

ABSTRACT

CREATIVE PROJECT: A Regenerative Ice Energy Education Park on A

Post-Industrial Site

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This project reclaims the local rich history of ice harvesting as a heritage event and utilizes the existing relic storage infrastructure of fuel tanks and slag, which are both abundant resources. The reintroduced ice industry provides multifaceted and integrated benefits for the region including cooling energy, water purification, cultural heritage, recreation and wellness, community connection, and economic resilience. The regenerative seasonal cooling system removes polluted ice from the nearby lake in addition to collecting stormwater runoff from the community for on-site ice harvesting. The ice bounty is transported to the ice fuel storage plant, employing an adaptive reuse strategy for existing derelict fuel tanks and slag. The ice storage provides much needed cooling benefits for the site and the local community. As the ice melts, the water combined with community and site runoff will be purified in a series of surface wetlands on the site. Part of the purified water supports on-site consumption, such as community food production, entertainment

and ice production. The rest of the water eventually returns to the original lake.

Thus the whole system achieves self- sufficiency while incrementally improving the overall water quality. Thus, a strategy of introducing a regenerative seasonal cooling system to drive ecological reclamation and education, entertainment and production development is established. Taking

the site as a prototype, this strategy has the flexibility to be applied into communities and larger urban fabric in areas challenged by similar climates.

Through implementing the seasonal ice cooling system on vacant lots, those abandoned lands will be transformed into district cooling generators, distributing needed cooling and water resources to benefit local community entertainment, production and education systems.