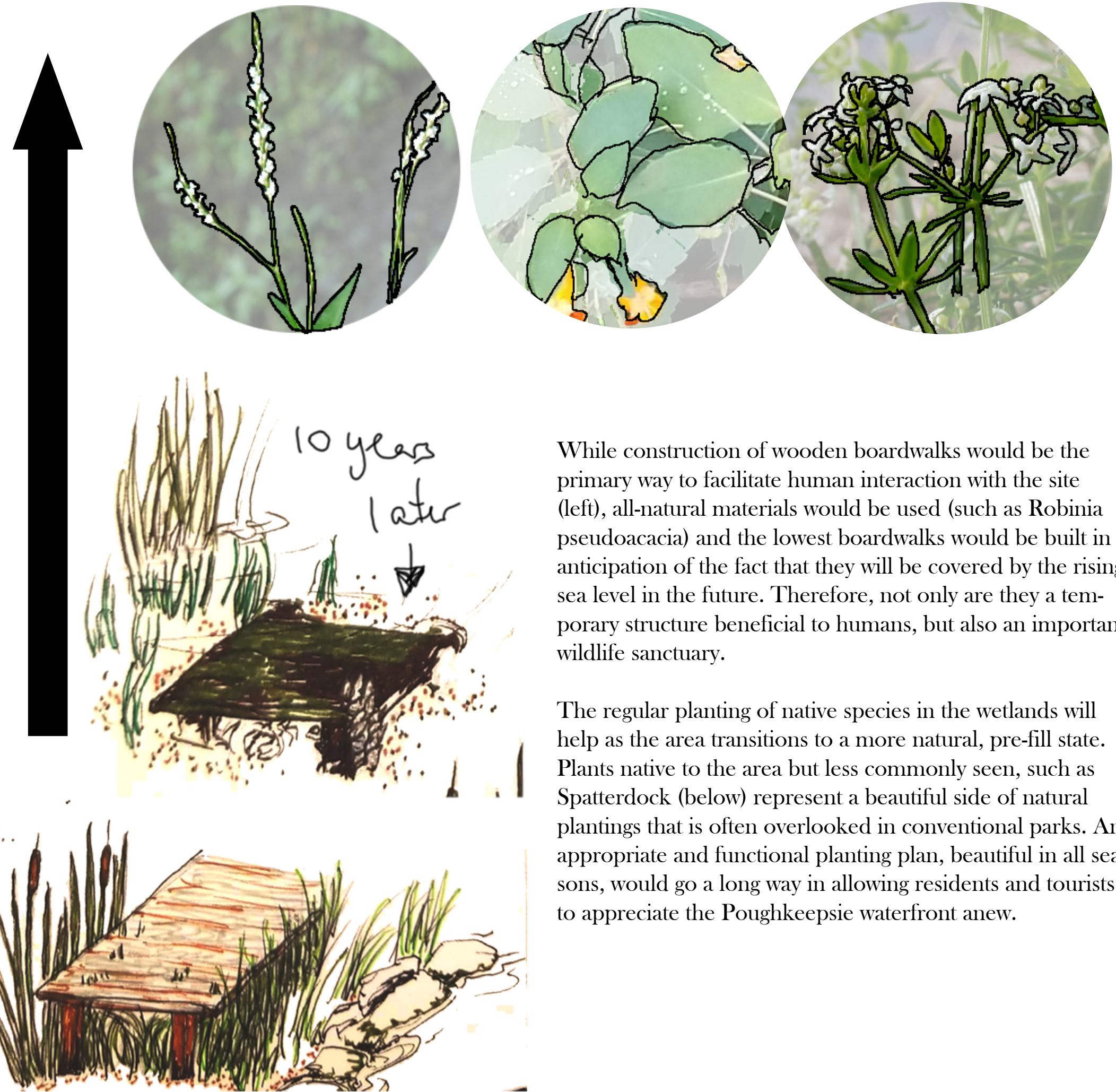


2080s Waterfront Changes



Fall Kill Estuary Natural Park

(currently Waryas/Upper Landing Park)



While construction of wooden boardwalks would be the primary way to facilitate human interaction with the site (left), all-natural materials would be used (such as *Robinia pseudoacacia*) and the lowest boardwalks would be built in anticipation of the fact that they will be covered by the rising sea level in the future. Therefore, not only are they a temporary structure beneficial to humans, but also an important wildlife sanctuary.

The regular planting of native species in the wetlands will help as the area transitions to a more natural, pre-fill state. Plants native to the area but less commonly seen, such as Spatterdock (below) represent a beautiful side of natural plantings that is often overlooked in conventional parks. An appropriate and functional planting plan, beautiful in all seasons, would go a long way in allowing residents and tourists to appreciate the Poughkeepsie waterfront anew.

The area of Waryas Park that would be returned to a wetland would displace the more conventional parkland to exist on a higher level, above the current park and bridging (both literally and metaphoerically) the gap between the city and the waterfront.

Fall Kill Estuary Native Plantings

Freshwater Tidal Marsh

- Heteranthera reniformis*
- Iris versicolor*
- Leersia oryzoides*
- Nuphar advena*
- Polygonum hydropiperoides*
- Sagittaria subulata*
- Scirpus americanus*/*Schoenoplectus americanus*
- Peltandra virginica* S+
- Pontederia cordata* S+
- Sagittaria latifolia* S+
- Impatiens capensis* S+
- Typha angustifolia* S+
- Zizania aquatica* S+

Additions as salinity increases -> Brackish Tidal Marsh

- Hibiscus moscheutos*
- Bolboschoenus fluviatilis*
- Bolboschoenus novae-angliae*
- Bolboschoenus robustus*
- Solidago sempervirens*
- Nuphar advena* ssp.
- Peltandra virginica*
- Pilea* sp.
- Schoenoplastus americanus*
- S. Tabernaemontani*
- Thelypteris palustris* var. *pubesens*

Freshwater Mudflats

- Heteranthera reniformis*
- Orontium aquaticum*
- Sagittaria graminea*
- Sagittaria rigida*
- Sagittaria monteridensis* ssp. *Spongiosa* S+
- Sagittaria subulate* S+

Additions as salinity increases -> Brackish Mudflats

- Scirpus americana*
- Ceratophyllum demarsum*
- Filamentous algae
- Green algae
- Limosella australis*
- Potamogeton crispus*
- Vallisneria americana*
- Zannichellia palustris*



The creation of freshwater tidal marshes and a larger estuary system at Waryas park would be a boon for birds reliant on this habitat that are native to the area, such as the Least Bittern (right) or Green Heron (seen in Fall Kill tidal area before).



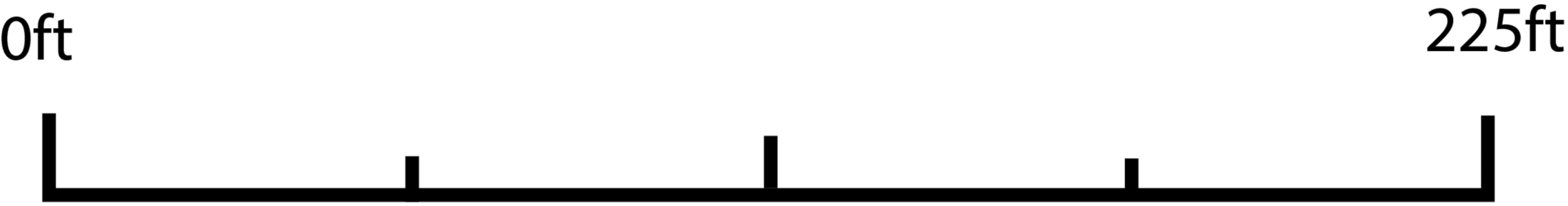
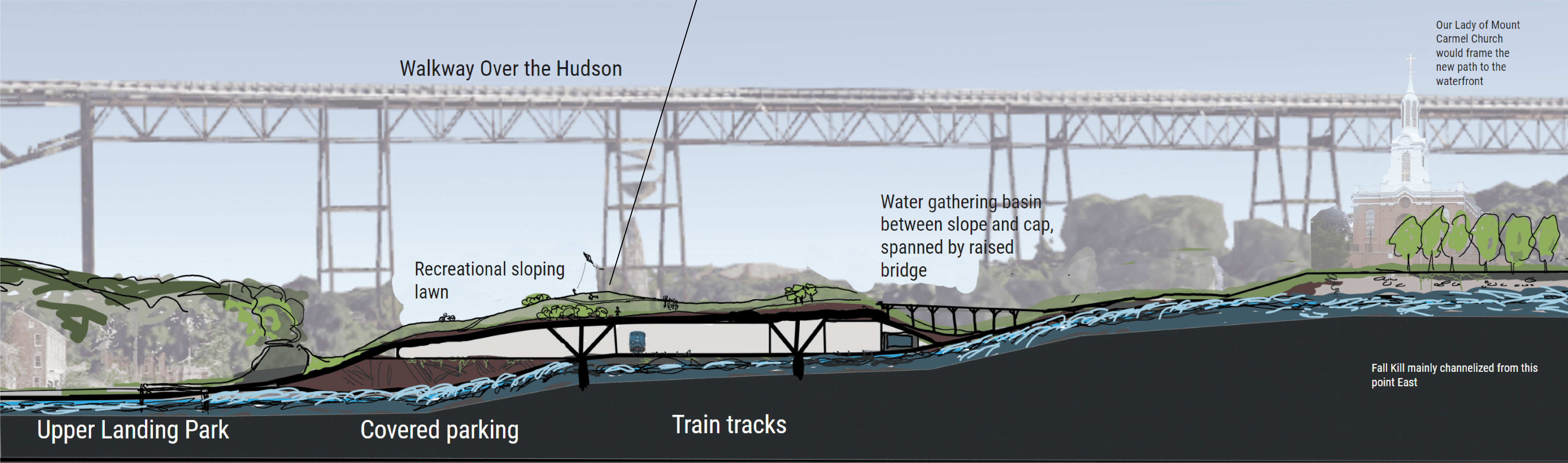
Fall Kill Cap

(Bridges Upper Landing Park to Mill Street as well as new bike lane in place of Route 9)

An important aspect of engaging the waterfront would be the accessibility through the ‘caps’ over the sunken railway, combined with the rerouting of part of Route 9. These two features would mean that there is no more physical barrier to people walking to and from the waterfront from downtown Poughkeepsie, and opens up many new recreational options. The section below shows a cut along the re-exposed Fall Kill facing North. Notice how trains can continue uninterrupted as activities happen on top. This also opens up a way for bikers/pedestrians to head to the base of Walkway Over the Hudson in the case of the elevators not working(!).



The Fall Kill Cap would allow bikers or those renting bikes to easily cross from the Upper Landing area or nearby One Dutchess to get to the Falls, or other parks more inland.





2080s

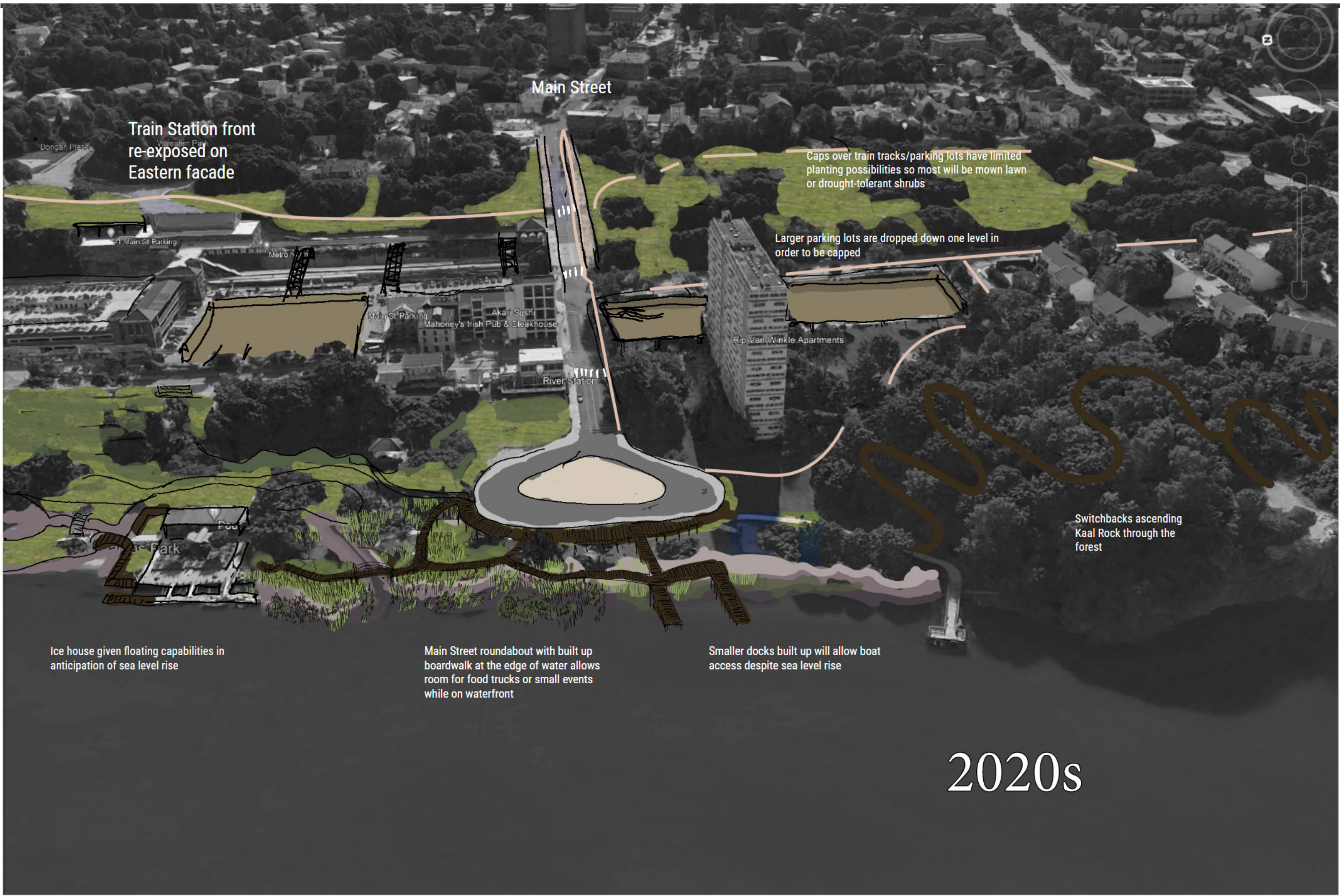


2050s



Main Street Green and Waterfront Plaza

An example of a switchback through the woods at Kaal Rock. The plantings around the boardwalk would help diversify existing ecology as well as leaving the cliff face exposed to the water. Areas of the ground that are too steep would be built out as raised walkways to help ease the slope as much as possible, while also providing an informal overlook to the surroundings.

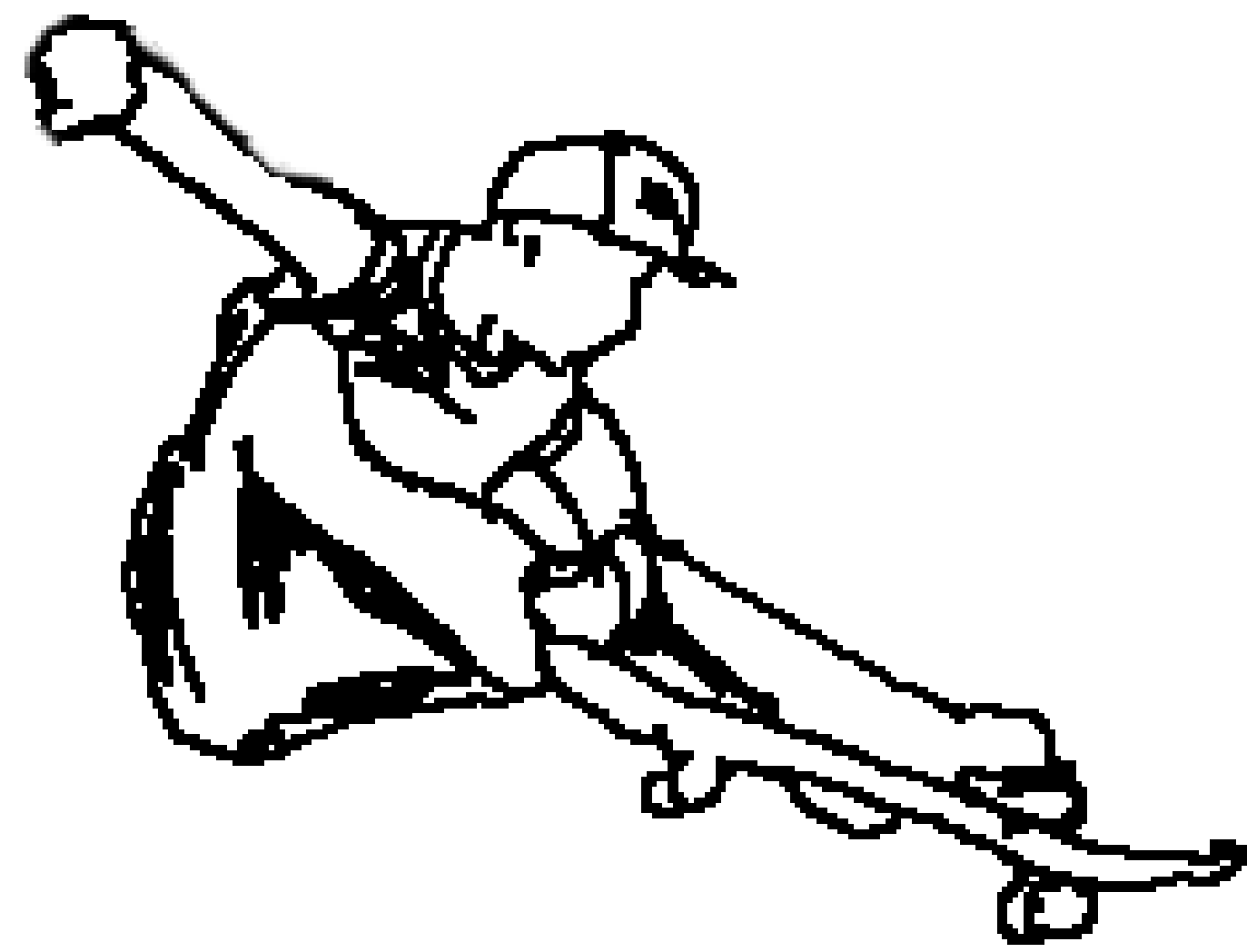


2020s

As the sea level rises and encroaches on the Main Street turnaround, activities such as canoeing and kayaking will become the main activities in the area.

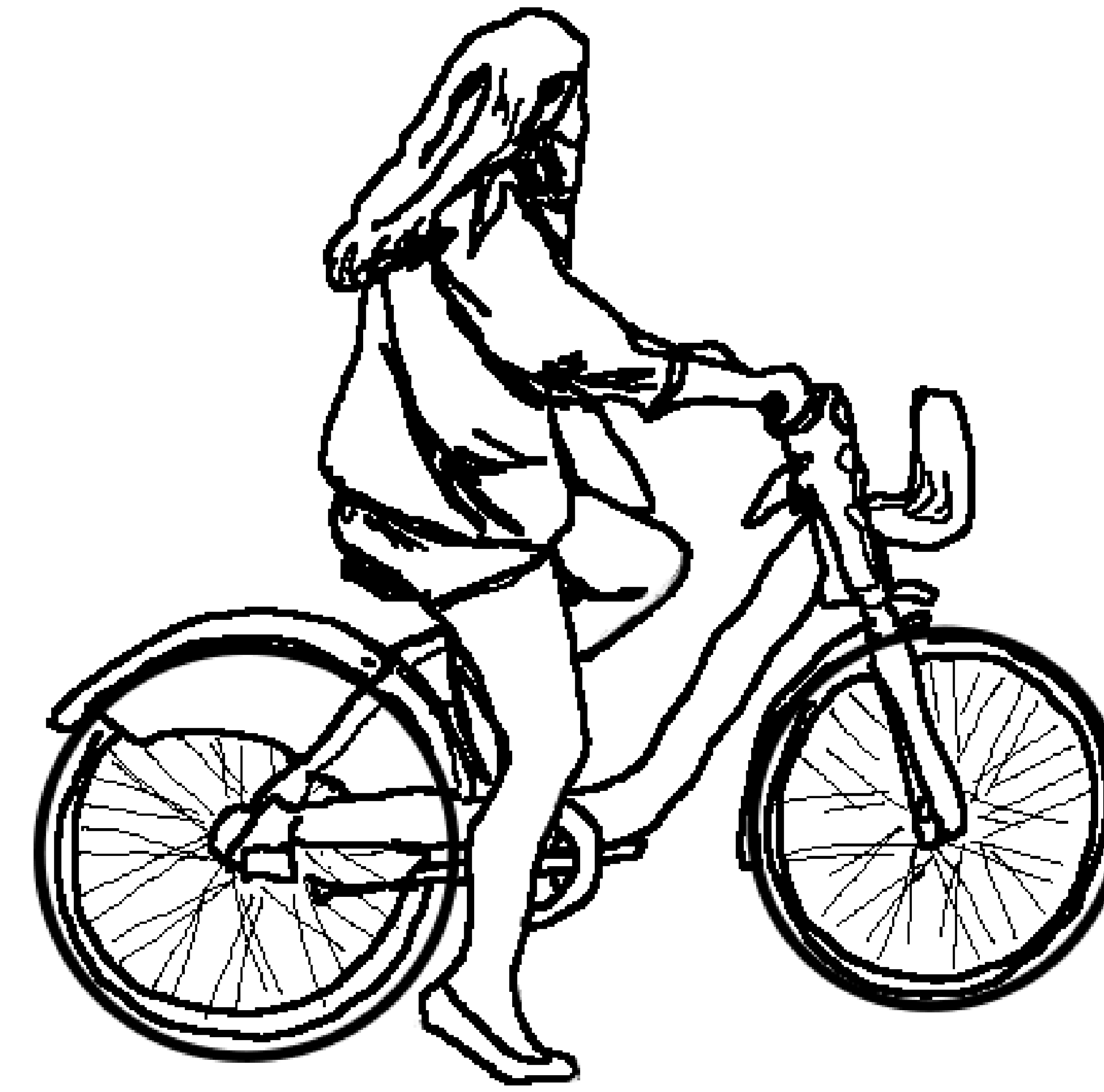
The new docks would allow for visitors from the water, as well as an area to tether the Ice House when it begins to float, all while allowing regular pedestrians access.





Several popular sports would take a new and central stage in downtown Poughkeepsie, increasing the capacity to host larger competitive or recreational events both within the city and in the larger region.

Casual bike borrowing services would compliment the designated bike paths to facilitate those going to and from the waterfront, as well as for tourists who may have casually taken the train into town. (right)

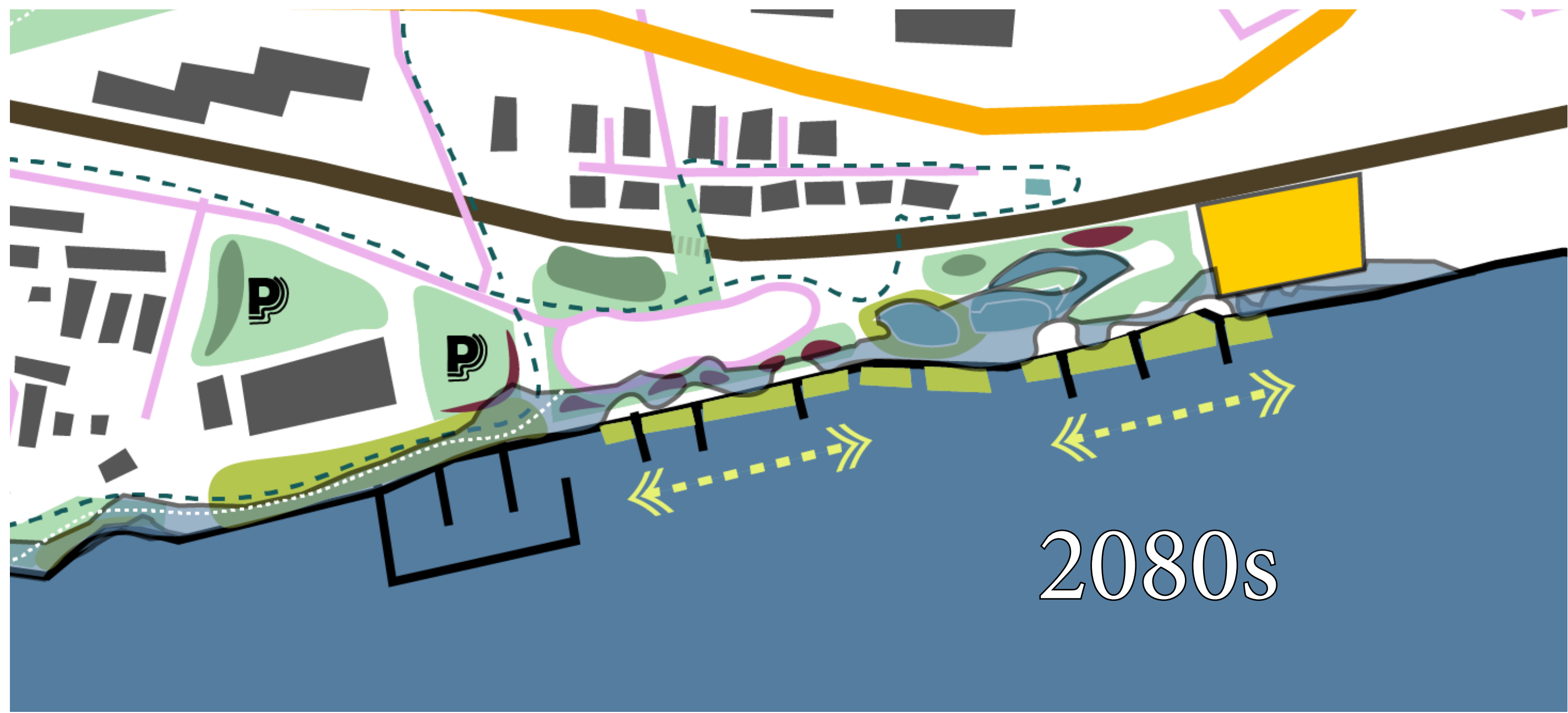


A professional-sized soccer field would be placed in the area where Route 9 formerly was. Stadium seating would allow for games to be easily accessible to people from Main Street. Covered parking would be included in the area to allow access for those coming from farther away.

New skate park next to Mid-Hudson Bridge near new cap. Larger, better facilities allow spectators for competitive AND casual street skating, putting this place on the map for large-scale skating events

View West from Main Street with Route 9 removed

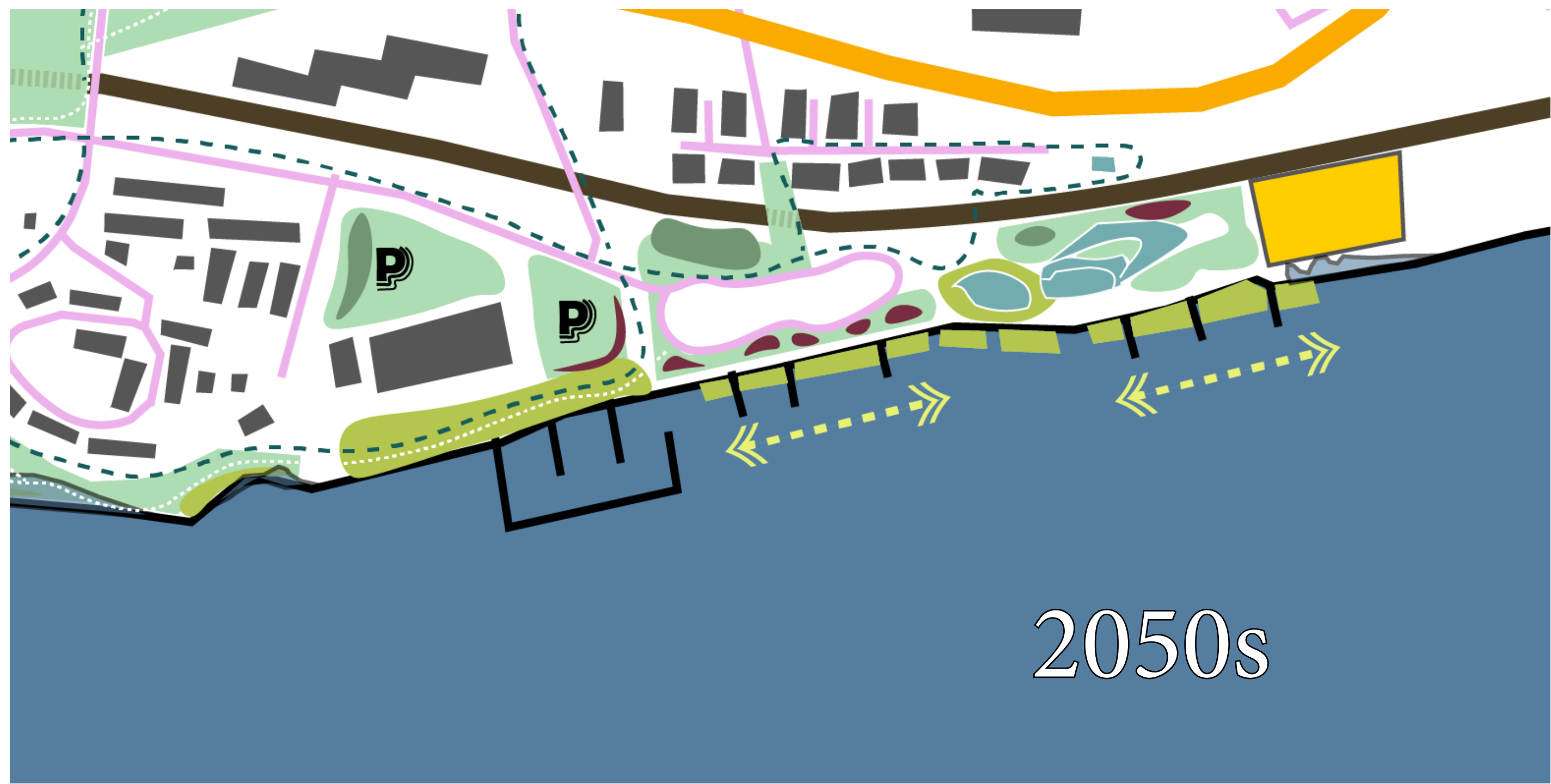




Cap Remediations and Interventions:

Contaminated area capped another 2', any soil rounded up and moved to contained raised planters with benches around edge. Plants would consist of types beneficial to phytoremediation in soil areas (sunflower, mustard, etc) and grasses/cliff plants for cliff 'face'. Floating wetlands between the deepwater docks and the 'cliff faces' to provide habitat for fish. Natural pool near tunnel where CSO (remediated) was. Turns into skating rink in winter. Modular market stalls that can be moved as needed for seasonal use. Overpass connecting 'gated' community to area. Dance plaza in area closest to the entrance with seating around made of recycled concrete.

Recycled concrete pieces stacked and secured with coco coir to allow for vegetation to attach
Interior space - gallery, residential



Delaval Plaza and Deepwater Docks

