

GEEK CAMP

Neversink Never Ever

Shu Lea Cheang, June 2021

500 billion gallons of water are stored in the nineteen reservoirs in the Catskill mountains and make up the New York City water supply system. 1.2 billion gallons of water channeled from the Catskill region, such as that channeled via the Neversink reservoir, are consumed each day in New York City.

Construction on the Neversink Reservoir began in 1941 to feed the explosive post-World-War-II population growth in New York City. The local hamlets Bittersweet and Neversink were condemned and flooded over in order to make room for the reservoir. The town of Neversink was subsequently relocated and rebuilt. The Esopus tribe, native to the region of the Catskill mountains and Sullivan County, where the Neversink reservoir lies, were displaced hundreds of years prior following the Esopus Wars in the late 17th century.

Today, complex systems of aqueducts channel the water from Catskill region to New York City, while present-day urbanites in return migrate back to the Catskills in seeking self-styled, sustainable living.

CycleX's mission is to utilize its 23 acres of farmland by hosting and fostering sustainable farming and intercultural, cross-disciplinary artistic activities. It is located in what is today known as the town of Andes, New York, situated among wild forest reserves and three major

reservoirs: Pepacton, roughly translated from Lenape language to “marriage of the waters”; Ashokan, roughly translated from Iroquois language to “a place to fish”; and Neversink, roughly translated from Lenape language to “always running.”

Geek Camp 2021: Neversink Never Ever is a summer camp, a feral lab amidst the occupied land and ever-running water. The campers, including artists, geeks, and farmhands, spend days together—walking, tracking and tracing the forest trails. Echoing the ebbs and flows of the reservoirs, we further engage waves of water, air, radio, wifi as carriers to recall the buried, bittersweet sentiments of displacement and relocation. As the sun goes down, we gather around the open kitchen to cook, eat, and drink together with the freshly harvested local farm produce, uttering sense or nonsense through the night before hitting the sack.



GEEK CAMP

Neversink nunca jamás

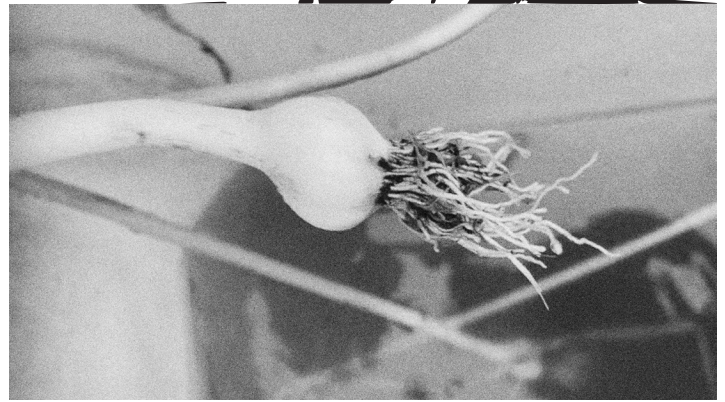
Shu Lea Cheang, junio de 2021

500 mil millones de galones de agua se almacenan en diecinueve reservorios en las montañas Catskill y forman el sistema de suministro de agua de la ciudad de Nueva York. Cada día en la ciudad de Nueva York se consumen 1.200 millones de galones de agua canalizada desde la región de Catskill, como la canalizada a través del embalse Neversink.

La construcción del embalse Neversink comenzó en 1941 para alimentar el explosivo crecimiento demográfico posterior a la Segunda Guerra Mundial en la ciudad de Nueva York. Las aldeas locales Bittersweet y Neversink fueron condenadas e inundadas para dejar espacio para el embalse. Posteriormente, la ciudad de Neversink fue reubicada y reconstruida. La tribu Esopus, nativa de la región de las montañas Catskill y el condado de Sullivan, donde se encuentra el embalse de Neversink, fue desplazada cientos de años antes después de las Guerras de Esopus a fines del siglo XVII.

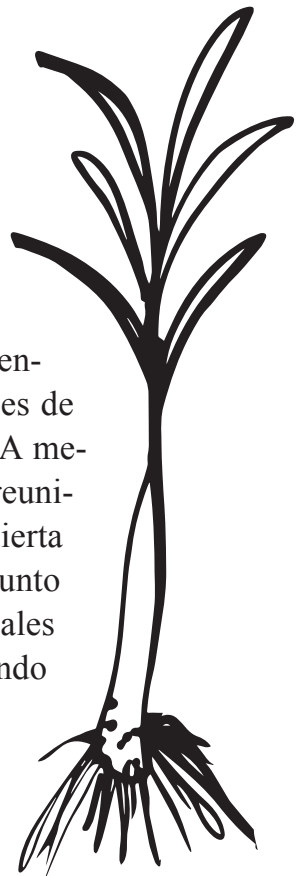
Hoy en día, los complejos sistemas de acueductos canalizan el agua desde la región de Catskill hasta la ciudad de Nueva York, mientras que los habitantes de la ciudad de hoy en día, a cambio, migran de regreso a Catskills en busca de una vida sustentable y de estilo propio.

La misión de CycleX es utilizar sus 23 acres de tierras de cultivo hospedando y fomentando la agricultura sostenible y las actividades



artísticas interculturales e interdisciplinarias. Está ubicado en lo que hoy se conoce como la ciudad de Andes, Nueva York, situado entre reservas de bosques silvestres y tres grandes reservorios: Pepacton, traducido aproximadamente del idioma Lenape como “matrimonio de las aguas”; Ashokan, traducido aproximadamente del idioma iroqués a “un lugar para pescar”; y Neversink, traducido aproximadamente del idioma Lenape a “siempre corriendo”.

Geek Camp 2021: Neversink nunca jamás es un campamento de verano, un laboratorio salvaje en medio de la tierra ocupada y el agua siempre corriendo. Los campistas, incluidos artistas, geeks y granjeros, pasan días juntos, caminando, rastreando y trazando los senderos del bosque. Haciéndonos eco de los reflujos y flujos de los embalses, involucramos aún más ondas de agua, aire, radio, wifi como portadores para recordar los sentimientos enterrados y agridulces de desplazamiento y reubicación. A medida que se pone el sol, nos reunimos alrededor de la cocina abierta para cocinar, comer y beber junto con los productos agrícolas locales recién cosechados, pronunciando sensaciones o tonterías durante la noche antes de irnos a la cama.



CYCLEX REFLECTIONS is produced on the occasion of Geek Camp 2021: Neversink Never Ever and Wet Networks. Geek Camp is Shu Lea Cheang's annual series of convenings in which she welcomes city-dwelling creative practitioners to spend days camping together at CycleX, an experimental farm and cultural center in Andes, NY. Geek Camp 2021: Neversink Never Ever took place July 15-18, 2021. Wet Networks is an exhibition curated by Celine Wong Katzman at the Queens Museum that showcases research, projects, and artifacts from Geek Camp 2021: Neversink Never Ever.

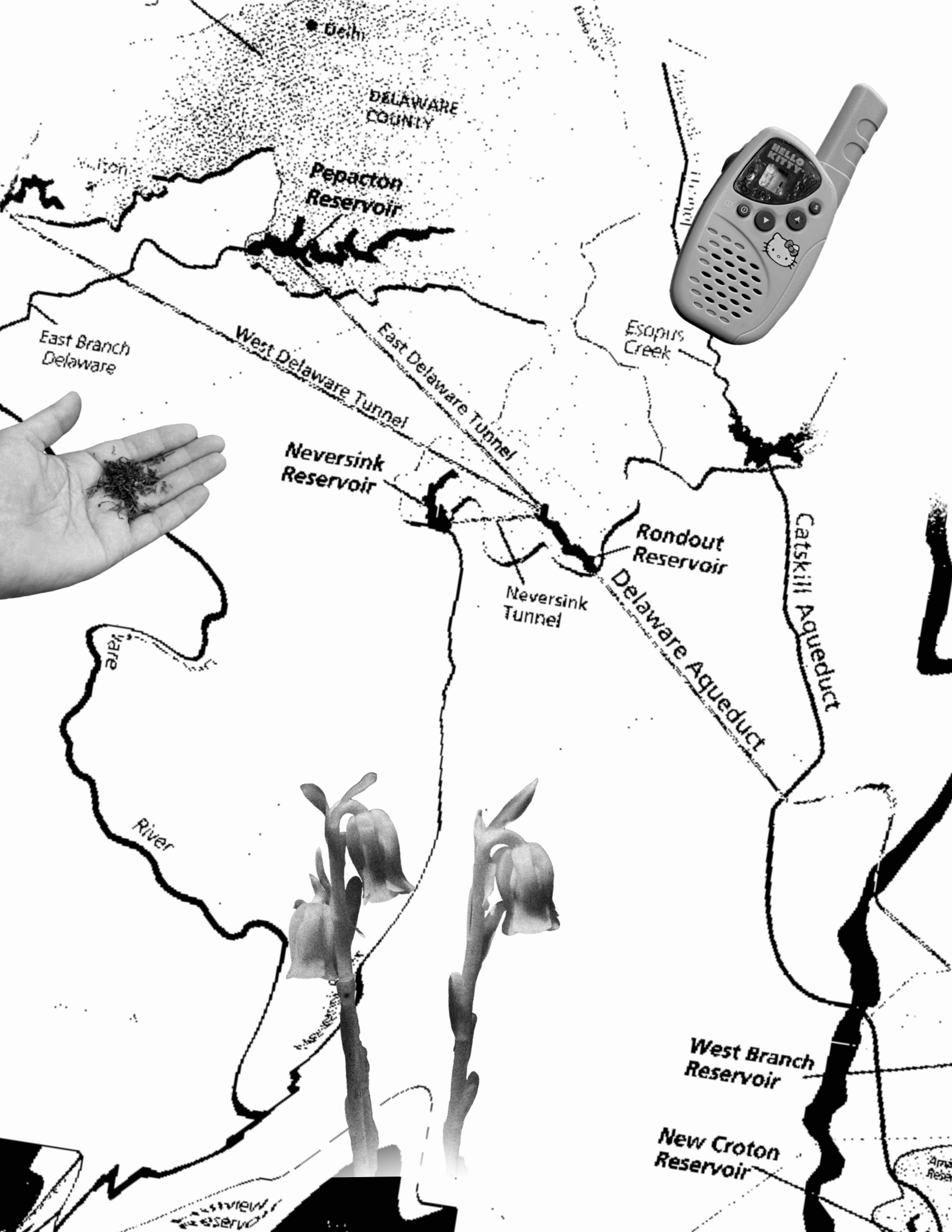
Participants include artists Tecumseh Ceaser, Nabil Hassein, Melanie Hoff, TJ Shin, Christopher Lin, and Jan Mun; Rhizome staffers Michael Connor and Celine Wong Katzman; CycleX Site Manager and Technical Director, Erwin A. Karl; and Founder of the Center for Algonquin Culture, Evan T. Pritchard.

CycleX Reflections is generously supported by Rhizome, the Queens Museum, and Taipei Cultural Center.

CycleX Reflections



Conceived by Nabil Hassein
Edited by Celine Wong Katzman
Designed by Neta Bomani



Delhi

DELAWARE COUNTY

Pepacton Reservoir

East Branch Delaware

West Delaware Tunnel

East Delaware Tunnel

Esopus Creek

Neversink Reservoir

Neversink Tunnel

Rondout Reservoir

Delaware Aqueduct

Catskill Aqueduct

River

West Branch Reservoir

New Croton Reservoir

MYCORRHIZAL
CORRH
MEMORY



Mycorrhizal Memory

Nabil Hassein

In July of 2021, I was among a group of artists—Tecumseh Ceaser, Melanie Hoff, TJ Shin, Christopher Lin, and Jan Mun—invited by Celine Wong Katzman, Shu Lea Cheang, and Rhizome to take part in a camping trip and residency at CycleX, an experimental farm located in what is currently known as the Catskill region of New York. During our time together, I had one of those rare chances to contemplate some of the rich natural history that my day-to-day life tends to lead me towards taking for granted. We observed mushrooms, harvested garlic, and hiked together, including to the top of a trail that allowed us to see an enormous reservoir of water that flows well over a hundred miles all the way through to our taps in Queens, Brooklyn, and the Bronx. An Algonquin elder taught us some Indigenous history of portage: the practice of carrying canoes to form overland links between rivers that come near but do not join, which allowed for extensive travel across the North American continent. We also cooked together, cleaned together, and generally attempted to practice the principles of collective life: “from each according to their ability, to each according to their needs.” Daily circle time was a central and essential ritual, during which we gathered



around a campfire to share conversation. We introduced ourselves, discussed and signed a community agreement, and reflected on our excitement and concerns about the events of our days together.

A memorable moment came early during a tour of CycleX from our gracious host Erwin A. Karl, who lives on and stewards the land. He shared some insight about the generational knowledge held by decomposing agents like mushrooms and other fungi, which I continue to reflect on today. Though a city dweller like myself typically has few reasons to consider those traditions and inheritances, people in other lines of work like farming and ecology—that is to say, workers without whom I would not eat—have an intimate familiarity with the fact that the loss of mycorrhizal subterranean heritage will result in disease, decay, and ultimately death among plants on the surface. In the history of white settler conquest of Indigenous lands on this continent (and others), destructive farming practices like clear-cutting—designed to extract as much value as possible in the short term—have caused ecological damage and generational trauma that has never been fully assessed or understood, and may never be. This fact might be considered as only another instance of the truism that everything is interconnected, and therefore that what affects one directly affects all indirectly. But let us try to carry the metaphor a little deeper.

In communities of care or practice from human artists to underground mycelia, much knowledge is shared in common rather than held as proprietary. This means that the absence of a few individuals—or even of the majority of individuals—may not result in permanent loss of information central enough to the group to have been widely circulated. I recall Erwin mentioning that the retention of just 20-40% of mycorrhizal fungi beneath farmland may be enough to stave off irreparable harm. A well-informed and empowered core can do a lot to support the dissemination of helpful information and behaviors, while conversely, the absence of such continuity and structure can lead to unnecessarily difficult struggles with challenges that previous generations had already faced.

When we went hiking one day, we had no coherent safety plan in place to keep everyone together, and someone fell behind. Almost instantaneously—and invisibly to many of us in the moment—gendered dynamics of care resurfaced, with people who had been socialized as women offering material, physical, and emotional aid to our straggling comrade. It is an old observation that patriarchal culture treats the fruits of nature and the products of feminized labor much the same: as free for the taking. Yet there are limits to appropriation which, if pushed beyond, lead to the sort of generalized collapse we currently observe all around us in the form of biodiversity crisis and climate catastrophe.



Perhaps other limits to exploitation will be reached sooner than we realize, as well.

Our mechanism for redress, circle time, allowed a space for us to pull this issue from the background to the foreground. Quoting from our community agreement: "Naming both intentional and unintentional forms of hierarchy, conscious and unconscious, is the first step towards our commitment to building an honest and inclusive environment." It was unfortunate that the burden for raising the issue in our group fell on those who had already taken on additional labor. Nevertheless, we were able to have an open discussion and address the problem before it assumed greater proportions. Among other reflections and outcomes, we instituted a new system for the following day's hike to ensure no one would be left behind: "lead and sweep." The "lead" held responsibility for selecting a path and setting the pace, and the "sweep" held responsibility for making sure everyone stayed with or ahead of them to prevent excessive separation. We assigned ourselves numbers to count off aloud to confirm we were all still within earshot even when everyone wasn't always in view. And we made use of a pair of adorable Hello Kitty walkie talkies that Celine brought! With this system in place, our hike went far more smoothly. Beyond the difference that a clear plan for communication made, our commitment to making space for conversation about our differing capacities and experiences was integral

to improving our ability to take care of vulnerable community members, and heightened the atmosphere of mutual respect for the remainder of our time together. Justice begins on a scale as intimate as a camping trip.

In the short book "Why Not Socialism?," the philosopher G.A. Cohen used the metaphor of a camping trip to argue for the desirability and feasibility of a social system based on principles of egalitarianism and community. His work builds, like I did above, on Marx's definition of communism as "from each according to their ability, to each according to their needs." As we pooled resources and rotated shared tasks like cooking and dishwashing, our group attempted to practice a collectivity comparable to other islands of communism in the sea of capitalism, like workers' cooperatives or families. In all three contexts, hierarchies continue to exist, following the logic that differing capacities and positionalities call for different roles in pursuit of equitable and just outcomes, like everyone getting fed. The degree to which such inequalities are transparent and agreed upon, rather than mystified and maintained by violence, might be considered measurements of democraticness. Notwithstanding the disparity in what equipment we each brought camping, objects from tents to toothpaste were shared freely, which is so mundane that it hardly seems worth noting until you stop to think of just how much we don't do this in so many other contexts of daily life. As



Cohen notes, in the camping context it is obviously much more efficient, as well as much more pleasant, to share everything than to engage in constant haggling for self-benefit.

Similarly, although natural ecosystems feature many types of competitive and predatory relationships, co-operation for the sake of mutual flourishing is also observed routinely among flora, fauna, and fungi which patiently share nutrients and ancestral memory as they weather the vagaries of outside forces to shape and reshape their own environment. Even a few days among such sights and scenes leaves an impression. So does the lasting sensory imprint of a delicious meal, prepared from ingredients fresh from the land, consumed with old and new friends under tarps in the dark and pouring rain. The knowledge we share when together and continue to carry when apart, whether of crops or of conflict resolution, disperses outwards like mycorrhizal spores: unpredictable in ultimate trajectory, perhaps dormant in the absence of the proper conditions, yet essential to the flowering of entire communities.



Neversink
Tunnel



Neversink River



fig. 1

MULCKING MATTERING & BONE

Mucking, Mattering, and Bone

TJ Shin

What do we know about the mucking crew? To muck is to remove manure and dirt from a stable or other buildings where animals are kept. But in these photographs from the New York City Department of Environmental Protection archives, there are no animals in the underground water tunnel except perhaps a rare horse that might pulley excavated dirt. Mixed with horse manure is the deconstructed earth—rock, dirt, sand, and smog—the movement of which would create the passage of water from Catskills to New York City.

To muck is to pull and move the earth: loading explosives 700 feet below ground, blasting the earth about nine feet at a time, and then hauling the broken-up bedrock out from its source of origin to a foreign place, far away. To hollow out a 576 foot tunnel, the muckers would detonate sixty-four explosions in the trenches; a slow crawl of the earth that is barely perceptible to us above ground. After the detonations, the mucking crew would hoist the broken ground into wheelbarrows, and push them into the rail cars. An air signal would indicate whether people or materials were coming up the shaft; a whistle to distinguish the differences between bodies and resources. Muck that came up would be

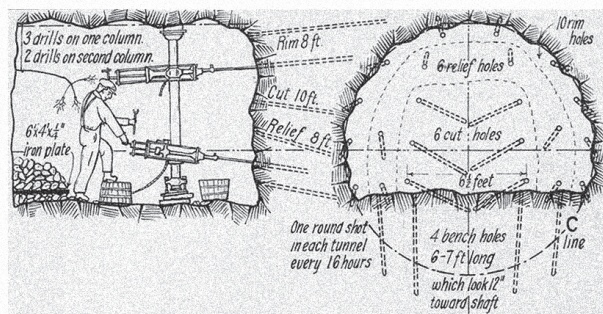


fig. 2

hauled to scows by horse-drawn wagons and then dropped into the Atlantic ocean. What is moved must be relocated somewhere: earth that is accumulated is dispossessed elsewhere.

For my *Landscape* series, I pull three photographs from the New York City Department of Environmental Protection archives from 1930-40. I am haunted by these images, the barely perceptible Black and blackened bodies in the earth's tunnels. I imagine what it would be like to be so close to the core, the earth made definable through the contours of tunneling features made visible through extracting, displacing, and quarrying—and in the process, bodies and land made into deadly matter, into flesh and territory. In *A Billion Black Anthropocenes or None*, Kathryn Yusoff writes that we can understand Blackness as a "historically constituted and intentionally enacted deformation in the formation of subjectivity, a deformation that presses an inhuman categorization and the inhuman earth into intimacy."

The idea of Blackness becomes materialized here: the geologic commons have been foraged by labor completely unseen and illegible. The mucking crew opens a hole—a new geography, epoch of space and



fig. 3

time—all dug underground. To make water salable, we remove its muck and outsource it to laboring bodies—in the case of the New York City water supply system, immigrant Irish, Brown, Black, and Indigenous communities. And after this process, what we end up seeing is only filtered, clean water. I'm interested in understanding how the conception and construction of public infrastructure, health, and sanitation have been made possible through the dumping of toxic processes—environmental exposure and dangerous working conditions for marginalized laborers.

My *Landscape* series reproduces these archival photographs as lithographic prints using homemade pigments produced by charring animal bones. I produced the pigment in collaboration with Erwin A. Karl, Site Manager and Technical Director at CycleX. During my stay there, Erwin and I dismembered a roadkill deer and fired its bones at high temperatures (around 550° C) into animal charcoal. Then, I ground the remains into a fine powder called bone black pigment. The result is black porous pigment created from particles of black carbon with subtle hues of blue from the natural oxidation process that occurs during firing. When mixed with linseed oil, bone black pig

ment transforms into a mixture of gooey tar that is slowly layered to reproduce the photographic image. Historically, bone black pigment produced from cattle or pig bones was used as paint or drawing ink by old masters. It wasn't until later that other black pigments such as carbon black, mars black, or iron oxide black became more desirable.

Bone char is also used for water filtration. Composed of about 10%-20% carbon and 80% calcium phosphate, along with smaller amounts of other inorganic minerals, it removes fluoride, copper, zinc, cadmium, arsenic, lead, and metal ions from water. Its highly adsorptive quality and activated charcoal content makes bone char one of the oldest water defluoridation agents in the world. When New York City established the Department of Sanitation in 1881, an army of street cleaners called the "White Wings" would collect animal carcasses from the streets and sell the remains to bone-boiling plants in the area of New York City where Central Park is located today. These plants would produce soap and bone char for water filtration. It was also used as a decoloring agent for sugar, turning it into a desirable white color than its unrefined and unprocessed brown sugar counterpart.

The same bone char that I used to reproduce the archival photographs is also laid out in dioramic representation. The wall-mounted sculptures themselves are complete water filtration devices: pour water through the bones and





fig. 5



fig. 6

Wheel barrows used.

Muck shot on 6'x4'x $\frac{1}{4}$ " iron plates.

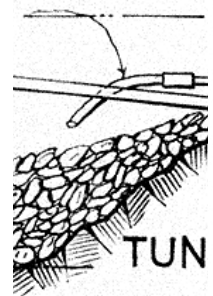
3 drills on one column.
2 drills on second column.



sand and you will end up with filtered, odorless water. I'm interested in this act of filtration, the process of purification, or in a literal sense, the "whitening" of food substances, entrenched in the violence of mining, whether it is mining people (inhuman) or materials (property), extractive personhood (value) or properties (possession). We see the earth simultaneously as a natural ecosystem and a productive resource that constructs our material ecologies of race and the racial formation of our geologies. As extensive as the urban infrastructure above ground, there is an equally vast network of tunnels and buried histories of excavation and expropriation of Indigenous lands. We have forgotten that it is the Earth that pulls and moves us.

holes, 4.
6 cut ho
6 relief h
ief holes shot, rock falling down and a part backward.
h holes shot, rock falling down, very little backward.
ch usually shot with cut round of heading.

ading, 1 drill on be
with 3 $\frac{1}{4}$ " & 3 $\frac{3}{8}$ " cylin
' connected to



TUN

SEQUE

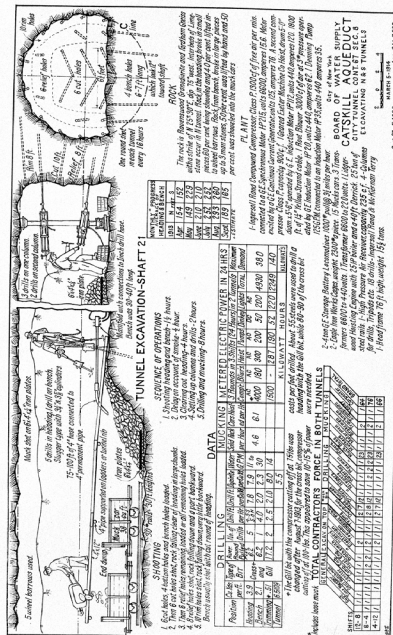
1. Shooting h
2. Delay on ac
3. Clearing ou
4. Setting up c
5. Drilling and

DATA

DRILLING								MUCKING		MET	
tion	Cu. Yds. per ft.	Type of BIT	Aver. Round Pulled	No. of Drills	Drill Ft. per Hr.	Drill Ft. per Cu Yd.	Dynmite per Cu Yd.	Water G.P.M.	Solid Rock per Hour	Cars Hoisted per Hr.	3 Round Comp'r. L
ing	3.9	Cross+ and Gill	6.2	5	4.55 5.0 N	7.8	7.9	11 to	4.6	6.1	AC 4000
h	2.1		6.2	1	4.0	2.0	2.3	30			180
ing	*.51		17.2	2	2.5	2.0	8.0	14			287
el	6.5/09						5.5				190
											52
											220
											2249
											140

KILOWATT HOURS

KILOWATT's



Hqa. 1161.

'HLY + PR
VERAGE C
ING & BE

N FEET
154
149
210
252
293
189

MATE

'ngersoll
connected to
excited by a
pressor Class
diam. 51

CAPTIONS

In order of appearance

1. This crew was doing the dangerous work of loading explosives into 37 11-foot deep holes they just drilled in the Delaware Aqueduct's Rondout-West Branch Tunnel. The dynamite blast after many hours of backbreaking work would move the tunnel forward about nine feet of its eventual 48 miles. June 10, 1938.
2. We have a few examples of cartoon-like drawings the Board of Water Supply made to show methods for tunneling operations. This one illustrates the drilling set-up for part of City Water Tunnel No. 1. The photo below of five drills mounted on two columns is a pretty close match showing how the work was carried out. Drawing date: March 5, 1914; Photo date: April 3, 1913.
3. 700 feet below Manhattan, sandhogs send muck (dynamited bedrock) in locomotive cars up a shaft to the surface as City Water Tunnel No. 1 moves forward. They used the air signal on the left to transmit a code of whistles to hoist operators above indicating whether people or materials were on their way up. From the top of the shaft, muck was hauled by horse-drawn wagons to scows in the East River and probably dropped into the ocean. June 4, 1913.
4. Deer bone charcoal.
5. Deer bones.
6. Firing of deer bones.
7. We have a few examples of cartoon-like drawings the Board of Water Supply made to show methods for tunneling operations. This one illustrates drilling and mucking for part of City Water Tunnel No. 1, along with data on drilling, shooting, mucking, electric power used, contractor's plant and forces, monthly progress and material encountered. March 5, 1914.

*Fig. 1 ,2, 3, and 7 are sourced from the
Department of Environmental Protection Archives*

DELAWARE
COUNTY

Pepacton
Reservoir

East Branch
Delaware

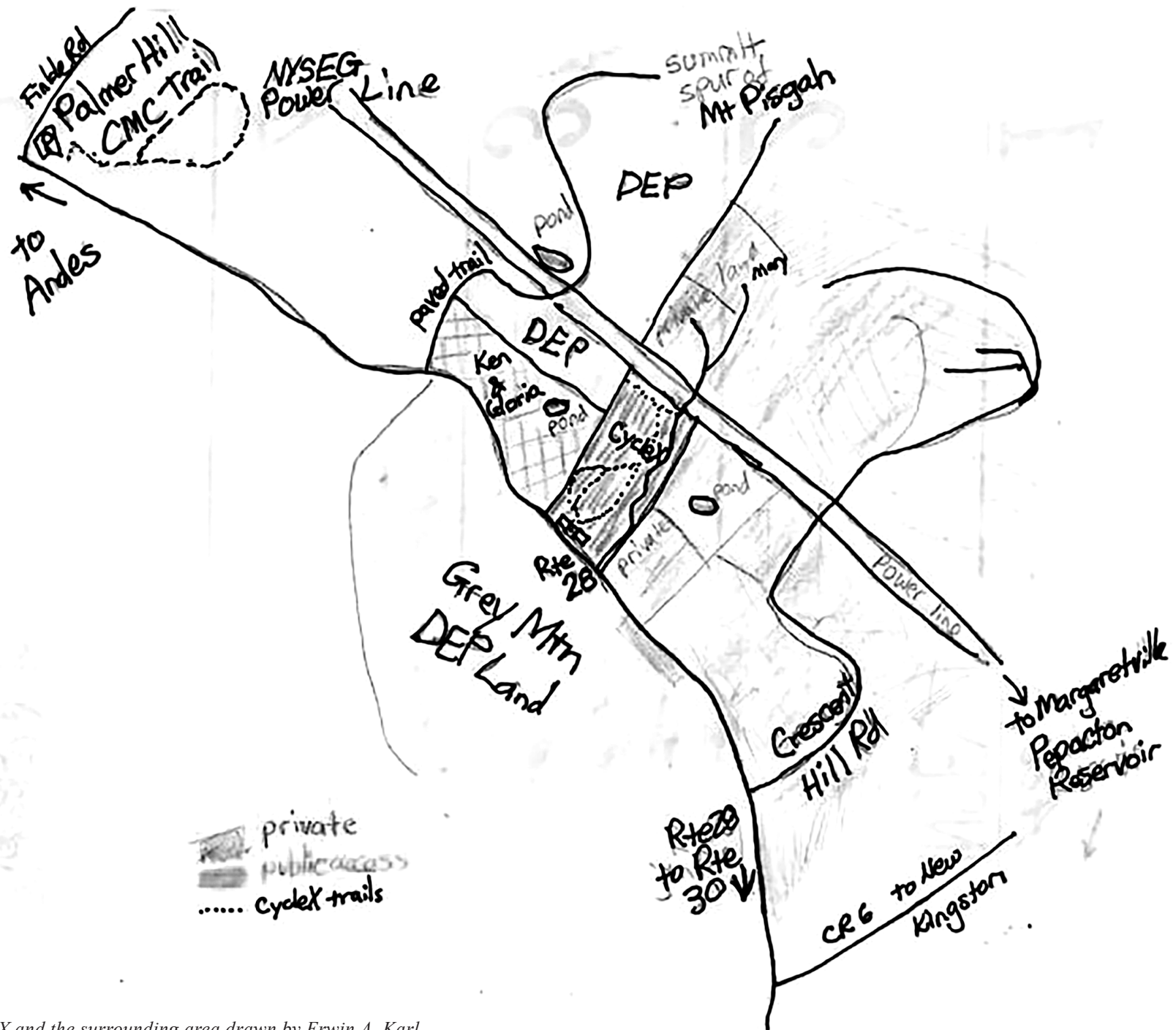
West Delaware Tunnel

Neversink
Reservoir



Wilton

Ware



Map of CycleX and the surrounding area drawn by Erwin A. Karl