

REUSE AND ECONOMICS IMPACTS NIPSCO POWER GENERATION FACILITY MICHIGAN CITY, IN

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1. Introduction

The energy market in the United States is changing with growing community and economic pressures, and coal-fired power plants across the country are shutting down (Delta Institute 2018). Cleanup, demolition, and reclamation of coal-fired power plants will accelerate over the next decade as renewable energy development grows, and carbon dioxide emissions are reduced to counter the impacts of climate change. This supplemental report is part of the economic impact analysis of “Clean Closure” at the Michigan City NIPSCO facility described in KirK Engineering (2021).

The creation of jobs and revenue linked to facility closure and environmental cleanup will eventually end, but environmental protection lasts in perpetuity. Continued short-term economic gains are possible through redevelopment. Similar to the economic benefits of closure and environmental cleanup, these gains are related to construction jobs and capital investment. Long-term economic gains are possible by targeting jobs creation as part of the redevelopment planning process. Other factors should be considered in the redevelopment planning process including community needs, environmental justice, ecological value, and other considerations needed to select a preferred redevelopment plan.

NIPSCO’s Michigan City Generating Station is located within the Michigan City municipal boundary and governed under local zoning ordinances for planning purposes. The facility is located on the shores of Lake Michigan next to Indiana Dunes National Park and Michigan City’s Washington City Beach Park. Reuse opportunities on the shores of Lake Michigan are rare, which means the opportunity garners local interest and out-of-area developers. Redevelopment at the site offers an excellent opportunity for a community-led redevelopment plan. A community-led redevelopment plan considers redevelopment alternatives that, for example, mitigate legacy economic and health impacts residents endured living next to a coal-fired power plant for over 100 years, ensure environmental justice is linked to redevelopment, generate revenue for the city and local businesses, and enhance quality of life for city residents. Environmental justice in this case means residual contaminants are adequately remediated so that any future reuse of the site is possible, and the redevelopment plan is not limited because of environmental restrictions.

Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies (<https://www.epa.gov/environmentaljustice>). Environmental justice is achieved when everyone enjoys the same degree of protection from environmental and health hazards, and there is equal access to the decision-making process to having a healthy environment where Michigan City residents live, learn, and work. A well planned and complete cleanup achieves a healthy environment that benefits the entire community. A community-led redevelopment plan achieves a better place for Michigan City residents to live, learn, and work.

Reuse and economic revitalization of contaminated sites is not new. The U.S. EPA Brownfields program was created in 1995 to aid states, counties, and local governments in identifying, planning, and remediating contaminated sites for economic and recreational gain. The program is designed to empower states, communities, and other stakeholders to work together to prevent, assess, safely remediate, and sustainably reuse contaminated sites. For most Brownfields sites, the property is abandoned, left by the owner, or the responsible party for the cleanup is out of business, which is not

the case for NIPSCO. However, the community planning ideals are apt for applying them to the NIPSCO facility. Like the Brownfields program, a key goal of reuse is having the local community embrace and lead reuse planning and consider economic, recreational, housing, and community needs at the site. Without a locally-led reuse plan, outside interest groups or organizations may acquire the site, targeting profit over community needs, and avoid mitigating legacy economic disparities and addressing environmental justice.

2. Case Studies

The following case studies are examples of community planning and redevelopment success stories. The case studies were selected based on the proposed redevelopment end use or process used to engage a community in the redevelopment process. They also serve as examples to incentivize Michigan City residents to lead redevelopment at the NIPSCO facility.

2.1 Developing a Multiuse Reuse Plan - Shenango Coke Plant

The Shenango Coke Plant, owned by DTE Energy and located on Pennsylvania's Neville Island, closed in January 2016 following years of environmental violations and community protest. In 2019, a number of local and regional concerned parties formed the Shenango Reimagined Advisory Council (Council) to better understand the needs and desires of the community for redevelopment and explore options for reuse (Delta Institute 2020). The Council decided that the end reuse must be feasible given local and regional market realities, have a positive economic benefit for the Neville Township, and not create environmental or health consequences for Neville or surrounding communities.

The re-visioning process identified seven Guiding Principles for reuse important to the community and redevelopment of the site. The process also identified 20 reuse ideas that align with the Guiding Principles and market forces. Together these elements form a conceptual regional model for commercial and industrial redevelopment expressed with site renderings (Figure 1).

Figure 1. Existing conditions and proposed reuse rendering. Source: Delta Institute 2020.



Redevelopment of the former Shenango Site has the potential to economically and environmentally impact over 18,000 residents of the Neville Township and the four northern boroughs combined and up

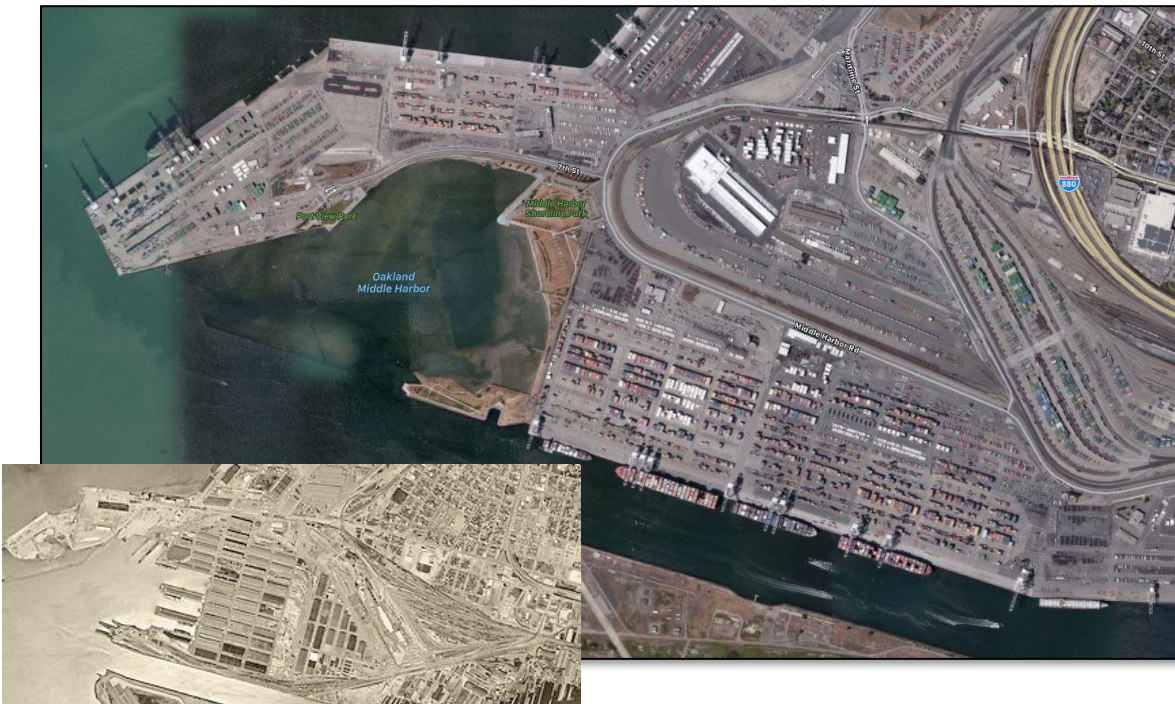
to 70,000 Pennsylvania residents living within a three-mile radius of the Site (Delta Institute 2020). The planning process yielded a community plan that can be implemented to bolster economic development, improve environmental outcomes, and expand revenue opportunities for the municipality.

2.2 Economic Development – Navy Fleet and Industrial Supply Center

The Fleet and Industrial Supply Center, Oakland was a war-time supply facility operated by the U.S. Navy in Oakland, California. During World War II, it was a major source of supplies and war materials for ships operating in the Pacific (https://en.wikipedia.org/wiki/Fleet_and_Industrial_Supply_Center,_Oakland).

The Depot had its origin in 1940 when the Navy bought 500 acres of wetlands from the city of Oakland for \$1.00. The Navy developed the land and populated it with large warehouses. It opened on December 15, 1941 and quickly began a decades-long expansion. In the late 1940s it was renamed Naval Supply Center, Oakland; later it was renamed Fleet and Industrial Supply Center, Oakland. During the Cold War, it was one of the Navy's most important supply facilities. The site was environmentally contaminated due to past activities. The 1995 Base Realignment and Closure Commission recommended that the Center be closed. The based was closed in 1998, and in 1999, the Navy transferred the entire 531-acre property to the Port of Oakland, a division of the City of Oakland. The new owner redeveloped the remediated facility into an expanded area of their intermodal freight transport marine terminal, railroad, and truck cargo facilities. A portion of the supply depot was developed into Middle Harbor Shoreline Park in 2003. The buildings were removed, and environmental restoration created new wetlands for wildlife (Figure 2).

Figure 2. Existing conditions and the former naval supply center. Source: Google Maps and Aerialachrives.com



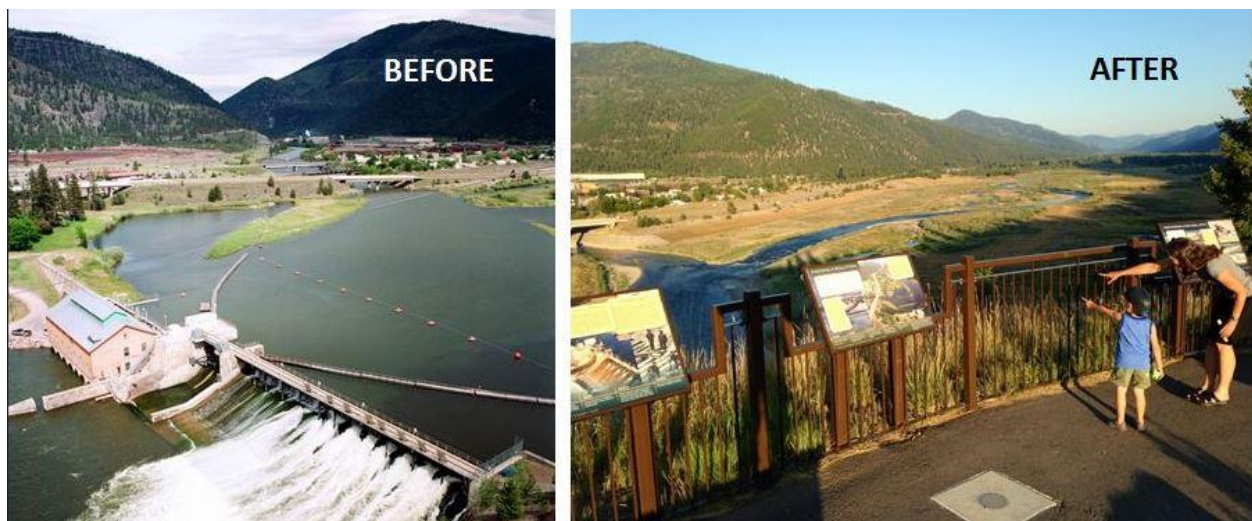
In many respects, redevelopment at the former Navy facility can be called an economic success story. The project demonstrates how a municipality can lead reuse of a once contaminated military base and convert it into a marine terminal and waterfront park. The civilian and military personal that worked for the Navy were replaced with Port of Oakland employees. Local jobs were created as part of the reuse plan and revenue continues to be generated for the city by operating the marine terminal. Other reuses, such as low-income housing, were discussed but not adopted by the city or pursued by the Navy. Middle Harbor Shoreline Park was eventually constructed to provide wetland habitat and ensure area residents had access to San Francisco Bay. Park construction helped quell objection to the preferred reuse alternative of a marine terminal. The economic opportunities from an expanded marine terminal quickly eliminated other possible reuse alternatives. While not a community-led redevelopment effort, the preferred reuse demonstrates how an industrial site can be redeveloped to boost and support a municipal economy.

2.3 Community-Led Ecological and Recreational Reuse – Milltown Dam Removal

For 100 years, Milltown Dam near Missoula, Montana blocked the confluence of the Clark Fork and Blackfoot rivers, trapping toxic sediments that washed down from mines in Butte, Montana. The sediments impacted local drinking water wells, the fishery, and riparian habitat. Between Milltown Dam and headwaters of Silver Bow Creek in Butte, the site is the largest Superfund complex in the nation.

The removal of Milltown Dam at the confluence of the Clark Fork and Blackfoot rivers near Missoula is one of the greatest restoration success stories in the West (<https://clarkfork.org/our-work/what-we-do/restore-the-best/confluence/>). A local nonprofit group, Clark Fork Coalition, spearheaded a decades-long, collaborative effort to list the Clark Fork River as a Superfund site, clean up a century's worth of mine waste, remove the dam, and reunite two rivers. The former dam and reservoir area are now a restored floodplain, and the confluence of the Clark Fork and Blackfoot are open for recreation and fish migration (Figure 3).

Figure 3. Milltown Dam before and after dam removal. Source: clarkforkcoalition.org



The dam was built in 1905 to generate power. A possible reuse alternative that was considered was to leave the dam in place, continue generating renewable energy, and remove sediments built up behind the dam. Instead, dam removal became the preferred solution based on a culmination of two decades of

studies, proposed plans, lobbying, campaigning, and public input. Eventually a final plan to remove the ageing dam and the copper and arsenic-laden sediment behind it was selected (<https://clarkfork.org/reflections-on-milltown-dam/>). Community support for removal was overwhelming, pressuring decision makers to remove the dam and accelerate remediation. Removal and restoration construction was completed many years before upstream headwaters were cleaned up, which continue to undergo cleanup today.

The plan for the redevelopment of the Milltown area included creation of a state park and trail system connecting the surrounding communities. In 2007, a conceptual design for the park was created in cooperation by the Milltown Superfund Redevelopment Working Group; the Montana Department of Fish, Wildlife, and Parks; the National Park Service Rivers and Trails Program; and the Idaho-Montana Chapter of the American Society of Landscape Architects, exemplifying the need for partnerships for site redevelopment. In 2009, a grant proposal for the initial park development was submitted to the Montana Natural Resource Damage Program and funded to complete the construction.

Following the removal of the dam and mining waste, native fish including endangered bull trout navigate upstream, and the two rivers flow free. This reuse success story emphasizes the importance and need for community-led reuse plans at contaminated sites. Without a determined community, public demands, and partnership, the former Milltown Dam could still be in place today.

2.4 Affordable Housing Development – Washington Courtyards

In 1996, the Avenue Community Development Corporation (ACDC) in Houston, Texas, conducted a door-to-door survey of the Washington Avenue area that identified affordable housing as a critical need. In response, ACDC contracted to purchase a 2.76-acre brownfield at 2505 Washington Avenue for housing development in December 1997. Three years later, a ribbon-cutting ceremony commemorated the development of Washington Courtyards, a 74-unit, mixed-income building (Schopp 2003).

The site previously housed a municipal greenhouse, an automobile sale/repair shop, a truck parts storage facility, and a used car dealership. ACDC used a U.S. EPA Brownfields Program grant to conduct a Phase I & II environmental site assessment and identified four areas within a quarter mile of the site where leaking petroleum storage tanks and contaminated soil were removed in 1989. In 1998, tests from monitoring wells revealed low levels of lead, arsenic, and chromium contamination in the soil and groundwater, which were below the action levels under the Texas Risk Reduction Program. The state issued a final certificate of completion for the site, enabling site development to proceed through numerous alliances of private, public, and community agencies (Figure 4, Schopp 2003).

Residential redevelopment raises several sociopolitical issues. Constructing affordable housing on former contaminated sites can trigger equity concerns because low-income people, if given a choice, might not wish to live there. However, remediating and redeveloping these types of properties as affordable housing can create an asset for low-income communities and encourage other commercial and residential investment nearby (Schopp 2003).

Figure 4. Washington Courtyards redevelopment. Source: Schopp 2003.



2505 Washington Avenue before redevelopment



Washington Courtyards after redevelopment

Promoting residential reuse at market prices raises still other concerns about contributing to gentrification, which can push out existing residents who can no longer afford the rising taxes and rents in their community as property values increase. Such social justice concerns are particularly strong where market-priced housing projects have been sited on former contaminated sites near highly desirable waterfront areas (Schopp 2003).

2.5 Light Industrial Development – Brick Township

The Brick Township Landfill Superfund site is located in Brick Township, New Jersey. The Brick Township was responsible for an expensive landfill closure. The town’s leaders started thinking creatively about how the site could help generate revenue to defray the cost to taxpayers (EPA 2015). They considered redevelopment of the area from building a medical office park to an indoor firing range for area police departments. In the end, they decided on a solar power facility large enough to supply all electricity needed by nearby township government buildings and community parks (Figure 5). When it was clear the township could not hire a single team to coordinate the cleanup and redevelopment construction, the township stepped up to coordinate the project by assembling a public-private partnership.

Figure 5. Before and after at the Brick Township landfill Source: EPA 2015.



The landfill began operations in the late 1940s and operated for more than 30 years as a disposal site for mixed wastes. An unknown number of 55-gallon drums were disposed of at the landfill containing engine oil, lubricants, automatic transmission fluid, antifreeze, resin, pesticides, and herbicides. A total of 63 million gallons of septic wastes were also disposed of in the landfill between 1969 and 1979. Brick Township purchased the landfill property in 1973 and closed operations in 1979. EPA placed the landfill on the Superfund program's National Priorities List in 1983. Contaminants from the landfill leached into groundwater, soil and sediment affecting about 470 acres of groundwater (EPA 2015).

In 1992, state officials ordered the township to construct an impermeable cap on the landfill. The township asked the state to allow an alternative remedy (monitored natural attenuation). The state agreed at the time that an impermeable cap was not needed; but it was later found that this less stringent remedy was not reducing contaminant levels quickly enough. EPA's risk assessment found that the levels of arsenic, chromium, mercury and vinyl chloride in the site's groundwater would pose a risk to human health if people consumed it. After multiple sampling events, EPA selected a final remedy in 2008, which included constructing an impermeable landfill cap and institutional controls to restrict the use of groundwater (EPA 2015).

Through the public-private redevelopment partnership, the township was able to leverage resources needed to create a 7-megawatt solar facility (EPA 2015). Brick Township installed the landfill cap in 2013 and in 2014 the solar developer installed the site's 24,000 solar panels. The solar facility is connected to the regional electric grid. The solar facility started producing electricity in October 2014 and by May 2015, the solar facility had generated over 3 million kilowatt-hours of power, offsetting as much carbon dioxide as 60,000 trees (EPA 2015).

Members of the collaborative project team learned several lessons during the project, and they suggest communities consider the following for similar projects:

- Integrating cleanup and reuse was crucial to the success of the project. By selecting a desired reuse prior to designing the cap, the design engineers were able to adjust the cap's design to optimize it for the solar panel construction.
- Having an experienced solar developer is crucial. Make sure the solar contractor has experience with similar projects.
- Environmental cleanup companies and solar developers operate in separate industries; they may not want to team up together on a combined contract.
- Make an extra effort to inform the public about the project, using a variety of methods. Putting in extra effort up front can help avoid misunderstandings down the road.

2.6 Unique Reuse Opportunities – Petrified Forest Expansion

The NIPSCO facility location offers unique and innovative reuse possibilities. The Lake Michigan shoreline and proximity of the Indiana Dunes National Park provide redevelopment alternatives that are not normally possible at closing facilities. The Indiana Dunes National Park typically has over two million visitors annually (<https://www.statista.com/statistics/254018/number-of-visitors-to-the-indiana-dunes-national-lakeshore/>). Michigan City can target redevelopment that capitalizes on National Park visitation.

National parks have limited authorized acreage they can manage, but National Parks can be expanded through executive order and new laws. Funding from the Land and Water Conservation Fund (LWCF), a

federal land protection program that receives significant revenue from the development of federally-owned offshore oil and gas rights, can be used to fund National Park expansion and renovation. The following case study demonstrates this type of land redevelopment at a National Park.

On December 3, 2004, President George W. Bush signed the Petrified Forest Expansion Act into law, more than doubling the authorized acreage of the park. The Act provided the authority for the National Park Service to acquire approximately 125,000 acres of private and State lands from willing sellers and transfer Bureau of Land Management (BLM) lands into the new boundary for the Park.

On May 18, 2007, the BLM transferred administrative jurisdiction of approximately 15,228 acres of public lands to the National Park Service. The funds for acquisition of lands came through LWCF, and no taxpayer dollars were used to support the transfer. As part of the transfer process, the Petrified Forest National Park competed for LWCF funds with other worthy projects across the National Park Service.

Using this funding approach, the former Paulsell Ranch was purchased from the Hatch family, adding 25,876 acres primarily to the eastern portion of the park. In January of 2013, the Conservation Fund, in partnership with the National Parks Conservation Association, purchased the 4,265-acre McCauley Ranch on the park's behalf. On December 26, 2013, the National Park Service purchased the ranch from The Conservation Fund. On August 30, 2016, a 7,629-acre portion of the NZ Milky Ranch in the southeastern portion of the park expansion was purchased by the National Park Service. Including several smaller parcels not highlighted above, the park has acquired over 53,000 acres since 2007, mostly in the eastern expansion area, and is leasing another 25,000 acres from the State.

Through partnerships with local, county, State of Indiana, and federal agencies and private stakeholders, it's possible that a similar process can be implemented at the NIPSCO facility, expanding Indiana Dunes National Park. The Michigan City business economy would benefit if the former NIPSCO facility could be redeveloped in part by the Park Service and merge it with other redevelopment alternatives that support local business development. For example, reuse alternatives could include a Climate Change Resource Education Center, or an overnight visitor campground owned and managed by Michigan City. Through partnering with the National Park Service, LWCF funds can be targeted for redevelopment to avoid or limit use of taxpayer funds. LWCF funds are an appropriate funding source because they are collected from the fossil fuel industry and would be used to redevelop a former coal-fired facility responsible for decades of greenhouse gas emissions, and in particular carbon dioxide.

3. Challenges, Strategic Planning, and Engineering

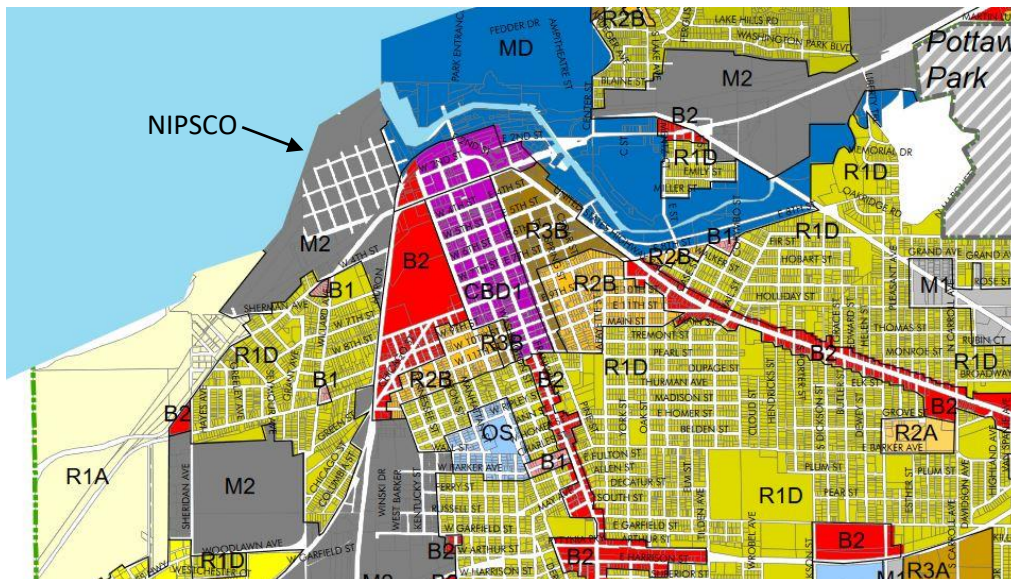
Closing the NIPSCO power generation facility is several years away. The complete cleanup of the site and demolition of the power generation facilities must be planned and executed. It may be possible to retain some of the existing power generation facilities, such as the cooling tower; however, funds are needed to maintain and eventually remove legacy structures if they become a hazard. It may be possible to collect demolition funds from the owner at closing and use the funds in the future for demolition. Reuse planning should not be delayed until cleanup is completed. The sooner the community and local leadership establish a placeholder on redevelopment, the more likely it is to realize local redevelopment goals. A placeholder on redevelopment could take the form of an agreement or memorandum of understanding between NIPSCO and a coalition of interest groups, community leaders, elected municipal leaders, planners, and volunteers. The agreement would outline the process to exchange reuse ideas, adopt a process to select a final redevelopment plan, estimate costs, and address

administrative needs, such as zoning changes. Outside interests in Lake Michigan shoreline development is almost certain. There will be competing redevelopment interests that likely are driven by profiteering versus local community needs.

Planning funds are needed to create a community board or council, identify key agency and stakeholder memberships, and develop a vision and actionable goals that support redevelopment once cleanup and demolition are completed. The source of funding for planning may be through local funds if available, state or federal government grants, or potentially nonprofit organizations providing in-kind support or funding. Michigan City may benefit from receiving in-kind support service, grant writing services, or outside reuse facilitation services needed to begin the reuse planning process.

Michigan City has a legal and vested interest in reuse because the power generation facility is located within city limits. For over 175 years, the city has invested local resources in the development and operation of city services, roads, and utilities. The city has a vested interest ensuring major changes within the city limits, such as a closing power plant, are well planned and reuse benefits residents, housing, and businesses. The city also has a vested interest in community planning and assuring citizen representation in a reuse selection process. To accomplish this, the city has legal authority over zoning, subdivision, annexation, infrastructure development, and community planning per local ordinance. Zoning at the NIPSCO facility is currently zoned as Heavy Industrial (M2). North of the site is zoned the Marina District (MD) and south of the site is R1A, or Single Family Residential (Figure 6). Michigan City can and should identify and recommend the best possible zoning designation before environmental cleanup is completed to meet the community planning, growth, and economic objectives.

Figure 6. NIPSCO facility zoning Heavy Industrial (M2).



The city can decide to retain the industrial zoning designation for electrical generation or other beneficial industrial uses, or it can be changed to recreational, residential, commercial, or multiple-use after cleanup. While processes exist for developers and outside interests to petition to change zoning designations, Michigan City can rely on a community-led planning effort to identify rezoning based on community needs and desires. This can be achieved through preparation of a Growth Policy or

Comprehensive Plan. This process can occur in the redevelopment planning phase to prevent reuses that may not be compatible with the best interests and needs of the community.

Another responsibility Michigan City leads is transportation and access to the NIPSCO facility. The facility is located across a major highway and railroad corridor. Railroad corridors are significant barriers to expanded local access. Generally, the number of railroad crossings are limited for safety reasons and there are high costs associated with modifying access through these types of corridors. Alternatively, the railroad corridor could be removed if there is no longer a need for rail traffic in this area.

Assuming the railroad corridor must remain in place, the existing access points may limit easy and nearby residential access to a redeveloped site, such as a park or commercial business area. Expanding access may be desirable to provide local residents with better access to the area, such as an elevated foot traffic bridge over the railroad corridor to a waterfront recreation area or park system. A redevelopment plan must consider transportation needs assuming enhanced access to a recreation area is desired. Other considerations include plans for parking, walking trails, interior roads, public water, public sewer, and stormwater infrastructure, all of which require civil engineering services and agency review.

4. Reuse Alternatives

A reuse plan for the NIPSCO power generation facility does not currently exist. Limited information from area residents, community leaders, and nonprofit organizations identify ideas for reuse and for what not to develop. However, no official group or government agency is leading redevelopment for the NIPSCO facility. In the absence of a reuse plan, a range of possible reuses are discussed here and serve as talking points to foster local input, creative reuse ideas, and garner interest in pursuing a formal reuse planning effort.

The following facility reuse matrix identifies 22 example reuses at the NIPSCO facility once cleanup is completed. The redevelopment alternatives range from no action, a recreational beach and park, marina, commercial development, low-income residential development, renewable power generation facility, industrial reuse, and possibly expanding Indiana Dunes National Park. It is difficult to conclude which, if any, of the identified reuse ideas have merit in terms of truly benefiting Michigan City residents from an economic, environmental justice, housing, quality of life, and other perspectives. A formal public input, planning, and review process is needed to sort, discuss, and prioritize redevelopment at the plant site.

The matrix is set up to list possible reuse alternatives, identify new ones, and discuss the pros and cons of each reuse. It also serves as tool to consider eliminating some redevelopment alternatives. For example, local input suggests there is no desire for constructing condominiums after cleanup. This reuse was kept in the matrix to serve as a reminder that it was not formally dismissed under the official reuse selection process and private interest groups may pursue redevelopment in the absence of a community-led reuse plan. A desire for no private development can be articulated in the guiding principles of the community redevelopment plan.

The matrix provides qualitative indicators of cost as low, moderate, high, and very high designations. These indicators suggest the cost of required construction after the cleanup is completed. This cost may include demolishing industrial infrastructure, adding more fill and sand for beach reconstruction,

protecting the break wall so it lasts in perpetuity for a marina, engineering permitting services, road construction, utility infrastructure construction, landscaping, building/home construction, commercial facilities, industrial facilities, and whatever else may be needed to achieve turnkey redevelopment.

For the purposes of discussion, costs are broken into four categories. These are not precise or representative cost estimates but serve as way to compare relative cost between redevelopment alternatives. Actual costs cannot be prepared until more details are available for reuse alternatives.

Low:	< \$1 million
Moderate:	< \$40 million
High:	< \$80 million
Very High:	> \$80 million

The difficulty in implementing a reuse plan, identifying possible leadership roles, and technical feasibility are described in the matrix. Both the difficulty, such as being able to setup a public and private partnership, and technical feasibility, such as being able to address all engineering needs, shed light on the challenges for each alternative. Similarly, the likely beneficiaries from reuse are identified, possible issues identified once reuse is constructed, and the relative local economic impact is provided. These criteria offer subjective perspectives on reuse that are subject to change pending redevelopment discussions.

All of the reuse plans are expensive with the exception of no action. Under the no action alternative, Michigan City would likely lose significant tax revenue as it offers only limited to no benefits to residents. Private reuse plans are also not necessarily expensive to the community because they are funded with private venture capital. These types of developments may add to the tax base, replacing at least some of the lost tax revenue from the power plant. However, they also may have limited contributions to local businesses and offer no benefits to residents because of economic inequalities related to, for example, construction of upper-end condominiums. A locally led reuse plan can consider reuses that account for a variety of guiding principles that lead to redevelopment and alternatives that target the needs and desires of Michigan City residents.

Notable reuses in the matrix include low-income lakefront housing and public beach funded through government housing programs; expanding Indiana Dunes National Park through LWCF, executive order, and partnering with Michigan City; building an RV park and campground with a public beach to generate local revenue from visitors camping next to the Park; and generating renewable energy from a solar farm with a public beach.

Other development options have different economic and public benefits. All of them are similarly difficult to fund and implement without public funding or private venture capital. Nonetheless, a well-organized and determined community-led council can find ways to plan and implement the preferred redevelopment alternative. The plan will require adequate outreach, partnering, and stakeholder support. The reuse plan should use site renderings needed to garner public support and fundraising (Figure 7). The preferred alternative can target one focused redevelopment option, such as expanding Indiana Dunes National Park, or propose multiple land uses involving, for example, public beach recreation, commercial development, and low-income residential housing.

5. Economic Gains, Job Creation, and Quality of Life

The economic gains from a complete environmental cleanup for Michigan City are quantified in the Coal Ash Remediation Cost and Job Analysis report. While significant, these gains are considered temporary. Redevelopment, depending on the preferred plan, will likely have similar construction-related economic gains for Michigan City. The economic gains cannot be quantified until a specific plan is adopted. After one or more reuse alternatives are adopted, it is possible to estimate the number of jobs created, capital investment required to construct the alternative, and quantify long-term economic gains.

Qualitatively, the number of jobs created from redevelopment can be discussed early in the planning process and used to compare alternatives. These types of temporary construction jobs last from a few years to generally less than a decade, but they are worthy of analysis because they are potentially a major investment within the Michigan City limits.

Reuse also has a long-term economic benefit that lasts decades and potentially in perpetuity. For example, constructing a private marina or a Michigan City-owned and operated campground at the former facility can increase the local tax base (in the case of the marina) or increase municipal revenue (in the case of a municipal campground selling overnight RV campsites). Both reuses provide temporary short-term construction jobs and long-term employment at the new facility. The long-term economic gains are significant and after decades of operation the benefits should exceed the local economic gains of the original construction activity.

As part of reuse planning, analysis of jobs creation and economic gains must be balanced with other community needs. For example, the reuse plan can prioritize improving quality of life for Michigan City residents and address environmental justice. These types of reuses may include restoring a natural lakeshore for public access or building waterfront affordable housing. The economic benefits for these alternatives may be less but could be considered reasonable following guiding principles that rely on multiple reuse goals vs. a singular goal of economic gain.

Future work on behalf of Michigan City residents is needed to assess the economic benefits in terms of construction jobs, long-term economic gains, and meeting community needs. Economic gains in the matrix are described as: none, limited, some, or significant for each alternative. These descriptors are useful to compare alternatives but offer no monetary level of economic benefit. The descriptors suggest if there is a potential economic contribution to Michigan City as increased tax base, jobs, business development opportunities, or reduced housing costs. Future work should quantify these possible economic gains for targeted redevelopment alternatives as a means to assist reuse planning and decision making.

Michigan City Power Plant Reuse Matrix - Post Cleanup

Possible Reuse	Land Use	ID	Alternatives	Cost	Source of Funding	Difficulty	Leadership	Feasibility	Beneficiaries	Issues	Economic Gains
No action	Remediated Site No Land Use / No Access	1	None	Low	NIPSCO	Low	NIPSCO	Low	None	Poor aesthetics, no reuse, lost revenue	None
Restored Natural Lakeshore	Recreation	2a	MI City ownership	Moderate	NIPSCO, local/federal government, private	Moderate	Local	High	Benefits local community and some visitors	Limited local access across highway and RR tracks	Significant local
		2b	MI City & NPS lakeshore partnership	Moderate	Local/federal government, NIPSCO, LWCF	High	Local & NPS	Moderate	Benefits broader community and lake ecology	Limited local access across highway and RR tracks	Limited local
		2c	NPS ownership, expand park & possible limited ownership	Moderate	LWCF, NIPSCO, Local government	High	NPS & Local	Moderate	Visitors, limited local community, and lake ecology	Limited local access across highway and RR tracks	Limited local
Multiuse Lakeshore with no Housing (and Natural or Modified/Fortified lakeshore)	Recreation & Commercial	3a	Unknown mixed recreation with limited commercial	High	Local government, private, NIPSCO	High	Private and local government	High	Benefits local community but also visitors	Limited local access across highway and RR tracks	Some local
		3b	Small marina & park with some public beach	Moderate	Private, local government, NIPSCO	High	Private and local government	Moderate	Benefits local community and visitors	Existing lakeshore left in place and fortified, limited local access	Some local
		3c	Large marina	Moderate	Private, local government, NIPSCO	High	Private and local government	High	Benefits visitors, limited local community	Existing lakeshore left in place and fortified, limited local access	Limited local
		3d	RV park / campground and public beach	Moderate	Private or local government, NIPSCO	Moderate	Private or local government	High	Benefits visitors, limited local community	Limited local access	Significant local (campers visiting NPS)
		3e	Museum, public beach	Very high	Private, local government, NIPSCO	Very high	Private and local government	Low	Benefits visitors, limited local community	Limited local access	Limited local
		3f	Athletic park / center / ball fields	Moderate to high	Local government, NIPSCO	High	Local government	Moderate	Benefits local community and some visitors	Limited local access	Limited local
		3g	Outdoor concert venue	Very high	Private, local government, NIPSCO	Very high	Private and local government	Low	Benefits visitors and some local community	Limited local access, loud music	Some local
		3h	Three par golf course	High	Private	Very high	Private	Low	Benefits visitors and some local community	Possible limited local interest	Limited local
		3i	Combination & other possible recreation/commercial uses	Very High	Private, local government, NIPSCO	Very high	Private and local government	Moderate	Benefits local community and visitors	Limited local access	Some local
Office space and sales	Commercial	4	Office / retail / other	High	Private	Very high	Private	High	Visitors, area community and limited local community	Limited local access	Some local
Housing & Multiuse Commercial with possible Lakeshore	Residential, Limited Commercial, and	5a	Individual homes	High	Private	Moderate	Private	High	Visitors, new residents, and limited local community	Increased home values	Some local

Reuse and Economic Impacts – NIPSCO Power Generation Facility

Possible Reuse	Land Use	ID	Alternatives	Cost	Source of Funding	Difficulty	Leadership	Feasibility	Beneficiaries	Issues	Economic Gains
Recreation	Lakeshore Recreation	5b	Condominiums	High	Private	Moderate	Private	High	Visitors, new residents, limited local community	Increased home values	Some local
		5c	Public beach, commercial and townhouse development	High	Private, local government, NIPSCO	Moderate	Private and local government	High	Visitors, new residents, and limited local community	Increased home values	Some local
		5d	Public beach, low income lakeshore housing	Moderate to high	Federal government, local/county government, NIPSCO	High	Local government	Moderate	Local community	None	Significant local
Power Generation	Industrial	6	Solar energy & possible a public beach	High	Private and/or NIPSCO	Moderate	Private Renewable possible local government	High	Limited local community	Poor aesthetics, area limited to developing 5 to 10 MW solar power based on available acreage	Some local
Transportation	Industrial	7a	Rail without Marine	Very high	Private	Very high	Private without possible local government	Moderate	Local and area community	Noise, pollution, poor aesthetics	Some local
		7b	Marine and rail	Very high	Private	Very high	Private and possible local government	Low	Local and area community	Existing lakeshore left in place and fortified	Some local
Manufacturing	Industrial	8	TBD	Very high	Private	Very high	Private	Low	Local and area community	Noise, pollution, poor aesthetics	Significant local



**Exhibit 7. Example Reuse Plan
NIPSCO Power Generation Facility
Representative Reuse Scenario**

0 0.125 0.25 Miles



Designed By: Samantha Kopeck

Checked by: Scott Payne, PhD

Sheet No.
1

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Other info:

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