# DYLAN GAUTHIER
# KENDRA SULLIVAN

## 2017

UPenn, November 10, 2017

http://www.thefreeseas.org
dylan@floatingcity.us
ksullivan@gc.cuny.edu

“How to live in a world that we cannot help but transform?”
Jedediah Purdy, *After Nature* (2015)

How to depict a world that is transformed through its depiction?

“One place understood helps us understand all other places better” ~ Eudora Welty

collaborative
process-based
open-ended
participatory

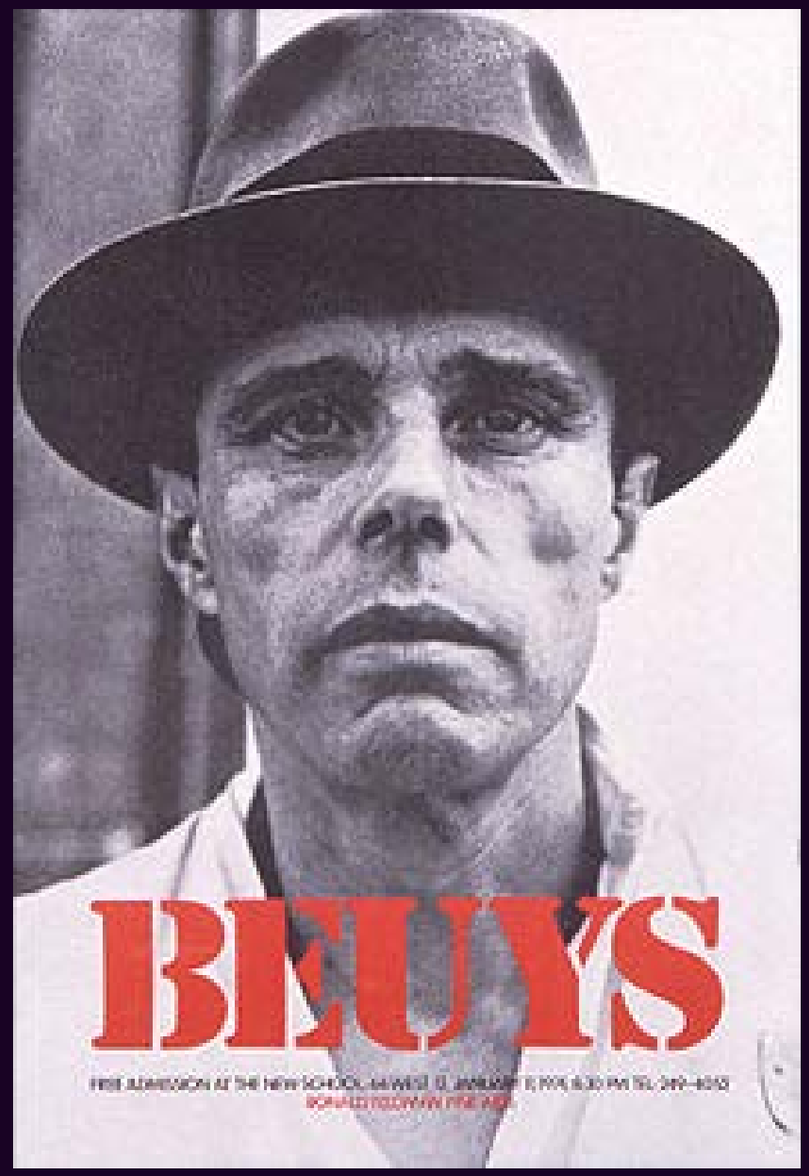
1. water as a connective tissue and a pathway

2. a communications medium and a commons

3. constructed; post-natural and emergent places

sculpture as a catalyst for social change

“social sculpture”



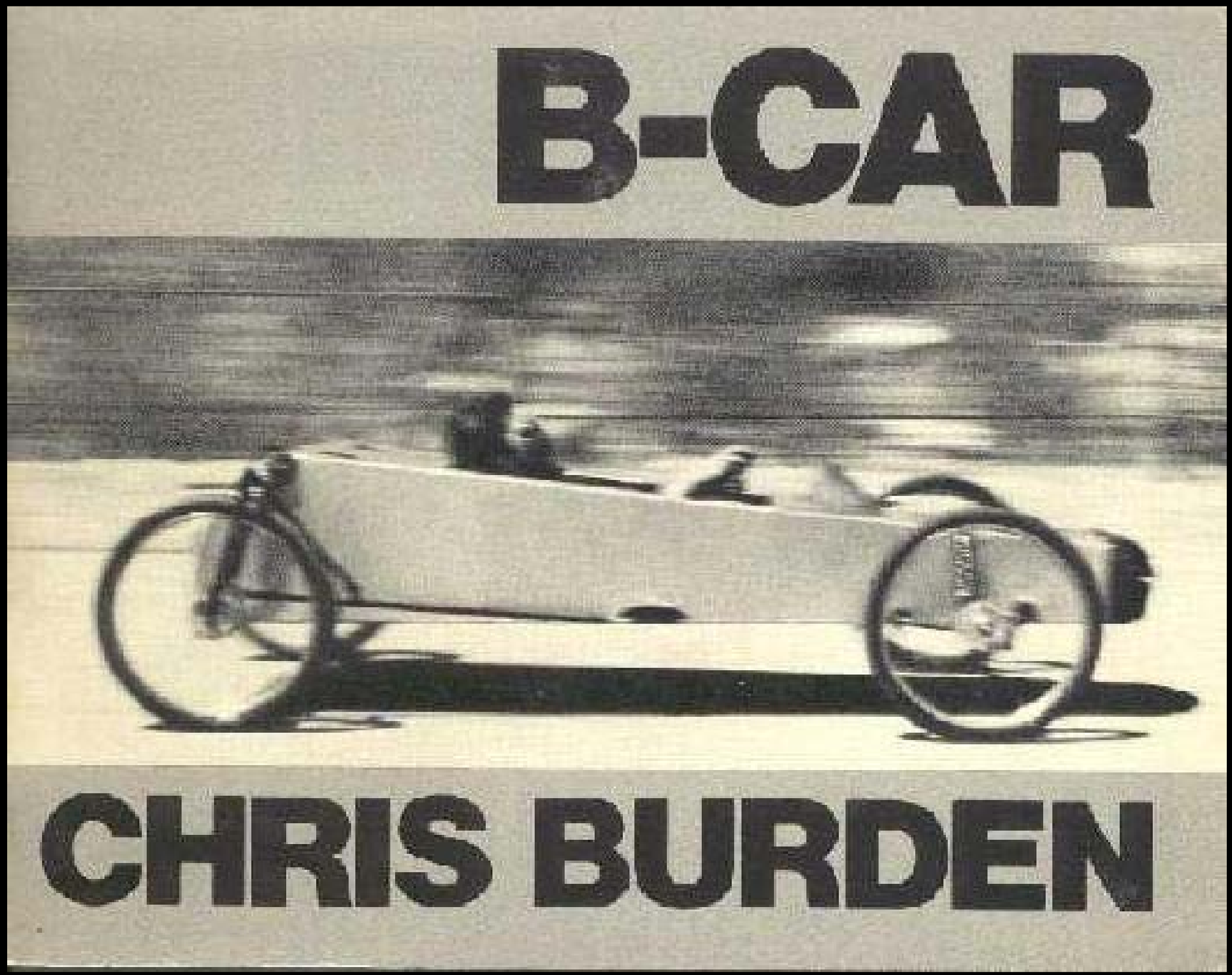

‘A SOCIAL ORGANISM AS A WORK OF ART’ ~ Joseph Beuys, 1973



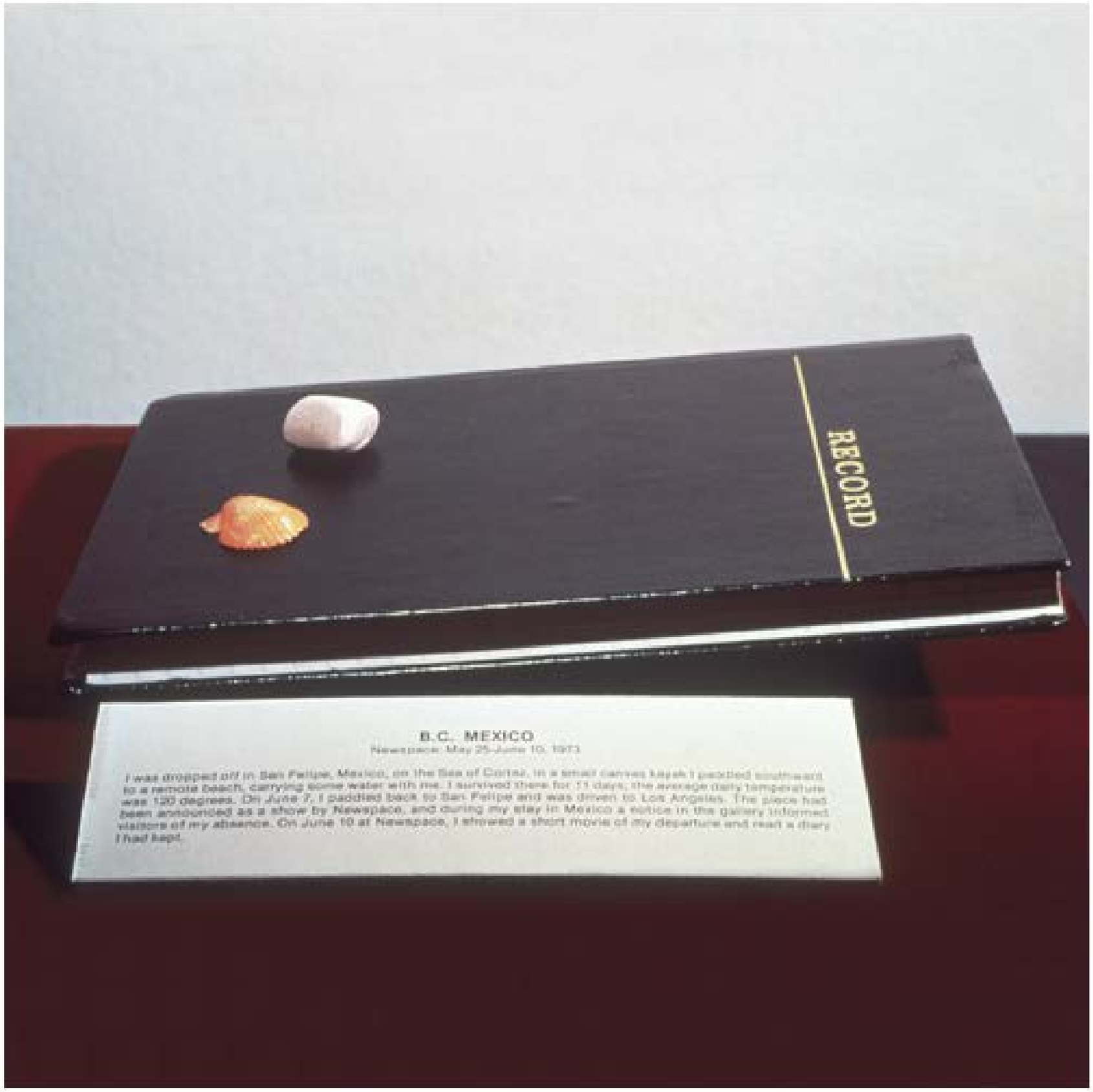
documenta 7 1982 Kassel Joseph Beuys – 7000 Eichen



Robert Smithson, *Spiral Jetty,* 1970

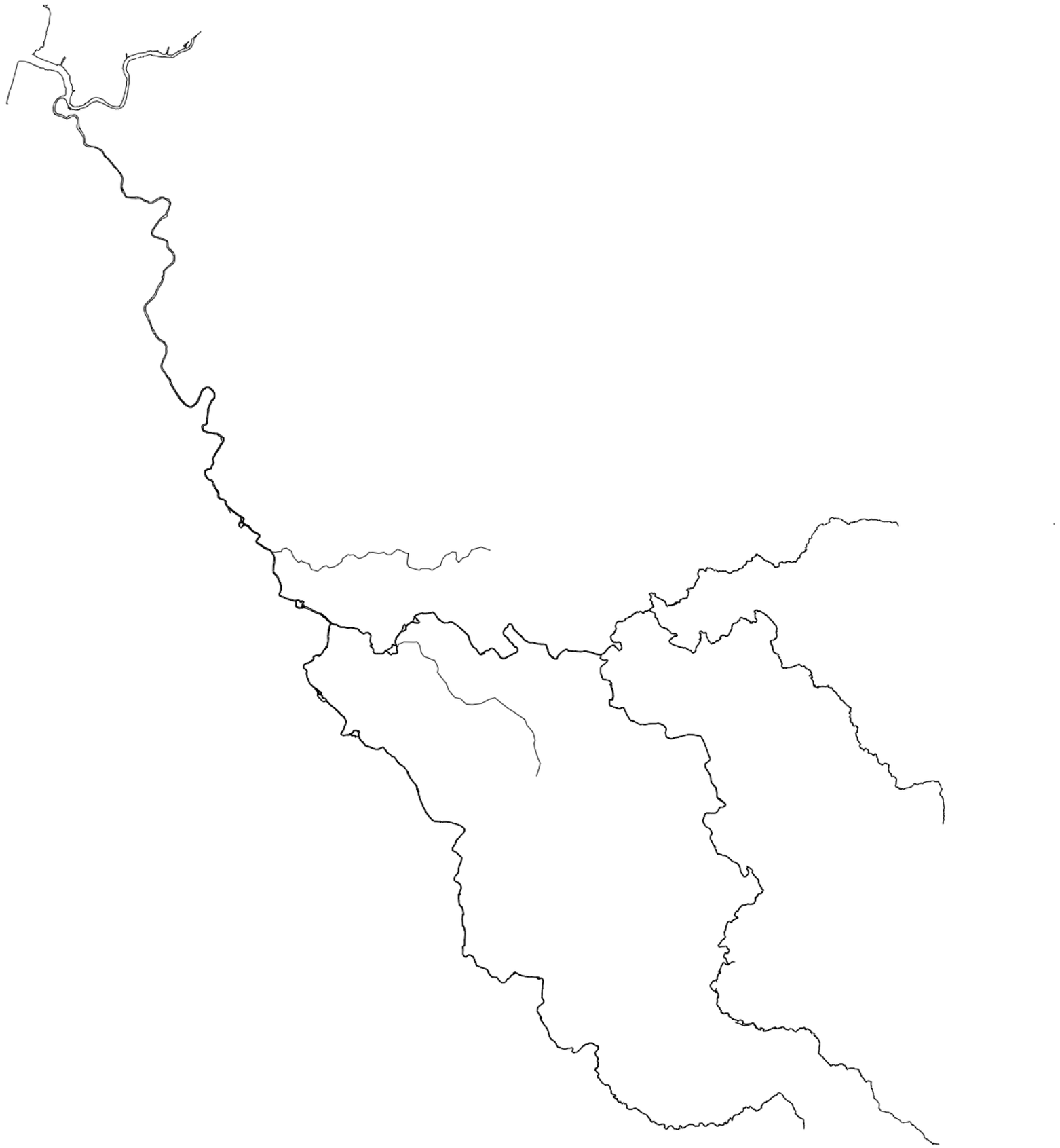



Chris Burden, *B-Car,* 1977






Chris Burden, *B.C. Mexico,* 1973



# BACKGROUND



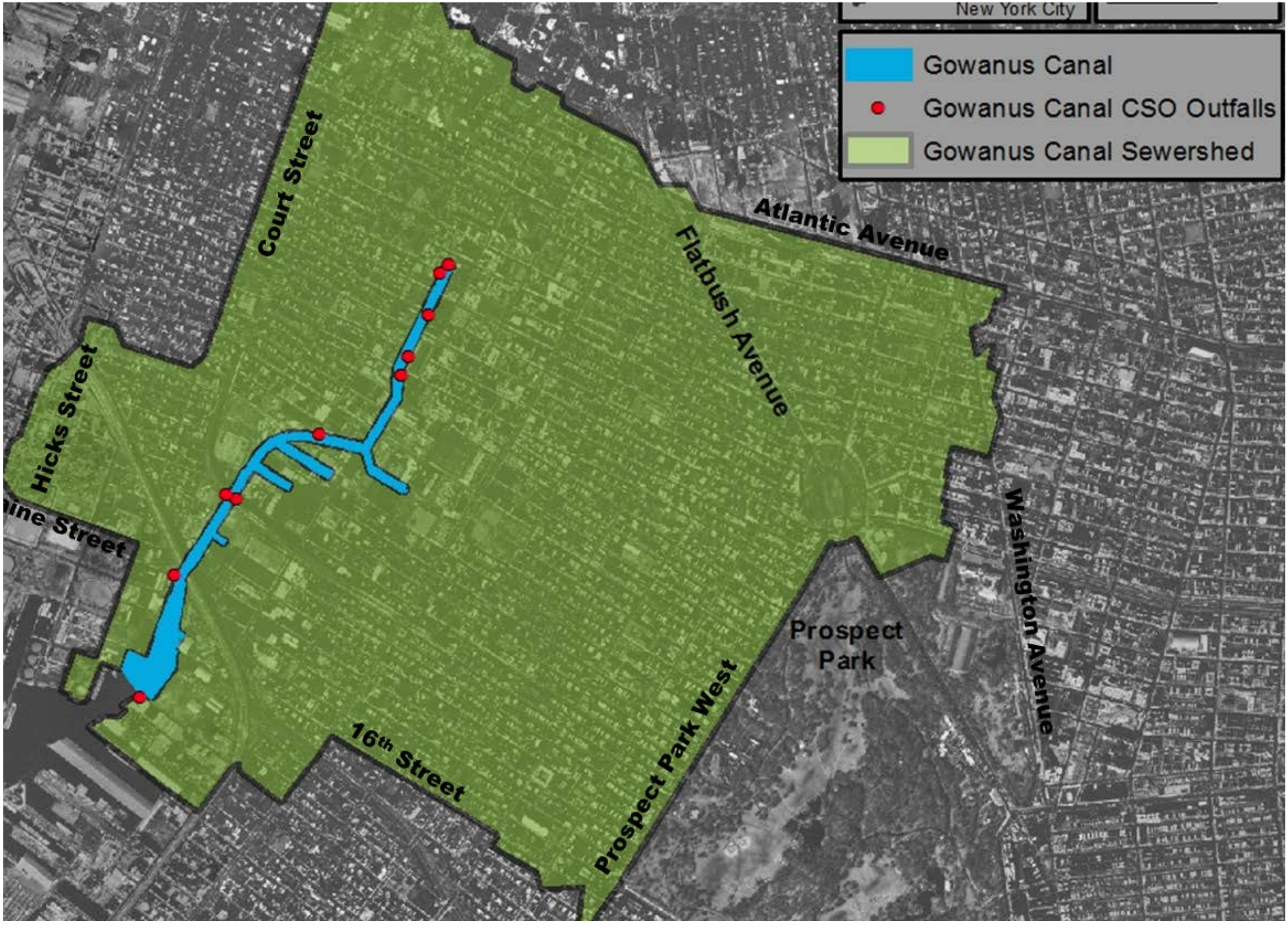
mare liberum

2007-

http://www.thefreeseas.org

“The beautiful city, the city of hurried and sparkling waters! The city of spires and masts! The city nested in bays! My city!”

- Walt Whitman, Leaves of Grass




Map: S. Stempel

Brooklyn’s “Lavender Lake” - The Gowanus Canal Sewershed


PARA REPORTAR
CONDICIONES
PELIGROSAS EN
UN SITIO DE TRABAJO
LLAME AL 311
NO TIENE QUE
DAR SU NOMBRE
TO
ANONYMOUSLY
REPORT UNSAFE
CONDITIONS AT
THIS WORK SITE
CALL 311


Elizabeth Weinberg Photography



Elizabeth Weinberg Photography


Elizabeth Weinberg Photography



Elizabeth Weinberg Photography




NEVA



Mare Liberum with Marie Lorenz and Flux Factory at the Tugboat Graveyard, 2011



Mare Liberum with Marie Lorenz and Flux Factory at the Tugboat Graveyard, 2011

# LIBERUM KAYAK

By Stephan von Muehlen, Benjamin Cohen, and Dylan Gauthier
A project of Mare Liberum.

## Build This Kayak with Bamboo and Cable Ties.

The Free Seas / Mare Liberum is a free form publishing, boatbuilding and waterfront art collective, based in the Gowanus, Brooklyn.

Finding its roots in centuries-old stories of urban water squatters and haphazard water craft builders, Mare Liberum is a collaborative exploration of what it takes to make viable aquatic craft as an alternative to life on land. The project draws from sources as diverse as ocean-crossing raft assemblages, improvised refugee

Our latest project brings together classic stretched canvas kayak and canoe skinning with a plywood, bamboo, and cable-tie hybrid framework with the goal of making quick and durable kayaks to get you out on the water with the minimum investment in tools and space.

Refer to the Bill of Materials for a complete list of everything you will need to build a Liberum Kayak. You will also want to download the .pdf file for the Liberum Kayak from the

## 2. Cut the pieces to length.

Pair your pieces of bamboo to the parts list in the Bill of Materials. Make sure that the piece for the keel is nice and straight, and the top- sheer- and bottom-stringers are matched to be about the same diameter and straightness. This will result in a fair and true kayak. Begin cutting the pieces to length, starting with the stronger parts, the keel, and then the bow- and aft-deck.



# *Script for an unfinished video about the Charles River*



## 1.

A river is a slope toward the ocean or the harbor. A current trying to find the tide. You wouldn't know all of this from here. You can only see the shapes of this, shapes of things, shadows described by grimy sort of jagged pixels that hurt your eyes to look at for too long.

Not far from here Thoreau bought the small cabin, sending the people who had been living there on their way. Did he build it or buy it? Bought it and unbuilt it. Then rebuilt it again. He pulled out the nails, took it apart, log by log or plank by plank, and carried it like that, piece-meal, to Walden. The workman he had hired to help him jerk behind the sleds. He dressed true. But never mind he knew anyway and never mind all that now the nails were bound the cabin was rebuilt or put back together in a way it couldn't have been before, as a publication. It is about the cabin more than the pond. It's still there, whether he built it or not.

The map is a publication. Like a telephone book it must be updated to continue to accurately



depict the multitudes contained therein. There are bridges. Looking out into these thicknesses there's thickets where things should be open. What things could be wilderness? What is that thing's icon? How can you mark its edge? What is this about? Is it about a place? Look down — where is this? I think I recognize — yes. Is this the place you were thinking of? Yes it is a part of the place I was thinking of.

There are many small lakes like Walden Pond here. Or anywhere.

Walden Pond is a lake in Concord, Massachusetts in These United States. A humour example of a kettle hole. Walden Pond lake was formed by retreating glaciers etc. It's zero-zero-zero-zero

12-zero-zero-zero years ago.

This is a place. This isn't a place. It is a telling of a place by and in things. These are things that tell of a place. It is this telling of a place now.

Word communicate with the city by barge. To communicate used to mean to trade. To travel. Communications were things you did in barges, or boats, or on a horse's back, or then a bike, a car, or even walking: place to place. This was before they broke the river up with locks and dams. Before communication became something you didn't have to travel for. But also back then the river could ruin amok, flood, fuck, who knows what it could, become a-more-than-a-river if you turned your back so you'd better watch it. Everything was less stable then since there were less people around to scotch it. Mud flats in the harbor became a creek that spread with a given season, became a delta, became a flood. Mud flats everywhere were things you could sink in. A mile wide mud flat, reluant on the tide to cover it over now and then. If anyone called it a river down there they were trying to sell you land. Now its always a river. Concrete holds it in place. For how long?

The Charles River Dam was built in 1908. I've never seen a river less in need of being subdued. It was mostly a mud flat and then a seasonal torrent. Now the river is sometimes more like a chain of puddles, sometimes a torrent, but always under control.

Do we have to write this all down? Why are these things telling about the place not fully-formed things? Why don't they really tell about the place? What is it out here?

Thoreau met peasant-farmers in the fields around Walden, and wrote:

"Look at their fields, and imagine what they might write, if ever they should put pen to paper." He wrote: "Or what have they not written on the face of the earth already, clearing, and burning, and scratching, and harrowing, and ploughing, and subsoiling, in and in, and out and out, and over and over, again and again, erasing what they had already written for want of parchment."

## 2.

We have a farm along the edge of this river. Dogs, hens, whatever, cows, somethings. I don't know. In the dry season we send the Amm boys down to pull up the trap doors, to bring the water in from the river. All the farmers have their own trap doors to the river. And the other way. It comes out. It goes back. Back into the river. At the end of a season we drain the field we find fish in it. Laid up and dried out. Always one eye to the sky. Half buried by the earth, half scorched by the sun. Farmers, too, sometimes drowned and are found in a field, dried out, sun scorched, always face down. The river has always been a way of counting the dead. The river is full of dead things. Everything else moves through it. The dead things don't.

We have a farm along the river. We communicate - I mean trade, with the river, along the river or along the river. We feed it it feed us. The small corred boats would ply along through the river when the water was high enough. Shallops, punts, dories, canoes, barges, tubs, all kinds. "The canoes are pulled along by sticks or paddles - native americans not having oars of which to speak but rather, long pointed sticks." Or so I've heard. Or so I've read.



## 3.

The vessel's wooden frames are drawn like ribs on a wooden keel and planked with fitted wood-en boards and then nailed where the boards meet the ribs.

Mushaun-wonnuk meant canoe-place.

The paper is cut into strips and soaked in waterproof glue. The strips are laid cross-wise along the body of the mould. The boat takes shape like that, a thin wafer of paper becoming thick and rigid in time. There are no boards. No nails either.

## 4.

Are these the clouds of the cloud? Recently in a cloud center a cloud formed and rained a storm down on the cloud-servers for over an hour.

Boston's "Ice King", Frederic Tudor, harvested ice yearly on Walden Pond for export to the Caribbean, Europe, and India. The ice was cut in blocks the size of train cars and sometimes floated down the river when it wasn't frozen over. Why India? Shipping ice over the sea?

At one point there was an amusement park built at the western end of the pond, but it burned down in 1902 and was never rebuilt.

## 5.

From up here it's hard to tell how the whole thing works out. I read that it's 80 miles by the river or 30 as the crow flies. It will take 3 or 4 days to traverse it in its entirety. Through millrid flats and scrub ponds and shallows. Beneath low bridges. Carried around dams. And then? This is an account of the river in pixels. In approximations. In the limitation "millions of colors" "billions of colors" "trillions of colors" – as many colors as you need. It's not half bad. You can see the general curve, maybe guess at an incline. Alpha values. Each tile is loaded up only just as it becomes needed. You must economize your time in the cloud. It is not cheap to be up here. Rocks show through the surface of the river below.

## 6.

In 1639 a brook was built to divert water from the Charles to power mills on what was then called the East Brook.

The brook is a quiet, forgotten backwater (in some cases, even hidden - it runs in a culvert under the parking lot for the Pizzeria Uno in Dedham).

Echoes of the mills remain (Saw Mill Lane and Stone Mill Drive, which cross the brook). Centennial Dam now sits beside an apartment complex built out of a former mill on Stone Mill Drive.

The trees all clump together into some sort of treeness. The water... is it shallow? Is it water? Is it dried out? Give me a second and I'll look up



the weather. When are these images from? This is a memory of the river. Made for passing by. Odd that the whole of it was made in a single take. When was that moment, when all was memorized? Is this the new-river or something else – older-river? It is hard to navigate from here. You can't navigate a moment anyway. I'm trying to find my way through the cloud into the wilderness. Where is the dark matter we know exists? Are there any missing masses if you stop stopping to explain? Where is the way through the quote-unquote known to the still quote-un-quote unknowable?

Can we click off the known layer and find ourselves only in the real thing? Even a simulation of the real thing would be better than this. We are training our eyes not to see beyond that which we know, that which has been written. As if there was nothing else but that which had been written.

## 7.

Quinobequin was its given name. Meaning meandering. Or so it was thought. In 1830 someone else thought not.

Smith named it after the tribe for whom the state was also named. Offered it up to the King who thought to name it for his son.

The name of the river was Quinobequin, meaning circular. The explorer, Captain John Smith, renamed it the Charles in honor of the young son of King James.

View pictures for 224 Quinobequin Rd, a 5 bed, 2.5 bath, 3,880 sqft home that recently sold for $895,000. Custom built residence w/3080 sq ft of living.

They called the river Charles, that laves the farm. " Quinobequin," meaning in the language of the paleface, " Winding Water."

Lily would not under any circumstances be lonely here, but there are farmer neighbors not far away and nearer yet are songbirds and game.

Jack and Jill may have to compete with a wealthy neighbor, who perhaps is farming for pleasure, for style, or for some other motive pretty difficult to find out. Nearby they may have as competitors a Jack and Jill who are poor but terribly in earnest; - people who are farming for a living, who must work or be hungry and cold. Jack's second rival is harder to meet than the first.

Quonnebequi applied to long stretches of still water, as the same name with dialectic modifi-cation applied to portions of the Kennebec. Another Indian name, Nonombegat, is mentioned by Alimco, Thevet, and Ogilby, which defined or described the place too.

From Mushaum – canoe – the m was dropped for ease of utterance; om was exclusive; uk (ock) was place; e (or ee) may be euphonic.

So, the place where the canoe was kept - the ferry landing - was MUSHAU-WOMUK.

Another name was recognized by the Jesuit missionary among the Abnakis. It is given in his Abnaki Dictionary under the heading Nonis.

If we assign to the name given by the Jesuit missionary, we find familiar forms under dialectic variation.

Aben is the same as wan or mis or mus, great

al-nan is aldchu, waldchu, hill
set is sic, sicc, or saugus, mouth.

The combination, according to the Jesuit mis-

sionary, was Great-Hills-Mouth, referring to the mouth of the Charles and contrasting it with the mouths of Naponsett, Weymouth, and the other lesser streams emptying into the Harbor.

The combination which is said to have been applied, and properly, to the country about the



Blue Hills of Milton, was also properly employed in the Bay. It is the bay of the Great-Hills-Mouth, or the bay at the mouth of the Charles.

This name was another way of calling the site, not of the neck or the head of the cove, but of the mouth of the river emptying into the bay, near this point.

But there was still another name. It occurs in Ogilby's "America," and in some respects is the most interesting of all, from its possible imme-

diate connection with the final adoption of the English name.

Ogilby seems not to have heard of Shawmut or Shawmut, or Mushauwomuk or Massachusetts, as Indian names go, it is not difficult to analyze these names

It is the same as the Abnaki name, Agamenticus.

Accom (or Ogkomo) means beyond.

Mon (or mun, or mon, or mim), means elevation, or abrupt rising from water or a plain.

tuc (or tick) means tidal river, or cove.

ce (or set) means little.
Accomenticus means Beyond-the-hill-little-cove.

This would be the descriptive term employed by one standing on the site of the Charlestown Navy Yard, and describing the head of the ancient cove reaching up to the east side of the mill-pond of earlier times and of the present Haymarket Square. To him it would be the "Beyond-the-hill-little-cove."

So it would if he stood at old Fort Washington, south of West Boston Bridge, looking across the ridge traversed by Leverett Street.

So it would if he were at Brookline or Roxbury, looking over Beacon Hill, or if he were at South Boston or Dorchester, looking over the ancient Fort Hill.

From all these points the Sha-um or Mushau-womuk would be at or near the Beyond-the-hill-little-cove.

## 8.

[Two Ferries]

The first ferry (historical), opened in 1630, operated by various private individuals under colonial sanction, then Harvard College in 1640. Obsolesced by Charles River Bridge, at same location.

The second ferry (historical), opened in 1635 at the foot of Dunster Street in Cambridge, at canal/creek. Obsolesced by Great Bridge, at same location.

How can a river have so little of a story? Did you search for the boat houses? What happened there?

I want to find my way through these trees into the real trees. There is no touch here, no smell, no sound. I don't want to be carried across. The blur between points approximating my movements. We are frozen in approximation. No maples full of glee and sap, holding in their buds until the waters subside. What I am putting forth in this film is that there is no difference. That the inside, littered with content as it were, is no different now than the outside. Where did you get this from? I've cleared the cache. I deleted the bookmark. I don't want to know. Why bother now with attribution? The space we're working in gives a different reading.

Someone once wrote of photography: "It has fixed the most fleeting of our illusions, that which the sportsman and the philosopher and the poet have alike used as the type of instability and unreality. The photograph has completed the triumph, by making a sheet of paper reflect images like a mirror and hold them as a picture."

## 9.

Thinking of a different river. Thoreau writes: "It is worth the while to make a voyage up this stream, if you go no farther than Sudbury, only to see how much country there is in the rear of its great hills, and a hundred brooks, and farm-houses, and barns, and haystacks, you never saw before, and men everywhere, Sudbury, that is Southborough men, and Wayland, and Nine-Acre-Corner men, and Round Rock, where four towns bound on a rock in the river, Lincoln, Wayland, Sudbury, Concord. Many waves are there agitated by the wind, keeping nature fresh, the spray blowing in your face, reeds and rushes waving, ducks by the hundred, all uneasy in



the air, in the raw wind, just ready to rise, and now going off with a clatter and a whistling like riggers straight for Labrador, flying against the still gale with reefed wings, or else circling round first, with all their paddles briskly mov-

ing, just over the nurt, to reconnoitre you before they leave these parts; gulls wheeling overhead, muskrats swimming for dear life, wet and cold, with no fire to warm them by that you knew of; their labored homes rising here and there like haystacks, and countless mice and moles and winged remnes along the sunny windy shore; cranberries tossed on the waves and heaving up on the beach, their little red skiffs boating about among the alders—such healthy natural tumult as proves the last day is not yet at hand. And there stand all around the alders, and birches, and oaks, and maples full of glee and sap, holding in their buds until the waters subside."

## 10.

To be safe for swimming, water must have less than 126 colony forming units of E. Coli per 100 milliliters of water.

The overall EPA grade for the last 10 miles of the river is calculated from a composite of daily forecasts and monthly readings.

Oysters have been used to filter and clean Charles River water.

Readings are taken monthly. Forecasts are made daily based on the monthly readings. Grades are assigned based on averaging the forecasts with the monthly readings.

For the last few years the grade has hovered around B or B+, which many say is the best we can hope to get.

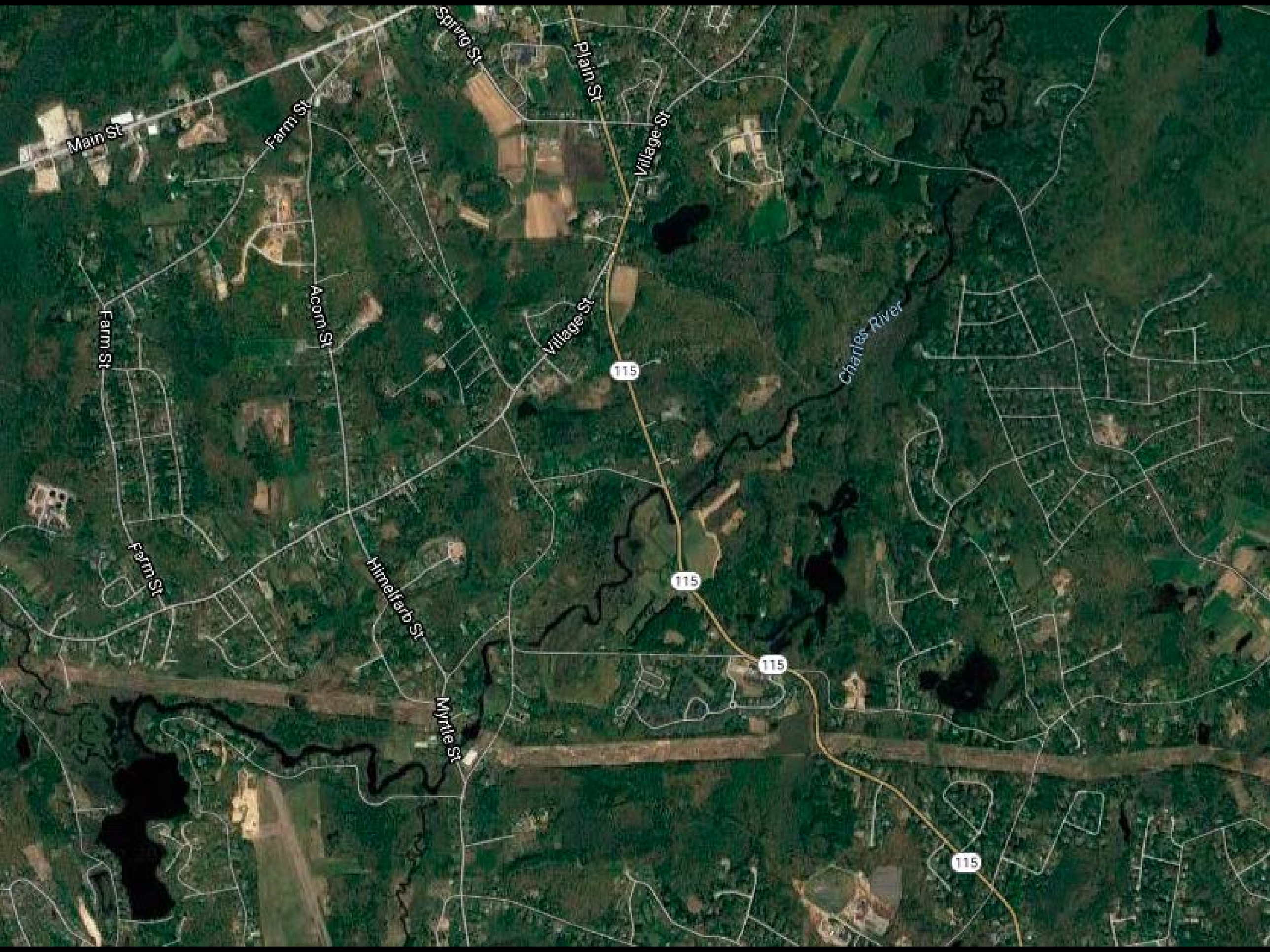
Swimming without a permit is punishable by a $250 fine. Earlier this year, a permit was issued for a public swim for the first time in 50 years.

Swimming events are held in deep water with swimmers jumping off a dock to avoid the toxic sediments on the bottom of the river that still make beach swimming dangerous. Sludge from factories. Residues of industry. One must avoid the mud at all costs.

## 11.

[I want to find my way through this approximate landscape into trees, into the real trees. There is no touch here, no smell, no sound. We are frozen in approximation. No maples full of glee and sap, holding in their buds until the waters subside. What I am putting forth in this film is that there is no difference. That the inside, littered with content as it were, is no different now than the outside. Where did you get this from? I've cleared the cache. I deleted the bookmark. I don't want to know. Why bother now with attribution? The space we're working in gives a different reading.]

*"My idea was to immerse myself in this maelstrom of images to establish its Geography."*
*— Chris Marker, Immemory*


Spring St
Plain St
Main St
Farm St
Village St
Village St
Acorn St
Charles River
115
Farm St
Himelfarb St
Myrtle St
115
115
115


161 Myrtle St
Millis, Massachusetts
Street View - Sep 2013
Myrtle St
River Rd
Dean St
Google





# SEA CHANGE PORTS OF CALL

August 30 – September 14, 2014

160 Miles in Human Powered Vessels in 2 Weeks

A Climate Justice Flotilla

A fleet of full-scale paper boats is going aflost on the Hudson River, charting a course from upstate New York to New York City in a convergence of art and activism to coincide with the meeting of world leaders at the United Nations Climate Summit.





ALBANY

SATURDAY, AUGUST

« 6PM »

Waterfront Don't be Cruel Photo-shoot, potluck and community forum to stop the vertical pipe line of crude oil and gas

CATSKILL

MONDAY, SEPTEMBER 1

« 7-10PM »

Publication Studio, Hudson

Fish soup dinner, communal dinnertime bookmaking and screening of "The River Twice" – Meryl O'Connor, Cecily Anderson, Publication Studio Hudson

TUESDAY,

« 5-9PM »

NEWBURGH – BEACON

SUNDAY, SEPTEMBER 7

# SEA CHANGE

# PORTS OF CALL

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A Climate Justice Flotilla

A fleet of full-scale paper boats is going afloat on the Hudson River, charting a course from upstate New York to New York City in a convergence of art and activism to coincide with the meeting of world leaders at the United Nations Climate Summit.





ALBANY
SATURDAY, AUGUST 30
« 6PM »

Waterfront
Don't be Crude! Photo-stunt, potlatch and community forum to stop the "virtual pipeline" of crude oil and gas



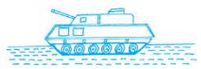
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MONDAY, SEPTEMBER 1
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Publication Studio, Hudson
Fish soup dinner, communal dinnertime bookmaking and screening of "The River Twice" – Meryl O'Connor, Cecily Anderson, Publication Studio Hudson



NEWBURGH–BEACON
SUNDAY, SEPTEMBER 7
« 7:30PM »

Potlatch, Performances and Presentation on Crude Oil Plans in Newburgh



COLD SPRING–WEST POINT
MONDAY, SEPTEMBER 8

Climate Change and Militarization, Present and Future. Intervention featuring Giant Inflatable Icebergs in the shape of climate-conflict countries, and veteran-civilian dialogue



HUDSON
TUESDAY, SEPTEMBER 2
« 5-9PM »

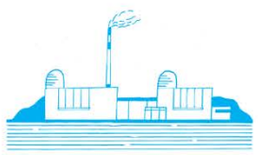
Henry Hudson Riverfront Park
Paper-boats + boats built by Sloop Club Campers from Kite's Nest, music by Brian Dewan, games with Hudson Praxis, and puppet show – Kite's Nest, Hudson Sloop Club, Jane's Ice Cream

TROY
SATURDAY, AUGUST 30
« 9:30AM »

Launch Party followed by a procession to the city marina – Riverfront Park by the Farmer's Market

TIVOLI–BARD
THURSDAY, SEPTEMBER 4
« 5-9PM » & FRIDAY,
SEPTEMBER 5 « 11 AM »

Tivoli
Banners and Signs Workshop: "Artivism: Visual Activism and the People's Climate March" Workshop with Bard Students – Environmental and Urban Studies (EUS)



PEEKSKILL–INDIAN POINT
TUESDAY, SEPTEMBER 9

Why Nukes Are Not the Answer: Discussion and potluck meal – RiverKeeper, IPSEC, NIRS, Sloths Against Nuclear State, Yuko Tonohira



NEW YORK CITY
SATURDAY, SEPTEMBER 13
« 7:30PM »

Landing Party!

SUNDAY, SEPTEMBER 14
« 2:00PM »

Circumnavigation of Isle of Manhattan – SeaChange Crew, NYC Boat Clubs

SUNDAY, SEPTEMBER 17,18,19

The Floating Library at the Lilac Steamship Preservation Project
Pier 25, Hudson River Park, Manhattan
Screenings, sharing, a landing ritual, and roundtables on art and climate change at the Floating Library – Hosted by Beatrice Glow and the Lilac

SATURDAY, SEPTEMBER 20
« BOAT BLOC FOR CLIMATE JUSTICE »

– SeaChange Crew, Boat Activists, Sailors, Artists, NYC Boat Clubs






OSSINING
THURSDAY, SEPTEMBER 11
« 6:30PM »

Ossining Boat & Canoe Club
1 Westerly Rd, Ossining, NY 10562
Discussion, potluck dinner, music and a Cantastoria – Ossining Boat and Canoe Club, Riverkeeper, Dan Shapley, Paul Sargent

** Dates are subject to change in the event of extreme weather. Please check website & social media for updates. **

http://seachange2014.tumblr.com
twitter: @seachange2014
instagram: @seachange2014
facebook: thefreeseas

Design by
Partner & Partners
Illustrations by
Erik Riley
Logo by
Jean Barberis and Cecily Anderson


CANOE CLUB
T. 1902
WE ALL LIVE DOWN STREAM
Old Town





Mare Liberum at Carpenter Center for the Visual Arts (CCVA) at Harvard University 2015

Mare Liberum at Centre Pompidou, Musée d’art Modèrne de la Ville de Paris, France, 2017




SAUF
Cityscoot





what wilderness:
9 Conversations on Ecology,
Abstraction, and the Anthropocene

ISCP, New York
2015-6

# NEWTOWN CREEK

# Newtown Creek

## Introduction

Newtown Creek is a 3.8 mile waterway connected to the East River and serves as the border between Western Queens and North Brooklyn. The Creek was originally a salt marsh environment with numerous fresh water streams feeding into brackish waters including plentiful amounts of fish and shellfish harvested by native Lenape tribes and early European colonialists. As the Creek became a hub for industrial activity in the 19th century, the environment was drastically altered to accommodate factories and maritime use; this included filling in marsh, bulkheading shorelines and deepening channels. By the early 20th century the Creek became one of the busiest waterways in the country, carrying more value and volume of cargo than the entire Mississippi River. Goods manufactured in the area included fertilizers, chemicals, glues, ropes, dyes and many varieties of petroleum products. However, the decline of American manufacturing after World War II led to abandoned and underutilized properties as well as loss of skilled jobs in the area. Heavy industrial use, with insignificant environmental regulation and protection, left a legacy of toxic contamination, still present within the sediments of the Creek. In 2010, the Creek was declared a federal Superfund site.

## Active Bulkheads

At it's busiest, Newtown Creek was home to 500 manufacturing businesses. Over 15,000 vessels traversed the waterway annually. As recently as the 1950's, ocean-going freighters were a common sight as far east as Maspeth. These days, maritime traffic is less active, but there are still many working waterfront facilities which primarily handle waste and petroleum products as indicated on this map. Moving bulk materials by barge is more efficient economically and environmentally. A single barge has the same capacity as 28 – 56 long haul trucks, depending on the industry. Compared to other transportation modes, barge transport of bulk materials is safer in terms of worker injuries, generates far fewer toxic air emissions and reduces maintenance costs for roads and bridges.

## Street Access Sites

Newtown Creek is lacking in public access. As of 2015, there are only two officially recognized public spaces on the Creek: the Manhattan Ave Street End (NYC Parks Department) and The Newtown Creek Nature Walk (NYC Dept. of Environmental Protection). A number of other street end sites around the creek provide potential for public access, including the 'Plank Road' site in Maspeth where NCA began restoration work in 2013.

## Naturalized Bulkheads

Much of the Newtown Creek shoreline is bulkheaded to accommodate maritime use and increase land use of properties adjacent to the Creek. Some portions of the shoreline maintain a more naturalized state where the edge slopes from water to land as opposed to dropping off 90 degrees as with bulkheads. These shores offer truer intertidal zones, or portions of land that are submerged twice a day by the incoming tides. Such intertidal areas provide critical habitat for numerous marine plants and animals native to the Creek.

## Greenpoint Oil Spill

In 1978 a Coast Guard patrol spotted massive oil plumes on the Creek near Meeker Avenue. This spurred an investigation which found 17 to 30 million gallons of oil underneath Greenpoint, Brooklyn. Released into the environment from Standard Oil (now ExxonMobil) and other nearby refineries during decades of operations; the spill is currently being remediated under supervision of the NY State Department of Environmental Conservation. As of 2015, some 12.5 million gallons of petroleum product have been removed. This map shows the original extent of the plume - the 2nd largest oil spill in US history.

## Potentially Responsible Parties

In 2010, the US EPA designated Newtown Creek a federal Superfund site. Part of the Superfund process is identifying potentially responsible parties (PRP) that have contributed to the contamination and will be held liable paying for the cost of cleanup and restoration. The Newtown Creek PRPs include ExxonMobil, British Petroleum, Texaco, Getty, National Grid, Phelps Dodge and the City of New York.

## Combined Sewer Overflow

NOB-024

As little as a tenth of an inch of rainfall can trigger Combined Sewer Overflow (CSO), which is when stormwater combines with sanitary sewers, treatment plants reach a capacity for intake and untreated sewage and stormwater enters the waterway via CSO outfall pipes located throughout the city. The Creek receives over 2 billion gallons of CSO each year, which has tremendous impact on water quality and represents the largest source of present day pollution.

## Public Libraries

The Brooklyn and Queens public libraries partnered with NCA to host weather stations at branches within the Creek watershed. These stations provide real time weather data and are connected to our #CSOalert system that lets residents know when CSO events are likely occurring. By conserving water during these events we can lessen the amount of pollution entering the Creek.

## Remedial Sites

The NY State Department of Environmental Conservation is working with property owners to remediate a number of contaminated sites surrounding Newtown Creek. Similar to the Greenpoint Oil Spill, these are often remnants of old industrial operations where toxic chemicals have leached into the soil and groundwater, posing significant health threats to the local community of humans and non human organisms. This map shows a number of these remedial sites that are currently being investigated or cleaned up. For more information about each site and the cleanup process visit dec.ny.gov.

## 1600 Shoreline & Historic Features

The geography of Newtown Creek has changed tremendously since the arrival of the first Europeans to the area in 1609. Shown here is an outline of the Creek as it existed at that time, with much of the surrounding shoreline consisting of extensive marsh and numerous streams feeding into the creek.

**NOTICE:** Newtown Creek is a federally designated Superfund site. Due to poor water quality and contamination of the sediments within Newtown Creek, it is NOT advisable to swim, wade or consume fish or shellfish.

NCA
NEWTOWN CREEK ALLIANCE

## NY State Remediation Sites

1) Queens West Parcel 11
2) Queens West Parcel 8
3) Kosan Industrial Corp.
4) Arch Street Yards (LIRR)
5) Neptune Meter Site
6) 44-30 Purves Street
7) ACCO Brands, Inc.
8) ACCO Brands, Inc.
9) Active Steel Drum Co Inc.
10) Roehr Chemicals Inc.
11) Review Avenue Development I
12) Quanta Resources
13) Quanta Resources
14) Phelps Dodge
15) Maspeth Substation
16) W.L.K. Corp.
17) Cornish Knit Goods
18) Ingraham Street Sidewalk GW
19) Popular Hand Laundry
20) 353 McKibben Street
21) 2 Ingraham Street
22) Scholes St. Station
23) Frito Lay
24) Scientific Fire Prevention Inc.
25) Bennett Trucking Corp.
26) Greenpoint MGP - Energy Center
27) Klinik Cosmo Cleaners
28) Acme Architectural Products
29) Acme Architectural Products
30) Soap Manufacturer and Lacquer Storage
31) Curtis Electro NY
32) Meeker Avenue Plume Trackdown
33) Spic & Span Cleaners and Dyers
34) 460 Kingsland Avenue
35) BRT Railroad Car Barn
36) NuHart Plastics
37) Huxley Envelope
38) Greenpoint Marina
39) Consolidated Freightways Truck Terminal
40) Williamsburg Works
41) Sunbelt Equipment
42) Wythe Avenue Station
43) Berkman Bros Site
44) 87 Kent Avenue
45) 149 Kent Avenue
46) Cleaners Sales & Equipment Corp.
47) Fyn Paint and Lacquer Co.
48) Sterling Transformer Corp.
49) Driggs Plywood Corp.
50) BQE/Ansbacher Color & Dye Factory
51) 555 Grand Street
52) 416 Kent Avenue
53) 420 Kent Avenue
54) Domsey Fiber Corp. Site
55) Peoples Works
56) 470 Kent Ave
57) Kent Avenue Station Site

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NOAA Chart 12338 was used as reference in the preparation of this map

0 1/4 mile
0 1/4 kilometer

MANHATTAN
BROOKLYN
QUEENS
LONG ISLAND CITY
HUNTERS POINT
GREENPOINT
WILLIAMSBURG
SUNNYSIDE
MASPETH
BUSHWICK
RIDGEWOOD
East River
Newtown Creek
Dutch Kills
Maspeth Creek
English Kills
East Branch
Queens Midtown Tunnel
Williamsburg Bridge
FDR Drive
Long Island Expy
Queens Midtown Expy
Hunters Point Avenue Bridge
Pulaski Bridge
Montauk Cutoff (Dutch Kills) Bridge
Borden Avenue Bridge
LIRR (Dutch Kills) Bridge
Greenpoint Avenue Bridge
Kosciuszko Bridge
Grand Street Bridge
Metropolitan Avenue Bridge
LIRR (English Kills) Bridge
Newtown Creek Wastewater Treatment Plant
Digester Eggs
City of New York
Exxon-Mobil
Amaco Oil (BP)
Texaco
Getty Oil
Metro Fuels
Allocco Recycling
Sims Metal Management
DEP Sludge Boat Dock
DEP Nature Walk
Motiva Enterprises
North Brooklyn Boat Club
HarborLAB
Newtown Barge Playground
Greenpoint Playground
Phelps Dodge
National Grid
Turning Basin
Plank Road
Baseball fields on Vandervort
Bayside Fuel
TNT Scrap
Charles King
Onderdonk House
Sunnyside Railyard
LaGuardia Community College (LGCC)
Smiling Hogshead
LIC Roots
Sunnyside Library
Greenpoint Library
Leonard Library
Bushwick Inlet
Bushwick Inlet Park
East River State Park
McCarren Park
Monsignor McGolrick Park
Sgt. William Dougherty Plaza Triangle
Cooper Park
Linden Hill Cemetery
Grover Cleaveland Park
First Calvary Cemetery
Grand Ferry Park
Transmitter Park
American Playground
Greenpoint Ave (G)
Nassau Ave (G)
Bedford Ave (L)
Lorimer St (L)
Graham Ave (L)
Grand St (L)
Metropolitan Ave (G)
Montrose Ave (L)
Jefferson St (L)
Hewes St (J,M)
Marcy Ave (J,M,Z)
Hunters Point South Park
Vernon Blvd - Jackson Ave (7)
Hunters Point Ave (7)
Hunters Point Ave (LIRR)
Long Island City (LIRR)
Court Square (E,G,M,7)
33 St (7)
40 St (7)
46 St (7)



# CAUTION

## Wet Weather Discharge Point

THIS OUTFALL MAY DISCHARGE RAINWATER MIXED WITH UNTREATED SEWAGE DURING OR FOLLOWING RAINFALL AND CAN CONTAIN BACTERIA THAT CAN CAUSE ILLNESS

IF YOU SEE A DISCHARGE DURING **DRY** WEATHER:

- PLEASE CALL 311 - REFER TO CSO OUTFALL #NCB-083
- For more information visit www.nyc.gov/dep
- Or Contact: New York State Department of Environmental Conservation
  Division of Water Regional Office
  47-40 21st St., Long Island City, NY 11101
  718-482-4900
- New York State Wet Weather discharge point
- SPDES Permit # NY 0026204

New York City Department of Environmental Protection



**Newtown Creek c. 1960 (source: NCA)**

Opinion | OP-ED CONTRIBUTOR

The New York Times

# An Oil Spill Grows in Brooklyn

ALEX PRUD'HOMME MAY 15, 2010

WITH an estimated 210,000 gallons of oil spilling from the Deepwater Horizon site every day — for a total of some 3.3 million gallons, so far — the disaster in the Gulf of Mexico may eventually prove to be the largest oil spill in American history.

But New Yorkers forget, or don't know, that a much larger oil spill sits in our own backyard: an estimated 17 million to 30 million gallons of oil, benzene, naptha and other carcinogenic chemicals pollute Newtown Creek and a 55-acre, 25-foot-deep swath of soil in Greenpoint, Brooklyn.

People don't often think of urban creeks as biodiverse waterways, but Newtown Creek was once a rich tidal estuary popular among hunters and fishermen. Starting in the 1870s, however, Standard Oil and other refineries began spilling or dumping excess fuels and toxic chemicals into the water or onto the soil, slowly poisoning the ecosystem. For years, people who hung their clothes out to dry found them darkened by chemical fumes. Today, Newtown Creek is a dead zone: when a dolphin was spotted in the creek in March, experts did not rejoice. They worried about its health.

## The Greenpoint Oil Spill




**~55 Acres**

**~25 Feet Deep**

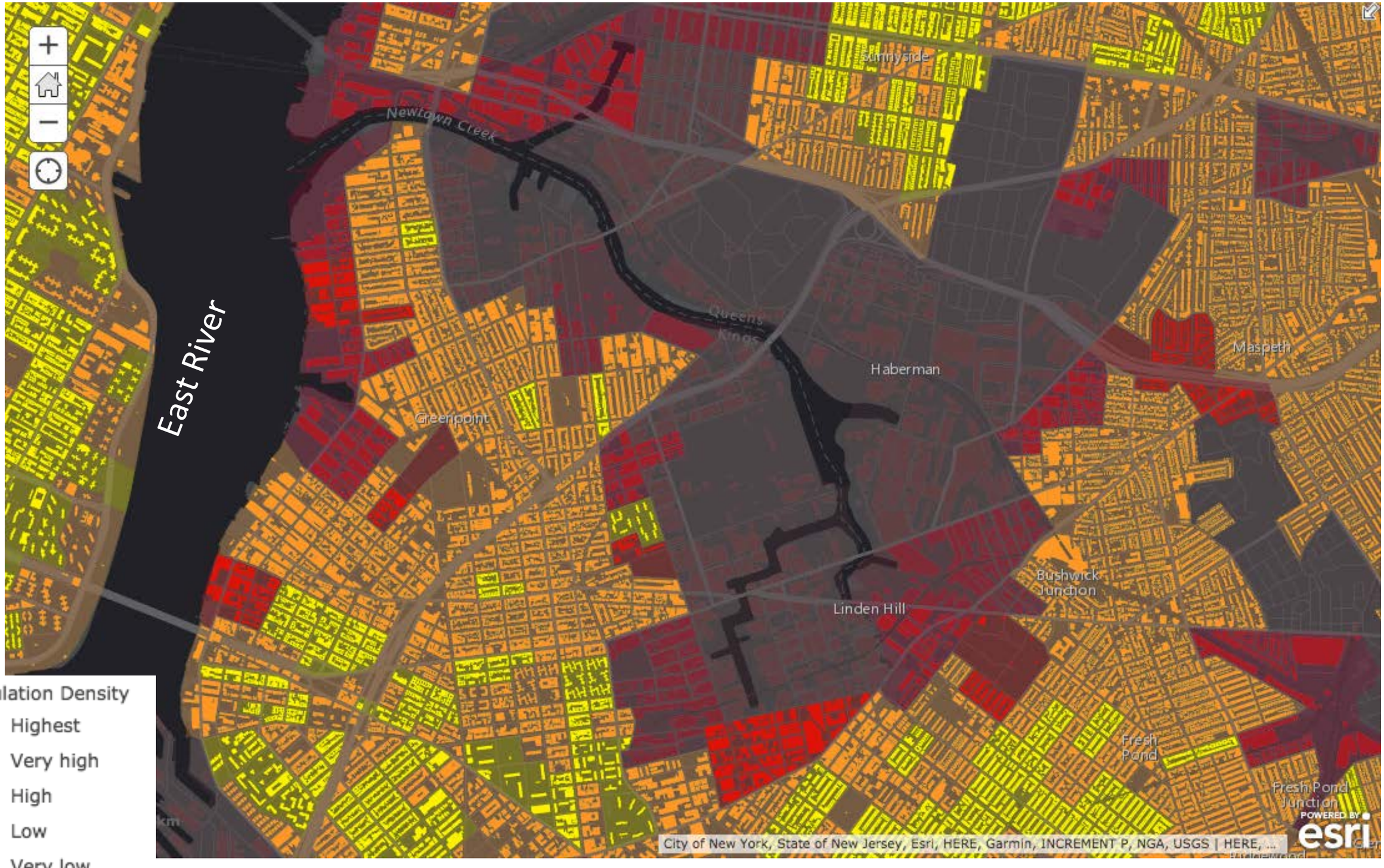
**17 - 30 Million Gallons of Oil**



## Deepwater Horizon Oil Spill

**2,500 to 68,000 Square Miles**

**(43,520,000 Acres)**


East River
Newtown Creek
Queens
Kings
Greenpoint
Haberman
Sunnyside
Maspeth
Bushwick
Junction
Linden Hill
Fresh
Pond
Fresh Pond
Junction
City of New York, State of New Jersey, Esri, HERE, Garmin, INCREMENT P, NGA, USGS | HERE, ...
POWERED BY esri
Population Density
Highest
Very high
High
Low
Very low
Lowest




ZIM CONTAINER SERVICE
ZIM
ZIM




NRS
mti
mti
mti




EMPIRE

“We never see the raindrop; we have raindrop feelings, raindrop thoughts, raindrop perceptions.”

~ Timothy Morton

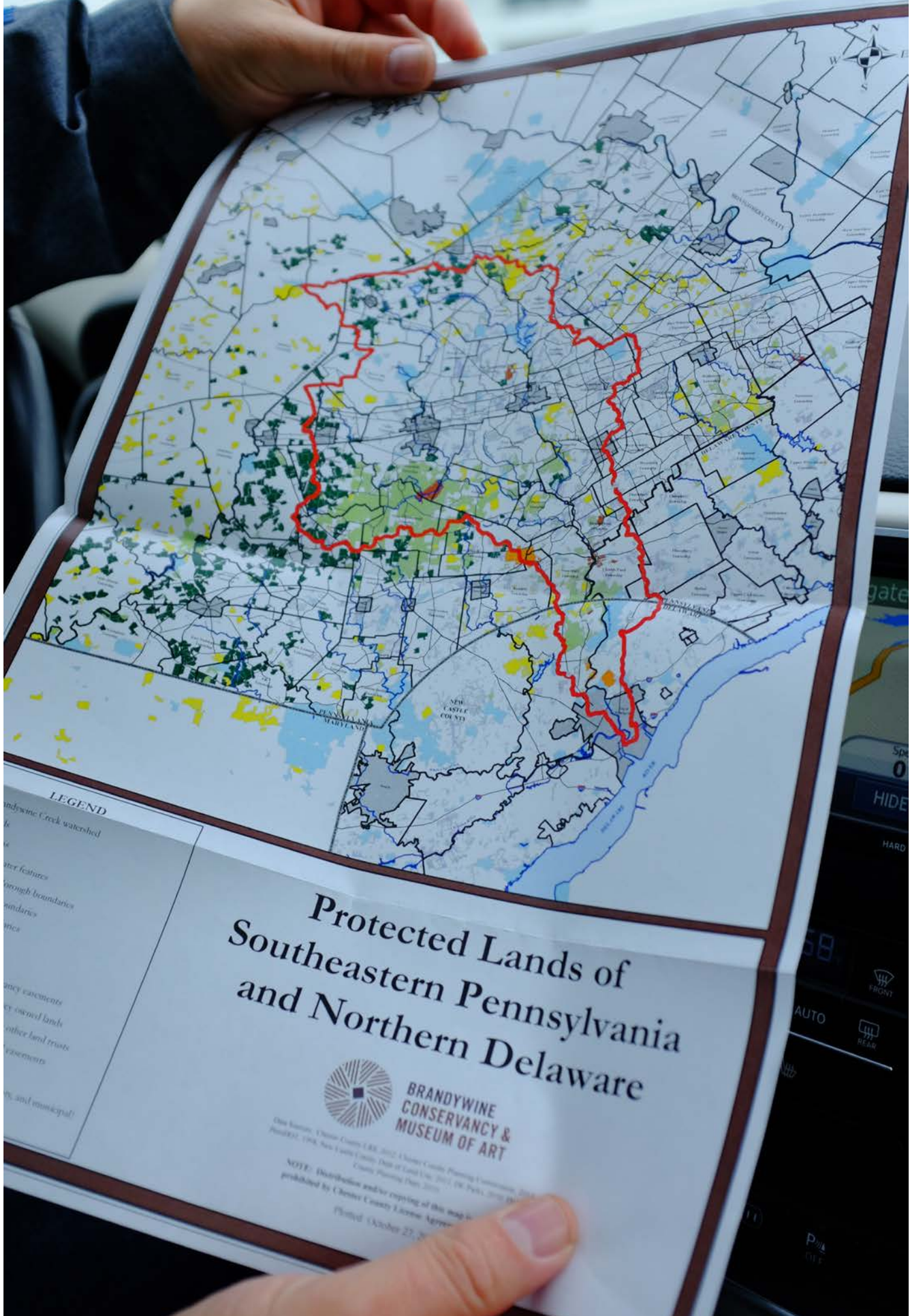
“In nature we never see anything isolated,
but everything in connection with
something else which is before it, beside it,
under it, and over it”

~ Goethe, conversation with Johan Peter Eckerman,
quoted in Sergei Eisenstin, “A Dialectic Approach to Film Form,
Revealed by Jordan Lord in a recent talk

# highwatermarks: six ways of sensing the river

2017

Brandywine River Museum
of Art


LEGEND
Protected Lands of
Southeastern Pennsylvania
and Northern Delaware
BRANDYWINE
CONSERVANCY &
MUSEUM OF ART

# Brandywine Conservancy BMP Implementation Sites

BRANDYWINE CONSERVANCY

Honey Brook Township

Philadelphia ->

Wilmington, DE

BERKS COUNTY

LANCASTER COUNTY

MONTGOMERY COUNTY

DELAWARE COUNTY

PENNSYLVANIA
DELAWARE

PENNSYLVANIA
MARYLAND

NEW
CASTLE
COUNTY

Robeson Township
Union Township
North Coventry Township
Limerick Township
Perkiomen Township
Skippack Township
Warwick Township
South Coventry Township
East Coventry Township
Upper Providence Township
Lower Providence Township
Caernarvon Township
East Vincent Township
East Pikeland Township
West Vincent Township
West Norriton Township
Earl Township
East Earl Township
West Nantmeal Township
Wallace Township
Upper Uwchlan Township
West Pikeland Township
Schuylkill Township
Charlestown Township
Upper Merion Township
East Whiteland Township
Tredyffrin Township
Radnor Township
Leacock Township
Salisbury Township
West Brandywine Township
East Brandywine Township
Uwchlan Township
West Caln Township
East Caln Township
West Whiteland Township
Easttown Township
Willistown Township
Newtown Township
East Goshen Township
Paradise Township
Caln Township
Valley Township
West Sadsbury Township
Sadsbury Township
West Bradford Township
East Bradford Township
West Goshen Township
Edgmont Township
Westtown Township
Upper Providence Township
Highland Township
Newlin Township
Thornbury Township
Middletown Township
Eden Township
Bart Township
Sadsbury Township
West Marlborough Township
Birmingham Township
Chadds Ford Township
Aston Township
West Fallowfield Township
Londonderry Township
East Marlborough Township
Pennsbury Township
Bethel Township
Chester Township
East Drumore Township
Colerain Township
Upper Oxford Township
London Grove Township
Kennett Township
Upper Chichester Township
Lower Oxford Township
Penn Township
New Garden Township
Little Britain Township
New London Township
Franklin Township
London Britain Township
Fulton Township
West Nottingham Township
Elk Township

## LEGEND

- BMP Implementation Sites
- Brandywine Creek watershed
- Municipal boundaries
- Roads
- Streams
- City and Borough boundaries

**Protected Lands**

- Brandywine Conservancy easements
- Brandywine Conservancy owned lands
- Lands owned or eased by other land trusts
- County agricultural easements
- Non-profit institution lands
- Public lands (federal, state, county, and municipal)
- Other protected lands

Data Sources: Chester County GIS, 2013; Chester County Planning Commission, 2013; PennDOT, 1998; New Castle County Dept. of Land Use, 2012. Delaware County Planning Department, 2012.

0 1 2 4 6 8 Miles

BRANDYWINE CONSERVANCY

NOTE: Distribution and/or copying of this map is strictly prohibited by Chester County License Agreement.
All acreages listed are calculated and approximate and may not represent real-world acreages.

Created: October 28, 2014
Last revised: June 3, 2015



Honey Brook Township, PA

Wilmington, DE



*highwatermarks*, 2017 (single-channel excerpt of 4-channel video installation for Brandywine River Museum of Art)

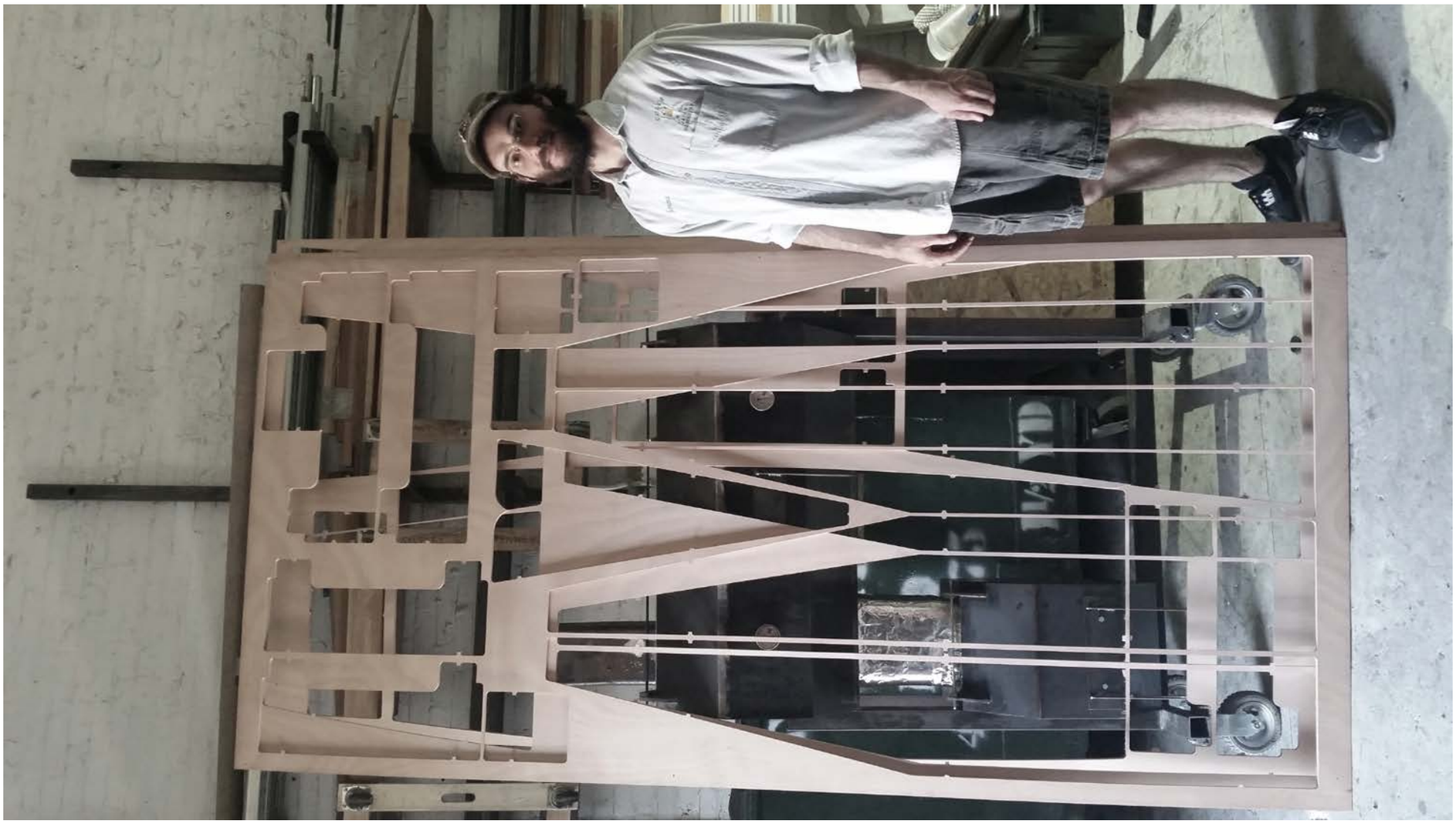




Andrew Wyeth, *Evening at Keurners (1970)*



Andrew Wyeth, River Boat, 1963, watercolor and dry brush on paper, 17 x 26 inches



“an unrippled water”

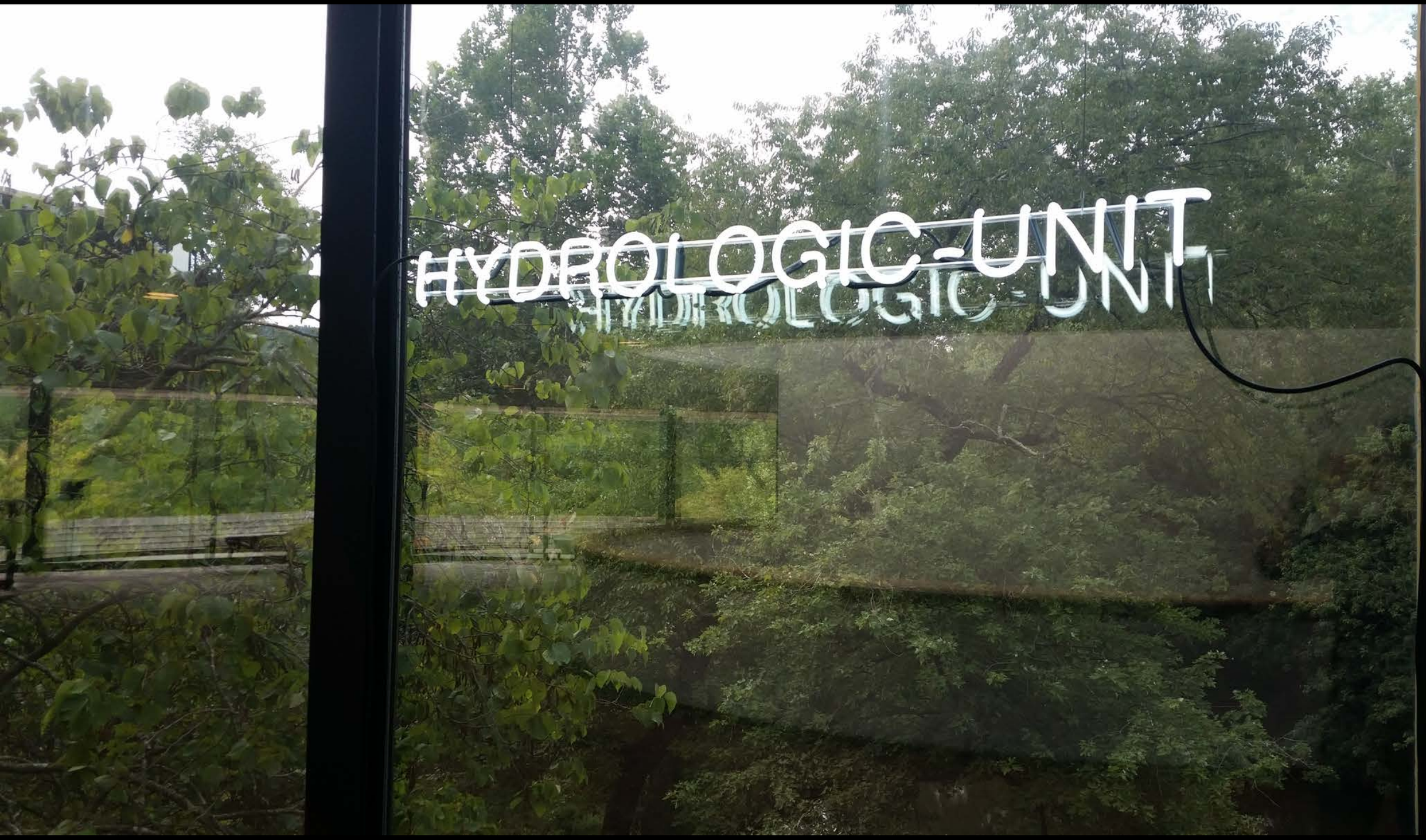
“in perfect time & measure”





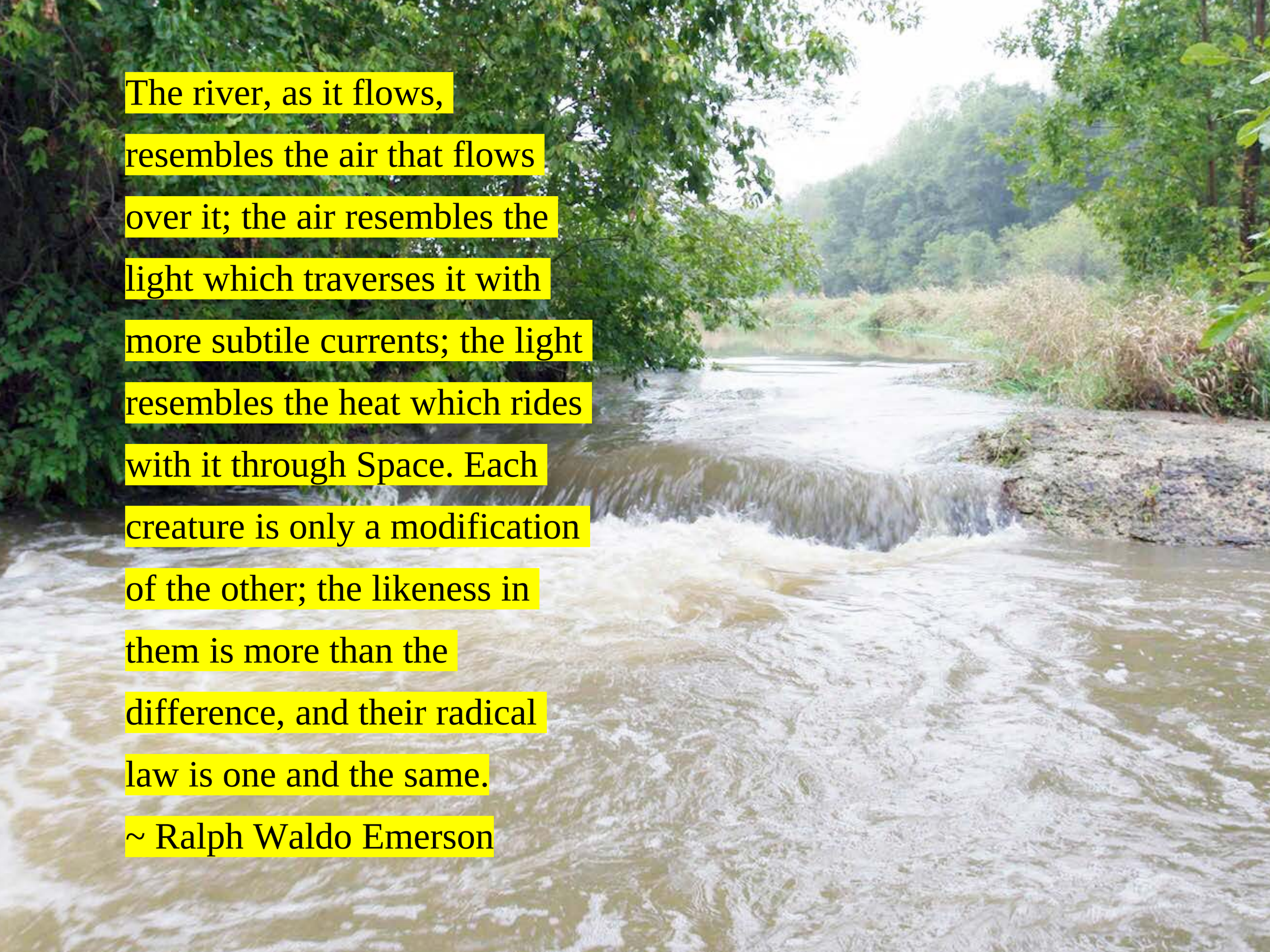

"an unstopped water"




HYDROLOGIC-UNIT



*highwatermarks*, mill outside of Wilmington, 2017 (single-channel excerpt of 4-channel video installation for Brandywine River Museum of Art)



The river, as it flows,
resembles the air that flows
over it; the air resembles the
light which traverses it with
more subtile currents; the light
resembles the heat which rides
with it through Space. Each
creature is only a modification
of the other; the likeness in
them is more than the
difference, and their radical
law is one and the same.
~ Ralph Waldo Emerson



Observation House in use. Mr A. Melville Bell, Mr A. Graham Bell, Miss Safford, (private secretary) and Miss Sarah Marsh, occupants.

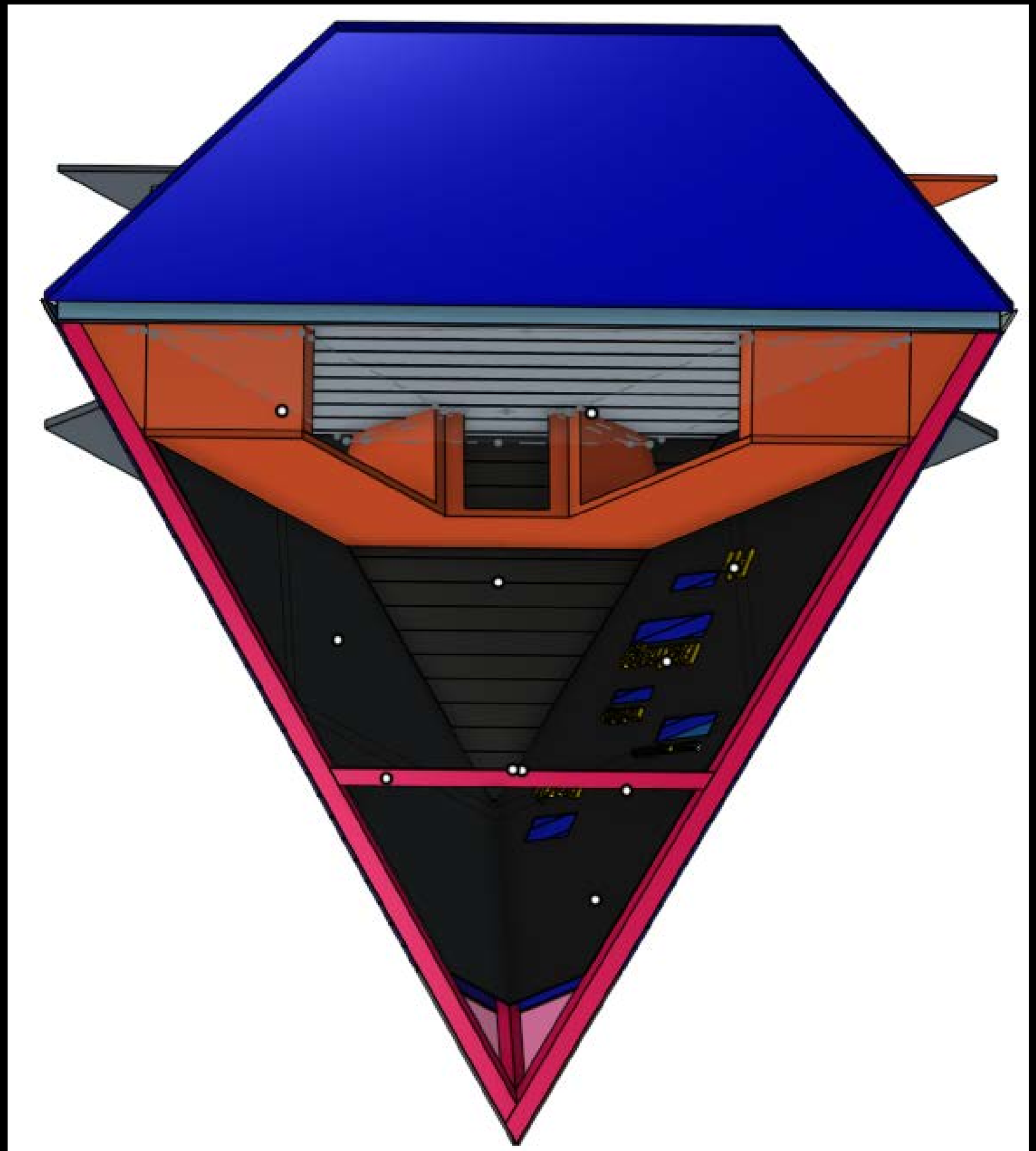


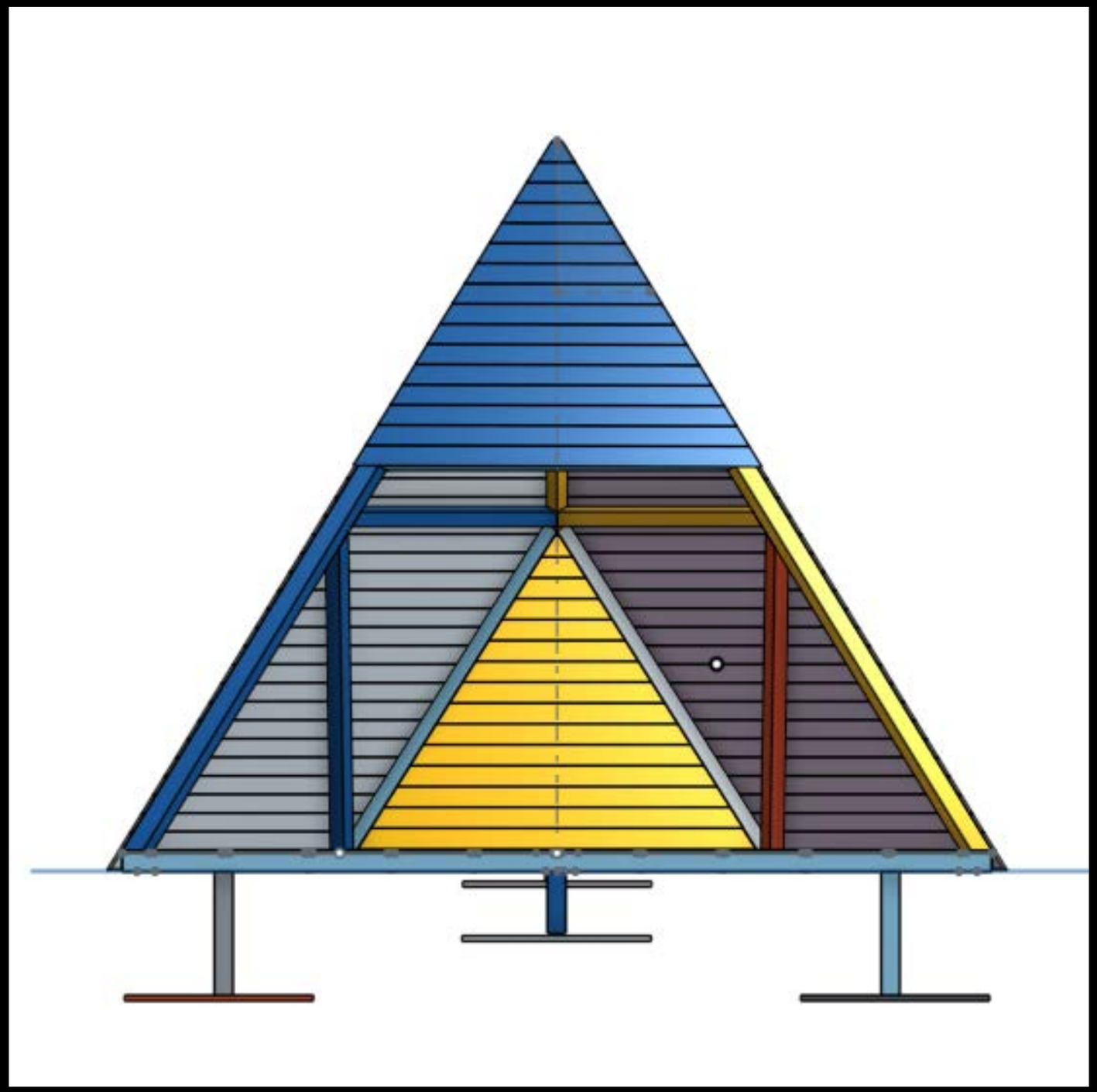
Observation House in use. Mr A. Melville Bel
ham Bell, Miss Safford, (private secretary)
Sarah Marsh, occupants.

















Wood Repurposed from New York CIty Watertower



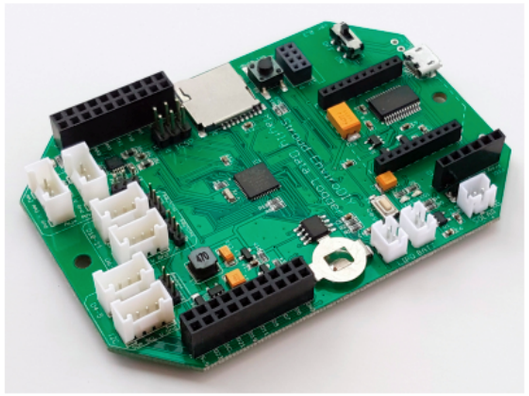








# Getting Started With the Mayfly Data Logger



The EnviroDIY Mayfly Data Logger is a powerful, user-programmable microprocessor board that is fully compatible with the Arduino IDE software. It features the ATmega1284p processor, which is much more powerful than the 328p chip found on most other Arduino boards. It has 4 times more flash memory for sketches, 8 times more RAM, and almost twice as many input pins.

**Features:**

- 128K Flash memory, 16K RAM
- 28 digital I/O pins, 8 analog pins, plus 4 additional high-resolution ADC pins
- 2 serial UART ports
- microSD memory card socket
- Onboard realtime clock (RTC) (DS3231)
- Solar lipo battery charging
- Low power consumption (6.5 mA when on but idle, 0.27-0.43 mA when in sleep)
- Bee module socket
- 2 LEDs, 1 user programmable pushbutton

With help from Stroud Water Research Center

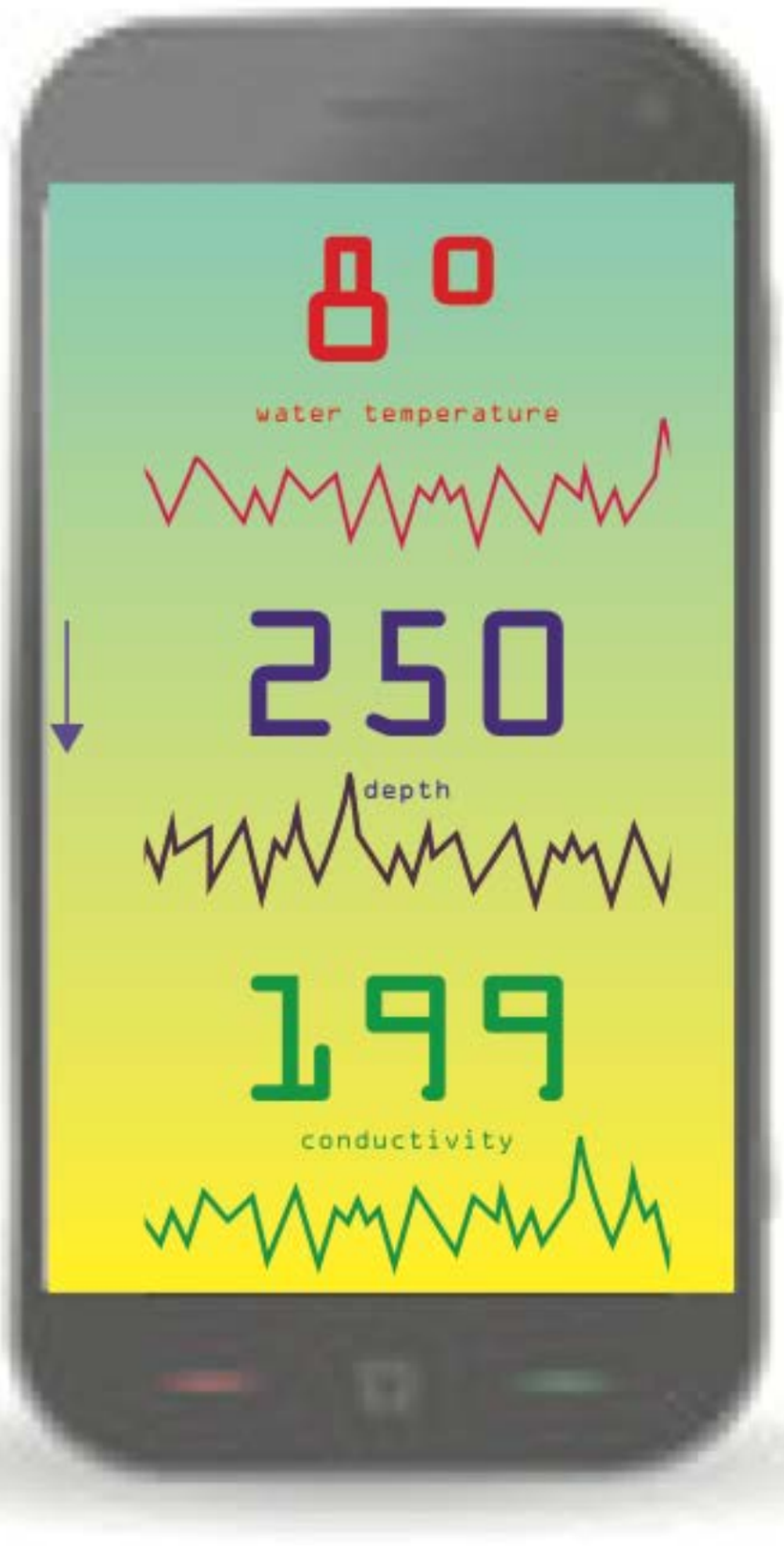
SENSOR LANDING PAGE

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SHOWING LAST 48HOUR RANGE

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SCROLL DOWN
FOR OTHER READINGS

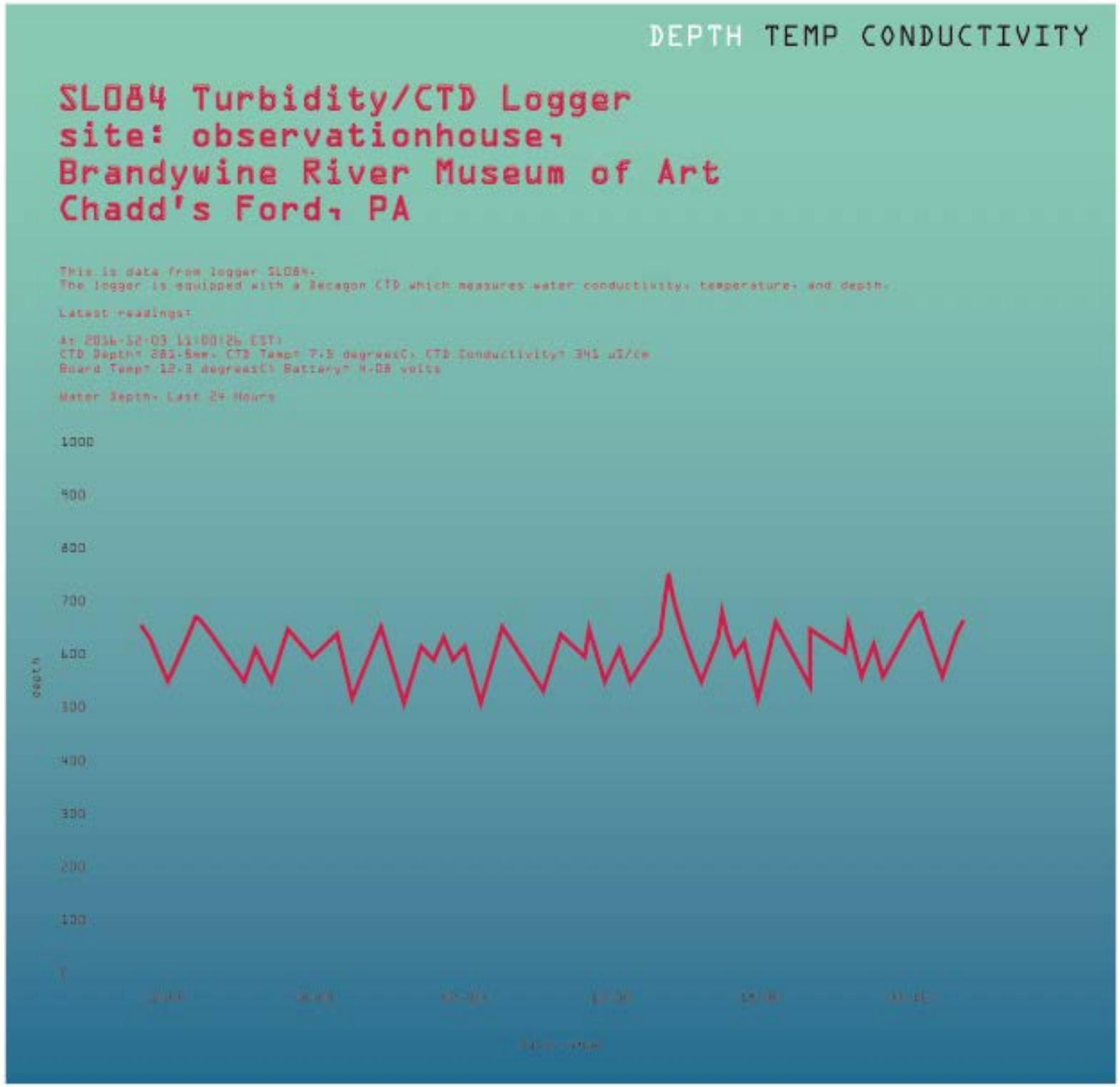
CLICK FOR GRAPH OF HISTORIC
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SL084 TURBIDITY/CTD LOGGER

PAGE 2:
GRAPH OF HISTORIC DATA




SL084 TURBIDITY/CTD LOGGER

http://swrcsensors.dreamhosters.com/charts_main_SL084.php

odule 5

Brandywine River Mu-

Preview

Museum o...

cations - On Ri...

anch Head...

his "lake" o...

loney Brook...

Run

ne Museum

Access Here

Someplac...

Museum

Scenic views of Honey ...

East and West Branch H...

Camp At Old Mill

Tributary - Birch Run

Coatsville - Good View...

Parking and River Acce...

Field by Brandywine Mu...

Roadside Parking Somep...

Brandywine River - acc...

Historic Dam

Shooting the confluenc...

Google My Maps

