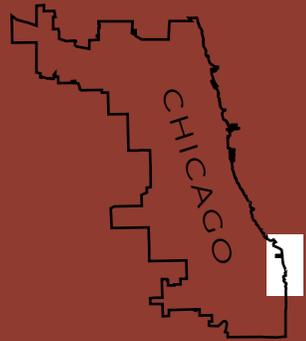
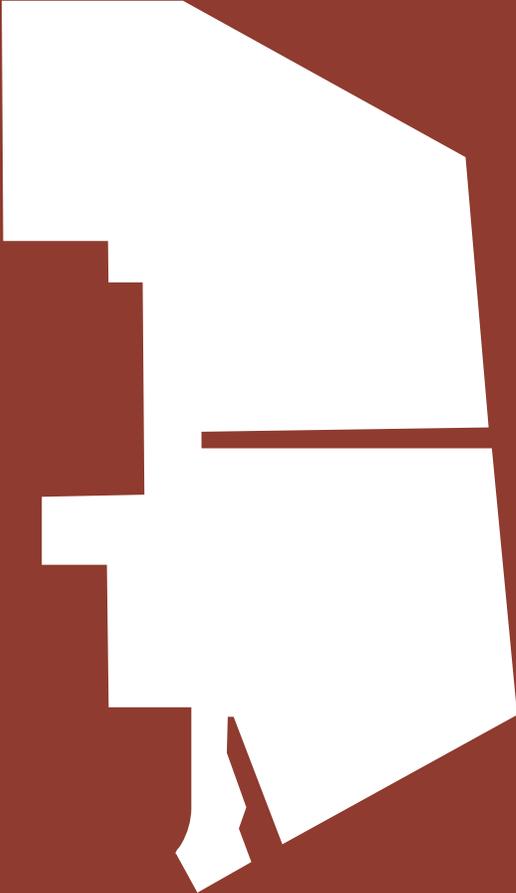


SOUTH WORKS DEEP GEOLOGICAL STUDY

*The Human Role in the
Formation of South Works:
Iron, Limestone & Slag*



SOUTHEAST CHICAGO



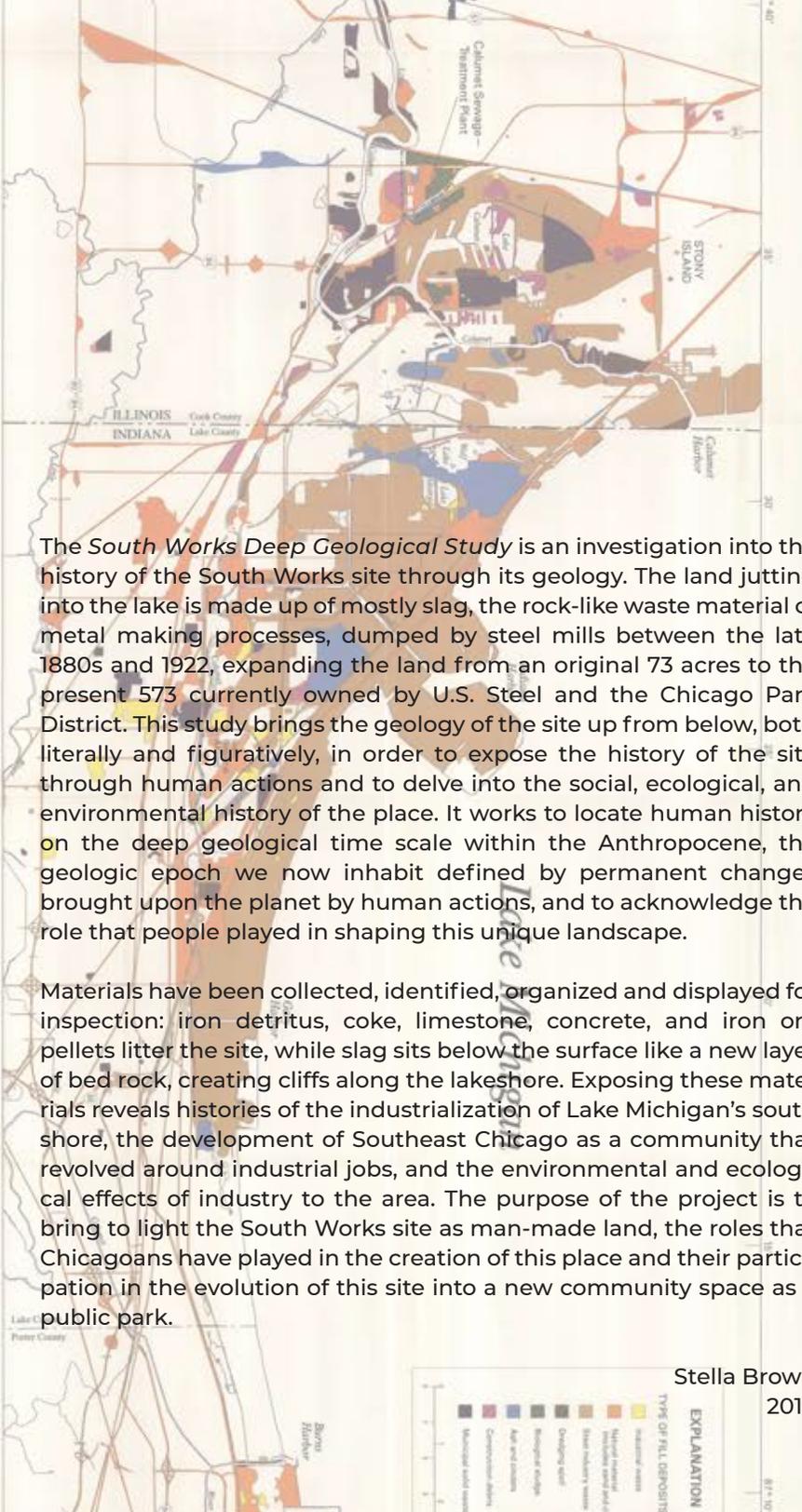
Stella Brown, 2018

In Collaboration with the Chicago Park District, Public Art Initiative

The *South Works Deep Geological Study* is an investigation into the history of the South Works site through its geology. The land jutting into the lake is made up of mostly slag, the rock-like waste material of metal making processes, dumped by steel mills between the late 1880s and 1922, expanding the land from an original 73 acres to the present 573 currently owned by U.S. Steel and the Chicago Park District. This study brings the geology of the site up from below, both literally and figuratively, in order to expose the history of the site through human actions and to delve into the social, ecological, and environmental history of the place. It works to locate human history on the deep geological time scale within the Anthropocene, the geologic epoch we now inhabit defined by permanent changes brought upon the planet by human actions, and to acknowledge the role that people played in shaping this unique landscape.

Materials have been collected, identified, organized and displayed for inspection: iron detritus, coke, limestone, concrete, and iron ore pellets litter the site, while slag sits below the surface like a new layer of bed rock, creating cliffs along the lakeshore. Exposing these materials reveals histories of the industrialization of Lake Michigan's south shore, the development of Southeast Chicago as a community that revolved around industrial jobs, and the environmental and ecological effects of industry to the area. The purpose of the project is to bring to light the South Works site as man-made land, the roles that Chicagoans have played in the creation of this place and their participation in the evolution of this site into a new community space as a public park.

Stella Brown
2018



THE SOUTH WORKS

A PROJECT OF THE CHICAGO PARK DISTRICT

82 x 10

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**GENERALIZED GEOLOGIC COLUMN
SOUTH WORKS**

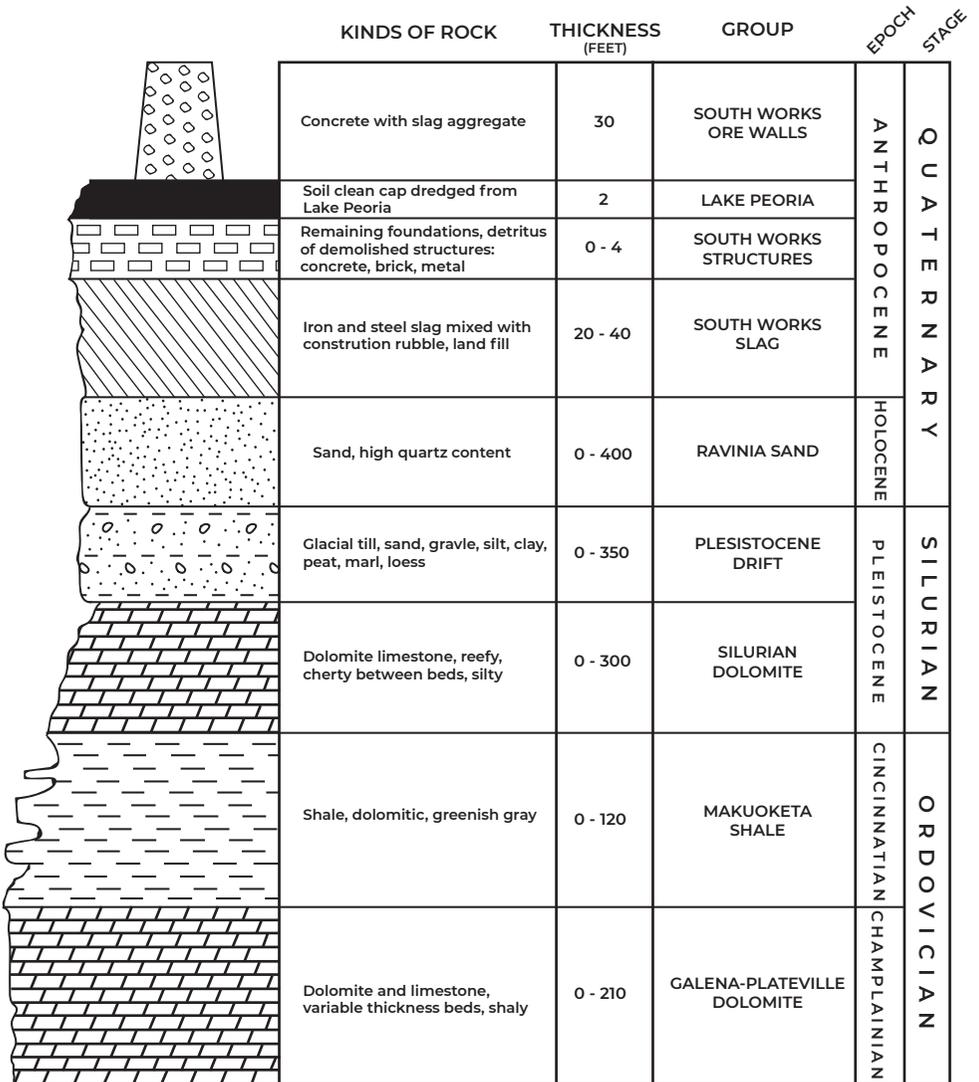


Fig 1. Estimation of current geologic column created in reference to 'Fig. 5 Columnar section of the rock strata in the Chicago Area,' Summary of the Geology of the Chicago Area by H. B. Williams, 1971.

Thickness in feet for pre-Anthropocene periods is an estimation for the entire Chicago area

Geology of Southeast Chicago

“For the first time in geological history, humanity has been able to observe and be part of the process that potentially may signal such a change from the preceding to succeeding epoch.”

-Waters, Zalasiewicz, et al., ‘A Stratigraphical Basis for the Anthropocene?’

The rocks that lie below the surface of a place tell its history- the way it came to be, and they determine its present- its shape and topography. The layers of rock, or strata, that make up the planet reveal the way it was formed. Stratigraphy is used to identify noticeable changes in rock strata as a way of mapping geologic time organized into eons, eras, periods, and finally epochs. We live at a unique moment in time when humans are creating geology on the human time-scale, rather than the slow, geologic time scale of rocks. In this new epoch, called the Anthropocene, Chicago’s comparatively flat, glaciated geologic record becomes incredibly rich. In the same way that tectonic plates thrust the mountains of the West up out of the earth, the people of Chicago have erected buildings, roads, underground tunnels, and infrastructure for the city, the record of which will last far into the future. Over time, cities will crumble and become compresspressed like all other rocks, but the materials that made them will remain in some form. Will this physical record be considered geological or archaeological?

HOLOCENE EPOCH

Most of the land in Chicago, specifically Southeast Chicago and the greater Calumet Region in which it sits, was created during previous geologic eras, the most recent being the Holocene epoch. The rarely exposed bedrock of the region is sedimentary in nature: limestone, dolomite, sandstone, shale, and some coal. 14,000 years ago most of the Midwest was covered by glaciers several thousand feet thick that flattened the topography as they moved southward. In this area, the Lake Michigan lobe of the Wisconsinan glacier flow deposited rocks, sand, and gravel as it spread. 13,5000 years ago the glacier melted, leaving behind Lake Chicago and two rivers: the Grand and Little Calumets.¹ Ancient Lake Chicago’s surface level sat some 23 feet higher than today covering much of present day Chicago. As the lake slowly drained in stages and transitioned into Lake Michigan, a series of beach ridges running parallel to the lakeshore were created. This dune and swale geomorphology, swales being the low lying areas between dunes, eventually formed the marshy wetlands of the area.² Modern soil developed from glacial deposits and the break down of vegetation added a layer of humus.³

1. William 1-3
2. Bouman 105
3. Alden Part Five



*Coastline at South Works,
circa 1900-1920.
U. S. Steel Collection, Courtesy:
Southeast Chicago Historical Project*

ANTHROPOCENE EPOCH

A starting date for the Anthropocene is still debated, but a commonly suggested marker is the Industrial Revolution. This is the time when human forces began to shape Southeast Chicago's geography. Prior to European settlement, the area was inhabited by indigenous Potawatomi people who used the lakeshore and its miles of dunes and wetlands for seasonal hunting and fishing settlements for thousands of years. The unique habitats of the marshlands were seen as a useless wasteland by white settlers- an ideal place to establish industry. Tall dunes were broken down to flatten the land and were replaced by land made of slag and other industrial materials, in a sort of remaking of the natural landscape for industrial purposes, marking the start of the Anthropocene.¹ Investors quickly bought up the land, the railroads arrived in 1851, and the Calumet Harbor was created with funding from Congress. Structures were built 300 feet out into the lake to prevent sand building up at mouth of river and a channel was dredged to allow larger ships to navigate the river. This made the land just north of the mouth of the river ideal for the North Chicago Rolling Mills to relocate from the North Side of Chicago in 1875. By 1882, thirty new acres of land had been built up by landfill. "In the year 1878 and 1879 the company commenced to deposit systematically, great quantities of slag and refuse from their mills, on the shore and in the lake along it thereby artificially increasing the natural advance of the shoreline."² In 1889 the mill expanded and was renamed Illinois Steel, and in 1901 it became United States Steel, who, by 1922, had quickly expanded the land to its current 573 acres.

1. Bouman 105-107

2. U.S. Congress 'Survey of the Calumet River,' 1882, 3. cited by Colten 20

CHANGING COASTLINE OF SOUTH WORKS



Fig. 2

The Ore Walls: Chicago's Grand Canyon

The ore walls, South Works' most striking remaining feature, run parallel to the site's north slip just above 87th street. In the flat terrain of Chicago, and several miles south of the Loop's skyscrapers, they loom on the lakefront, creating canyon-like spaces. Running 2000 feet in length and between 30 and 40 feet high, these four walls were built to store the raw material used in the iron and steel making process. Ships would dock in the slip next to the the walls and unload iron ore by a massive crane system that ran along tracks at the top of each wall. The cranes would then deliver materials to the four blast furnaces located directly to the south. The slag byproduct from the furnaces served not just to create new landfill; it was also used as an aggregate in the concrete that was poured in consecutive layers to build the walls. You can see these chunks of slag, porous and gray, if you look closely at a broken chunk of the concrete. The slag sits about 20-40 feet below the ground level, acting as a stable base for the construction. The water table sits at approximately the same level as the water one can observe in the slip. Wooden piers, or piles, were driven into the slag and submerged below the water, causing the wood to become water-logged, preventing rot and providing a permanent base for the walls.

During early redevelopment at South Works an attempt was made to demolish the ore walls using dynamite. It failed, but evidence remains in several gaps and crumbling sections of the eastern end of the walls closest to Steelworkers Park. As local resident and documentarian Kevin Murphy put it, "like the Grand Canyon we knew they would be there forever."



*Ore walls filled with raw materials,
South Works
Courtesy: Southeast Chicago Historical
Museum*

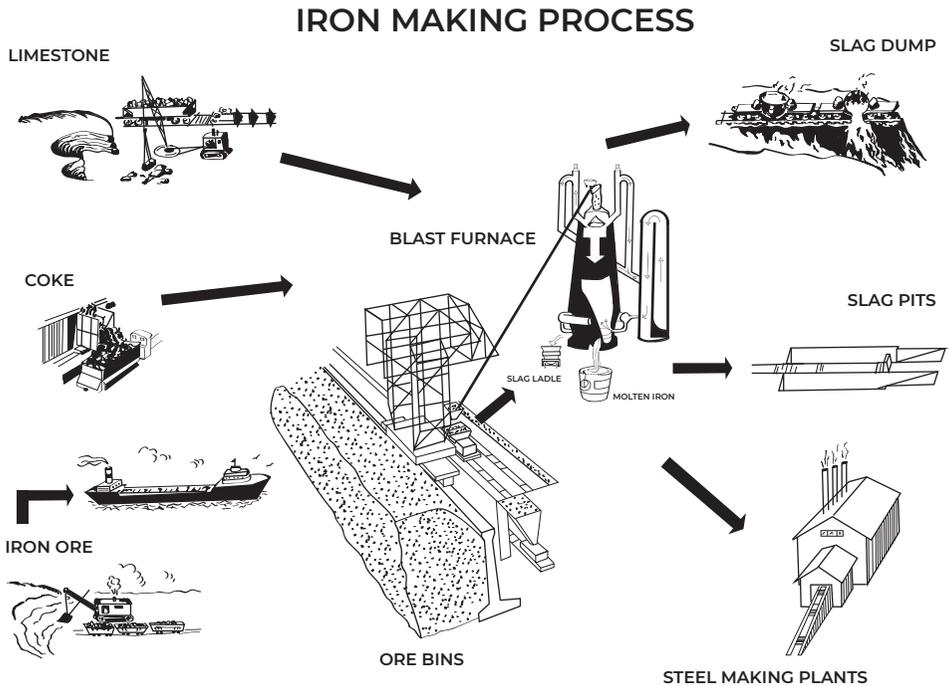


Fig. 3 Illustration based on 'Blast Furnace' diagram in *The Making Shaping & Treating of Steel, 1957* and promotional booklet *Your Visit to... South Works* both published by the *United States Steel Company*

The steel produced at South Works built the railroads that made Chicago a central hub for the country and are the bones of the skyscrapers that make up the city's Loop, including the John Hancock and Sears Tower, now known as the Willis Tower. To make steel, impurities are removed from raw iron, then new alloying elements like vanadium, chromium and manganese are added to create the different types and grades of steel. Before this process, iron must be extracted from the raw ore. Most of the iron ore used at South Works originated in northern Minnesota, specifically the Mesabi Range, a 120 mile belt of iron formed during the Precambrian period.¹ This rock, extracted through open pit mining, is about 55% iron. It is crushed to a fine powder and the iron is removed using magnets, or through a chemical process involving cornstarch. The iron ore powder is then combined with bentonite clay and formed into kiln-fired, marble-sized pellets, which are transported via ships from Lake Superior down to the southern tip of Lake Michigan where South Works sits.²

The recipe for a pure iron product is two parts iron ore and one part limestone and coke. These three elements are combined in a blast furnace and heated to a molten state. The limestone works as a fluxing agent, acting to pull away impurities from the iron through a thermo-chemical reaction that results in the slag byproduct. In the furnace, the slag floats above the heavier iron,

which is tapped off first. The slag comes out of the furnace at 1500 degrees Celcius and is carted in firebrick lined train cars to be dumped, cooled, or processed. The limestone used at South Works was sourced from Indiana, still one of the main sources of limestone in the United States. Dolomitic limestone is a sedimentary rock formed from the build up of the bodies of marine animals at the lake floor, and is therefore high in calcium carbonate with some magnesium carbonate. Coke is a high carbon fuel made from refined bituminous coal that burns extremely hot. This would have been brought in by rail from Gary, where it was processed, on the EJ&E Railroad.

1. Camp, Francis, and McGannon 156
2. Palmer 86

Slag Industry

On account of their fusibility, chemical activity, dissolving power, and low density, slags furnish the means by which impurities are separated from the metal and removed from the furnace both in iron and steelmaking processes. Since slags possess the power of dissolving oxides, they are used effectively as a means of controlling the composition of the bath of metal beneath. In the metallurgy of ironmaking, the importance of slag cannot be overemphasized.

*-The Making, Shaping and Treating of Steel, Chp. 7, Sect. 2, 'Slags'
United States Steel, 1957*

"The time had come for full recognition of Slag's potentialities. This is what the Association has tried to achieve. Today, millions of tons of Slag aggregates are produced annually in the United States. Its future is limited only by the imagination of its users."

-Nation Slag Association

Rich Droske, Director of Sales for Beemsterboer Slag Corporation and member of the Board of Directors for the National Slag Association for 18 years, showed me around the company's operations in Gary, Indiana. Massive hills of slag create a dusty, desert-like landscape on the southeastern shore of Lake Michigan. Adjacent to Beemsterboer, U.S. Steel's Gary Works facilities loom to the south. Piles of slag emit steam where loads of still cooling rock have been dumped, transported directly from the furnaces. These audibly crackling rocks emit a volcano-like steam, transforming the hills into looming, geologically metamorphosing phenomena. This man-made process allows us to watch on a human time-scale as rocks are formed, a process that in geologic time might take thousands to millions of years.

In the early days of South Works, slag from blast furnaces would have been dumped into pits to cool and harden. Different types of slag result from iron

and steel making- each step of the process yields a different chemical makeup and appearance, which explains the variety of slag found at the South Works site. The metal-heavy slag found there contains up to 10% iron, whereas the furnaces of today with computer technology have decreased the margin of error to 2%. The slag industry now controls cooling to create products for different purposes. Air cooled slag is crushed into various sizes for construction. Expanded slag is cooled using water to create a vesicular, or porous, lightweight product used as construction aggregate, a strengthening material added to concrete or asphalt. Granulated slag is made by pouring molten slag onto a spinning disk and quickly cooling it with water, resulting in sand-like, glassy granules used in cement.¹ The slags are flushed with water to remove any impurities that could leach out. As a show of confidence in the safety of his products Rich will drink from a glass of water containing slag.



Slag found at South Works, Stella Brown

Slag has been with us as long as metallurgical processes, and creative uses for the byproduct are just as old. It was used to pave the roads of Rome over 2000 years ago and probably brought as ballast in the ships of the first white settlers to the Americas. This man-made rock permeates human construction across the world. Once you recognize this product you will see it in soils, at construction sites, along railroad tracks, and beaches. The slag industry sells the various forms of slag as cement, aggregate for concrete and asphalt, for drainage, as insulation in the form of rock wool, and as Ag-Slag, a pH balancer for soils in agriculture. These companies see the reuse of slag in industry as playing a

relatively environmentally friendly role by using what would otherwise be waste products of the steel industry. Some processes, particularly those for creating stainless steel or copper, yield incredibly toxic slags. Treated incorrectly or without consideration, slags can cause health risks and environmental damage.



*Cooled slag waiting to be processed, Beemsterboer Slag Corp., Gary, Indiana
Photo: Stella Brown*

ANTHROPOCENE LANDFORMS OF SOUTH WORKS



1. ARMORED COASTLINE



2. CENTRAL ORE WALL CANYON



3. ORE WALL MONADNOCK



4. CLIFF WALL



5. SURFICIAL DEPOSITS



6. ANTHROSOLS

1. Large slag boulders, steel and iron detritus and concrete formations from demolition rubble have been added to create a coast armored against lake erosion.
2. The central of three canyons on the site has a wide, flat valley with a variety of vegetation running the length of the site east to west. Its northern cliff is made of an older concrete with slag aggregate and its south wall is concrete with limestone buttresses.
3. The western end of the more recently formed larger ore wall rises conspicuously from the flat land around it to form a monadnock. This end of the cliff has a sheer, flat face with visible weathering.
4. This wall shows signs of erosion caused from weathering with a distinct iron oxide patina from the iron ore it once stored with clearly visible sedimentary strata of consecutive layers of concrete with slag aggregate.
5. Several types of slag, concrete, fired clay brick and gravel-sized slag lay scattered in a till-like deposit on the surface of the landscape along the coastline, similar to glacial deposits.
6. This anthropogenic soil, or anthrosol, is comprised of a till-like mixture of gravel sized slag, fired clay bricks, construction rubble and iron and steel detritus. The strata reveal a layer of soil at the top, transitioning to solid slag, then to a looser, larger grained mixture.

ANTHROPOCENE LANDFORMS OF SOUTH WORKS



7. VERTICAL STRATIGRAPHY



8. PENINSULA



9. ORE WALL TALUS SLOPE



10. SLAG FLOW FIELD



11. ORE WALL RAVINE



12. SLAG DEPOSITS

7. These rare vertical layers of strata show clearly defined divisional planes of limestone in cement matrix abutting concrete with slag aggregate on a western section of the ore walls.

8. This concrete peninsula, or breakwater, extends into Lake Michigan from the northern section of South Works adjacent to the North Slip.

9. A talus, or mass of broken rock fallen from a mountain or cliff, is generally formed by natural erosion. This formation is a result of anthropogenic geomorphology, a human attempt to demolish the concrete ore walls.

10. This feature is the result of a slowly cooled, once-molten slag flow poured over the underlying geology. It has hardened to a solid and shows little weathering or soil formation on its surface due to the hardness of the slag material.

11. This ravine, similar to a canyon but narrower, runs the width of South Works from east to west along the North Slip. Its walls are formed of concrete with slag aggregate.

12. South Works' southern coast features prime examples of slag boulders formed during the iron making process.

South Chicago & the Bush

“As South Works goes, so goes South Chicago.”

– Rod Sellers, James P Fitzgibbons Southeast Chicago Historical Museum

Rod Sellers is the acting President of the Southeast Chicago Historical Museum located in Calumet Park’s fieldhouse in a former public library. Sellers and a number of other longtime residents act as keepers of shared cultural and historical knowledge. The urge to preserve history is strong in Southeast Chicago, and on Thursdays when the museum is open to the public it is full of current and former residents there to see the artifacts or drop off more documents for the archives.

The neighborhoods directly adjacent to South Works are South Chicago and the Bush, a sub-neighborhood of the former. Settled in 1836 as a small farming community, it remained fairly remote from the city, acting as both a hunting ground for city residents and a way to get away to nature. In the mid-nineteenth century investors bought up most of the land, hoping that a canal would be built making the Calumet River an industrial hub, but the I&M Canal was created, connecting to the Chicago River instead. Industry did not take hold until the 1880s. At that time a handful of small communities were annexed into the city limits and became South Chicago. The neighborhood really began to grow when United States Steel took over South Works in 1901. Their mill and others attracted immigrants from Ireland, Poland, Italy, Eastern Europe, Scandinavia as well as a Jewish population. By 1910 the city’s first Mexican immigrants were taking root in the neighborhood. Our Lady of Guadalupe Church, built in 1923, is the oldest Mexican established parish in the city and still stands today.

The history of U.S. Steel’s labor practices is dismal. As early as 1919 workers were striking at South Works, but did not unionize until the National Labor Relations Act of 1935. In 1937, during a strike over union contracts, the police killed ten protesters in what is known as the Memorial Day Massacre. By 1942 the United Steelworkers International Union of America was established, but the necessity to fight for workers’ rights, especially in an industry as dangerous as iron and steel manufacturing, persisted. At its height U.S. Steel employed 20,000 workers, many migrating from the South and establishing a new African American population in South Chicago and the Bush. By 1979 they were down to 10,000 employees, signaling the downturn of the steel industry experienced across the nation. The plant closed in 1992 disrupting the economy of the neighborhood and the livelihood of its residents permanently. Industry has not returned and the area still struggles economically, but thanks to the commitment of its residents a number of social service agencies, some led by community members, have been established. Many feel that South Chicago and The Bush are continuously overlooked by the city government and in a tradition of activism that runs throughout Southeast Chicago, they work to ensure its future. Today one finds a culturally thriving neighborhood with lifelong residents and generations of families.

Nature Reworked: Ecology of the Calumet Region

Industrialization came quickly and forcefully to a region that happened to have unusually high species richness. It is situated at one of the great Ecotones of the mid-continent, where vestigial boreal vegetation meets Indiana's great hardwood forests and Illinois' tallgrass prairies. Its sands and marshes are textbook examples of Wisconsinan glaciation that made the wet-dry alternation of sand and marsh a boon to biodiversity and a bane to European farming technique.

-Calumet National Heritage Area Initiative Feasibility Study, 2018

'Nature Reworked' is a phrase used by geographer Mark Bouman to describe the Calumet Region as a place where industry has thrived and formed the landscape. It is also a place where nature has persisted and come to reclaim some land. The phrase illustrates the idea that humans can live in the Anthropocene age alongside nature in a new configuration where both must concede some space for the other. The Southeast Side of Chicago is a prime example of this new global reality, where sites of living and relict industry and residential communities sit alongside swaths of nature. These ecosystems are both remnant, preserved from the time before human development, and newly remediated and nurtured. The nature preserves of Big Marsh, Van Vliissingen Prairie, Indian Ridge Marsh, Eggers Grove, Burnham Prairie and Woods, Powderhorn Prairie and Marsh, and Hegewisch Marsh, among others, are cared for by a community of stewards and volunteers. The diversity of ecosystems in this small swath of Calumet is an illustration of the biodiversity of the greater Calumet Region.

South Works is a prime example of nature reworked: man-made land with industrial contamination that became home to a forest of cottonwoods, grasses, and other plants amenable to the lakefront. Migratory and resident birds attracted to the site create a haven for birdwatchers. In 2002, the Chicago Park District was gifted the lakefront of South Works thanks to the Burnham's 1909 Chicago Plan that orders all lakefront land to be open and publicly owned. Soil dredged from Lake Peoria via the Department of Natural Resources' Mud to Parks program was trucked in to create a 24" clean cap on top of the slag and over 20 native Illinois species of grasses and wildflowers were planted in the park's "natural areas." Matt Freer, Assistant Director of Landscape for the Park District, described the site as not ideal, but better than other brownfield sites for plant life. The roots of the plants will continue work to break up clay and slag below the soil and further its remediation.

In 1997 U.S. Steel received a No Further Remediation (NFR) letter for South Works. This letter, issued by the Illinois Environmental Protection Agency, acknowledges that the owner of the land has cleaned up, or remediated, the site to satisfy the IEPA's laws and requirements. All documents pertaining to the cleanup have been made available through the Freedom of Information Act and can be accessed at:

<https://external.epa.illinois.gov/DocumentExplorer/Documents/Index/170000174004>

Brownfields as potential refuges for rare species

by Lauren Umek

Project Manager, Department of Cultural and Natural Resources, Chicago Park District

Rare plants have begun to colonize areas that were severely impacted by the steel industry on the South Side. Rather than cover these brownfields with topsoil and attempt to create another mediocre prairie “from scratch,” is nature giving us a clue that these areas can actually serve as sort of “man-made” habitats for rare species?

While some slag may be contaminated with high levels of heavy metals and polyaromatic hydrocarbons, there are some remarkable similarities between slag fields and dolomite prairies. Both soil types have a similar rocky structure, with minimal organic matter, and high pH. As a result, some Chicago Parks that are covered with slag have become home to unique and rare plant species including, sedges *Carex viridula*, *C. aurea*, an orchid *Spiranthes cernua* and *Agalinis tenuifolia*. Typical restoration methods suggest that slag fields be topped with at least 12” of topsoil prior to restoration in order to ensure that there is enough soil and organic matter depth to support native prairie root growth. However, this method is expensive, arguably wasteful, and comes with a very high maintenance cost associated with imported topsoil that is typically sourced from construction sites or agricultural fields and may contain weed seeds, and high levels of nutrients that encourage weedy species growth at the expense of natives. An alternative restoration approach, one that is potentially more cost effective and provides habitat for more rare and unique species than topsoil, is to develop a unique “slag mix” of native species seeds. This species list, based on what is already present in slag fields (without any intervention) and in analogous natural ecosystems, such as dolomite prairies or gravel hill prairies, may allow for greater beta-diversity within the Chicago region and effectively increase the potential habitat for rare species in an otherwise difficult to restore landscape.



Carex viridula (Little Green Sedge)
Photo: Christian Fischer



Spiranthes cernua
(Nodding Ladies' Tresses Orchid)
Photo: Dr. Thomas G. Barnes,
U.S. Fish and Wildlife Service

Environmental Activism in Southeast Chicago

Interview with Tom Shepherd

Tom Shepherd, a Pullman native, became a part of the environmental activism taking place in Southeast Chicago when he returned to the neighborhood in the late 1990s. Like many other Southeast Side residents, he fills several roles as activist, environmentalist and local historian. He has served as the President of the Southeast Environmental Task Force, is currently on the board of the Calumet Heritage Partnership, and is active with many other organizations and environmental efforts. He described being brought to activism because of changes he saw since his childhood with odors from landfills and increased pollution in Lake Calumet. Marian Byrnes, considered by many to be the instigator of environmental activism in the area, began the work that continues to this day with organizations like the Southeast Environmental Task Force.

Stella Brown: *When did environmental activism and waking up to what was happening in the area really start? With Marian Byrnes?*

Tom Shepherd: *In the 80s. We had a forward thinking State Representative Clem Balanoff... Clem appointed Marian [in an environmental capacity] and it gave her a platform to do a lot of this remediation, get a moratorium on dumping, and just go after recalcitrant dumpers in the area. And another thing happened that gave the people awareness in the neighborhood— that they were more than just a dumping ground— when Mayor Richie Daley announced that he was going to build an airport.*

SB: *So people in the area were very much against that? Why was that?*

TS: *It was going to eliminate the whole neighborhood of Hegewisch, the whole town of Burnham, a portion of Calumet City, and a portion of the East Side. The Ford Plant was going to have to go, Lake Calumet was going to be filled in for runways, and the Calumet River was going to be rerouted: it was just monumental and people were in shock and awe. This coalesced Marian's little band of environmentalists and the liaisons she made with Friends of the Parks, the Alliance for the Great Lakes, and other environmental groups.*

SB: *Has this historically been a place where the city just sort of shoved its garbage?*

TS: *This has been the dumping ground, not so much Pullman, but more on the Southeast Side, has been a dumping ground for generations now. And that's where Marian Byrnes began her effort to stop the dumping. Back in the 90s she and others got together and formed a committee for a better environment and they were successful in getting a moratorium on landfilling of garbage. Waste Management had bought up a lot of this marshland around here, which really had served a function for thousands of years, because from Lake Calumet all the way to Lake Michigan was marshland and Calumet River and Indian Creek.*

SB: *Has any of that been left intact?*

TS: *Yes, some of it has been left intact and some of it has undergone restoration due to Marian Byrnes and her activities.*

SB: What's really interesting about the area is that you're fighting to preserve these areas and restore them ecologically, but then at the same time there's the industry and an appreciation for the history of the industry. I'm wondering how you feel about that, how do you strike that balance?

TS: Just as one example there's a Chinese railway car manufacturer being built, as we speak, in the Hegewisch area and it's being built on property that had formerly been industrial. They're going to employ about 600 people there so it's a number of jobs for the area and they're going to do it in a clean environmentally friendly manner.

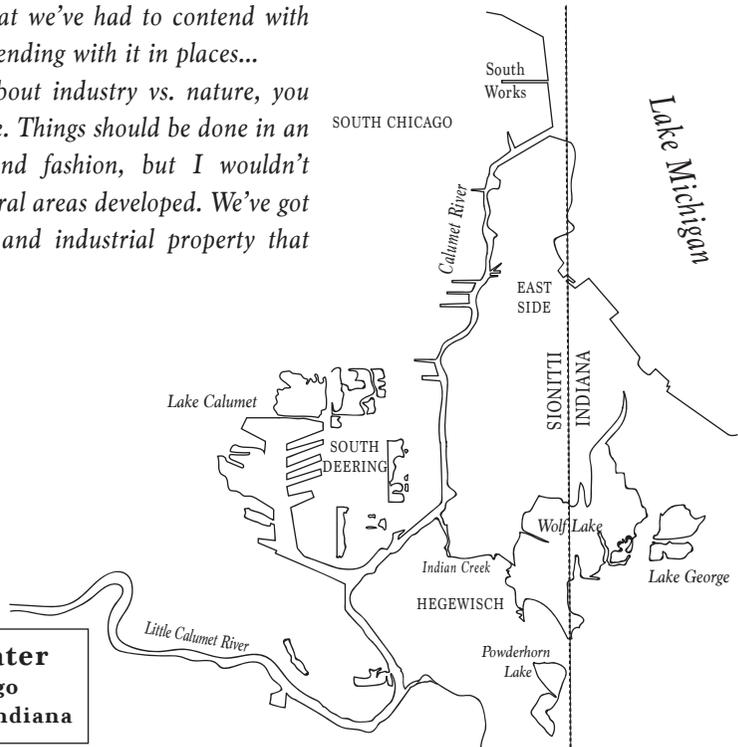
SB: So in your opinion the industry is good, people want the jobs, but it's just that they want them to come in in this environmentally sound way?

TS: That's a good way to put it.

SB: What do you feel would be the most beneficial use of the South Works land? For example, do you want it turned into one giant, amazing park, and if so do you just leave it as is, if it's safe? Because what has taken over and grown there is interesting, or do you restore it and turn it into a native habitat, or develop it because it would bring jobs to the area?

TS: I look at a combination of things and I think there's room for some of this and some of that. We fought to preserve some properties... Wolf Lake had dumping of slag for many years until the Department of Natural Resources turned it into the William Powers State Park. Slag is something that we've had to contend with and we are still contending with it in places...

To that argument about industry vs. nature, you know it's a tough one. Things should be done in an environmentally sound fashion, but I wouldn't want to see our natural areas developed. We've got enough brownfields and industrial property that can be developed.



**Bodies of Water
Southeast Chicago
and Northwest Indiana**

A Civic Asset: The Future of South Works

“Chicago’s greatest physical and most sublime historic resource lies dormant: the ore walls. These four parallel, half-mile long, 30-foot-high battered masonry walls, once filled with limestone and iron ore that fed the largest blast furnace in the world, are now filled with volunteer native plants and over 200 bird species. The walls define vast exterior rooms that open to the sky and to Lake Michigan.

We see that the ore walls at the U.S. Steel South Works are yet again threatened by speculative development. At 87th Street and the lake, Chicagoans have walls equal to those found in Egypt, China, the fortified cities of Europe. We must not squander the opportunity to turn them into a civic asset. We should retain and embrace the ore walls and the spaces they define rather than demolish or obscure them with already dated, privatized architectures.”

*-Dan Wheeler, Principal, Wheeler Kearns Architects and
Professor of Architecture, University of Illinois at Chicago
from letter published in the Chicago Tribune, August 8, 2017*

Like many Chicagoans from outside the Southeast Chicago area Dan Wheeler encountered the ore walls on a bike ride soon after Lake Shore Drive had been rerouted. He was struck by their historical significance and the role they were playing as an urban oasis for plants and birds. Development of the site, which had sat essentially dormant since the steel works’ demolition in 1995, was being planned between U.S. Steel, McCaffrey Interests and the City of Chicago. 470 acres would be turned into a new lakefront neighborhood called ‘Lakeside’ with homes, residential towers and a commercial complex. Wheeler wrote this letter to appeal to the city government and to the prospective developers to view the walls and the nature they have attracted as a valuable piece of architecture worth preserving- to suggest they might “cordon off this cultural artifact” like one would a national park, as the rest of South Works is inevitably built up.¹ Previous to his letter the Tribune had published some of the McCaffrey proposals and he wanted to ensure another opinion was part of the public conversation.

Wheeler sees this as “an opportunity to have a radically different landscape that would be a little more didactic about what was here before,” acknowledging the role that the steel industry played in the creation of this landscape and honoring the materiality of the site. He says, “when you’re within the walls you see nothing but sky, when you build a tower you lose that away-ness.” Keeping any new construction to a height minimum would preserve that feeling of isolation the walls provide, and leave the possibility for a public performance space, as Wheeler suggests, with the walls already providing a great acoustic space. He hopes that “over time the community might take it over, that it become a public space not a private space.”

Currently, a new development plan between the Irish company Emerald Living and Spain-based Barcelona Housing System has been proposed, but is on

hold due to continued concerns about soil contamination. Based on conversations with residents of Southeast Chicago the general feeling is that if the area is developed it will not be happening any time soon. Despite the possibility of a boost to the economy and opportunity for jobs they are more concerned with their neighborhood and community staying intact. To them, a successful plan would extend South Chicago into the South Works land, rather than creating a shining new, and possibly inaccessible, upscale residential area with no connection to their deep past.

Since the opening of Steelworkers Park, Southeast Chicago has reclaimed the land for their own. Recently, the Calumet Heritage Partnership, the Park District, and Beemsterboer Steel collaborated to place preserved blast furnace bells from the Acme and Bethlehem steelworks in the park as a reminder of its industrial past. Roman Villareal, a lifetime resident of South Chicago, artist and former steelworker at South Works lives blocks from the park and visits often. His sculpture, *Tribute to the Past*, sits at the entrance to the park and he is working to bring more local artwork into the area, including a shrine to the workers who lost their lives there.

Calumet Heritage Area

In April 2018, the Calumet Heritage Initiative Partnership Initiative, a collaboration between the Calumet Heritage Partnership and The Field Museum, and specifically the Field's Chicago Region Program Director, Mark Bouman, applied for a National Heritage Area designation for the Calumet region, stretching from the South Side of Chicago into Indiana including the lakeshore and the Dunes. The biological diversity, rare and specific geomorphology, relics of America's industrial past, and rich cultural histories make the region deserving of the title. This appointment would support the area "by fostering community stewardship of our nation's heritage through support of historic preservation, natural resource conservation, recreation, heritage tourism, and educational projects."² Regardless of the outcome, Southeast Chicago and the greater Calumet region are already home to an impressive number of organizations, museums and individuals devoted to the preservation and future of a landscape that is a prime example of the collaboration between nature and humans that defines the Anthropocene.

1. Wheeler, Dan. Interview, May 5, 2018

2. Calumet Heritage Initiative Partnership Initiative Feasibility Study 1

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Science Action Center, The Field Museum
Previous President, Calumet Heritage
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Field Museum Journey Through Calumet:
<http://archive.fieldmuseum.org/calumet/introduction.html>

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Calumet Stewardship Initiative
calumetstewardship.org

Calumet Heritage Partnership
calumetheritage.org

Southeast Environmental Task Force
setaskforce.org

