

Cape Fear River Watch

Position Regarding the Proposed Carolinas Cement Company (Titan America) Cement Plant and Mining Operation in New Hanover County, North Carolina

Position Summary

- Cape Fear River Watch (CFRW) is a non-profit organization dedicated to the protection and improvement the water quality of the Lower Cape Fear River Basin through education, advocacy, and action. After investigating the potential environmental impacts to the natural resources in and around the Cape Fear River watershed by the proposed Carolinas Cement Company (Titan America) cement plant and mining operation, CFRW has developed a position firmly against this project as currently proposed. Our primary environmental concerns are: The destruction of up to 600 acres of pristine wetlands
- The contamination of air and water quality due to emissions of high levels of mercury, Chromium-VI, and other pollutants
- The direct discharge of effluent into the Northeast Cape Fear River
- Dewatering and depletion of the aquifer due to limestone mining

Background

New Hanover County, North Carolina prides itself as a coastal county uniquely situated between the Cape Fear River and the Atlantic Ocean. This setting, along with a network of tidal creeks, vast wetlands, and beaches has allowed New Hanover County and Wilmington to flourish as a tourist destination and a community offering a positive quality of life for its citizens. In recent years the population of the county has grown substantially and is now approaching 200,000 residents. Increased population has led to increased threats to our natural communities and resources. These threats include increased stormwater runoff, destruction of wetlands, and a variety of other sources of pollution.

Protection of these communities and our natural resources requires that we decrease the amount of pollutants discharged daily into our airshed, nearshore waters, rivers, creeks, and wetlands. High levels of fecal coliform bacteria loading have already impacted our waters with increasingly widespread restrictions on shellfish harvesting and swimming. Mercury contamination has been reported in sections of the Cape Fear River and the Northeast Cape Fear. In particular, a stretch of the Northeast Cape Fear River has been listed on the Section 303(d) list due to high levels of mercury in proximity to the proposed site (formerly Ideal Cement Plant). It is contrary to our mission to support additional inputs of contamination or further degradation of these fragile ecosystems.

On June 6, 2008, the US Army Corps of Engineers issued a Public Notice (PN) detailing the plan for Carolinas Cement Company's (Titan America's) proposed cement manufacturing facility and quarry which would be located along the Northeast Cape Fear River within New Hanover County in Castle Hayne, North Carolina. As stated in the PN, "the proposed project would be located on an approximately 1,868-acre site... bordered to the north by the Northeast Cape Fear River, to the east by Island Creek, and to the south by Holly Shelter Road. The proposed project site includes undeveloped forest

lands... Areas of Environmental Concern (AEC) have also been identified.... The proposed quarrying action will impact approximately 493 acres of wetlands. This total includes 214 acres of wetlands located within CAMA jurisdictional areas". Since issuing this PN, the estimated acreage of potentially impacted wetlands has increased to 600.

Position

Based on the direct and indirect impacts of the proposed Carolinas Cement Company (Titan America) cement plant and quarry on our fragile ecosystems and natural resources, CFRW is against this project as currently proposed. Specifically, CFRW is concerned with the detrimental impacts that will likely be felt within the region with regard to the following issues:

- The proposed project, based on information provided in the PN, describes the potential impacts to surface waters and wetlands. The proposed quarrying action will impact an estimated 600 acres of wetlands. Of that total, 214 acres of CAMA jurisdictional wetlands will be impacted. These wetlands reside in a unique and highly sensitive ecological environment that is home to a diverse array of flora and fauna. Specifically, the area surrounding Island Creek is of important ecological value because of its pristine condition and remote location. Destruction of these important aquatic resources will impede the capability of this habitat to perform its primary functions: refuge for fauna and flora, a natural filter for contaminant-laden runoff, and a flood buffer.
- CFRW has serious concerns regarding the impact this proposed project will have on the water quality of the Northeast Cape Fear River and the Cape Fear River near Wilmington, only several miles downstream. The PN states that hydrogeologic investigations have been or will be conducted to assess the amount of water discharged from the proposed quarry pits. There is concern as to the nature of the constituents of the effluent released from this facility. Aquatic organisms are extremely sensitive to alterations to their physical environment and could be negatively impacted by contaminants or pollutants entering the wetlands and river. Historical water quality data collected by the Aquatic Ecology Laboratory at the University of North Carolina at Wilmington have helped determine a baseline of water quality conditions within the area. Deviations from these baseline conditions may result in fundamental changes to the local biota adjacent to and downstream of the Northeast Cape Fear River.
- The potential impacts of dewatering on groundwater resources are also of concern to the CFRW. The Castle Hayne and the Pee Dee aquifers provide a primary source of drinking water supply for many citizens of both New Hanover and Pender Counties. The proposed mining operation may threaten the integrity of the water source and quality within these two aquifers and thereby may threaten the source of drinking water for thousands of residents.

- The proposed cement plant and quarry will result in the emissions of hundreds of pounds of mercury, chromium VI, and other dangerous contaminants into the airshed and watershed. Contaminants such as these are highly toxic and detrimental to the fauna found in the aquatic environment. The unique environmental conditions found within the estuarine and riverine benthic habitats promote the conversion of mercury into the transferable and highly toxic form of methyl-mercury. The short-nosed sturgeon is a federally endangered species that has historically utilized the Cape Fear and Northeast Cape Fear rivers as conduits to its upstream spawning grounds. Any additional pollutant and contaminant input to the system will impact the recovery of this important species. Humans may also be significantly impacted by the deposition of mercury into the waterways. There is a significant health risk to humans who ingest fish containing methyl-mercury. Fish consumption advisories for mercury have already been issued for this watershed.
- Atmospheric deposition of mercury is a nonpoint source of water pollution and must be controlled to protect existing and designated uses of state waterways. The Environmental Protection Administration (EPA) also recognizes atmospheric deposition of mercury as a Clean Water Act nonpoint source of pollution. In response to fish consumption advisories due to elevated findings of methyl mercury, a Total Maximum Daily Load (TMDL) process was initiated to determine the measures necessary to protect human health. In order to establish adequate TMDLs, the EPA looked to the mercury concentration in fish tissue and both the point source and nonpoint source loads of mercury to the environment. Noting that the majority of mercury in the environment is derived from coal-fired power plants and air pollution, the EPA determined that most reductions to achieve water quality standards would need to be implemented through Clean Air Act regulations. The emission of potentially hundreds of pounds of mercury per year as proposed by the applicant will have an increasing impact on already burdened waterways. Clearly, the North Carolina antidegradation regulations do not allow for additional sources of mercury, either from direct point sources or nonpoint sources such as atmospheric deposition, where uses of waterways are impaired and Water Quality Standards are not being met.

The Northeast Cape Fear River is classified as being mercury impaired on the Federal 303(d) list from Highway 210 to Prince George Creek. The site of the old Ideal Cement plant is almost exactly in the center of these contaminated waters. This leads one to suspect strongly the source of the mercury may have been from the previous cement plant.

- Given the exceptionally high rainfall events in the Northeast Cape Fear River watershed, Island Creek and surrounding wetlands may be covered by flood waters that are ten to fifteen feet above flood stage (the 100 year flood event). Over a period of time potentially spanning weeks, these flood waters are slowly released into the Northeast Cape Fear River. The pristine wetlands in this area naturally buffer, filter, and help control flooding of inhabited and other areas downstream. The loss of this buffer as a natural means to control downstream flooding will potentially impact

personal property, human lives, native fauna, and downstream riparian ecosystems, including the heavily developed waterfront areas of the City of Wilmington.

- Anadromous fishes in the Cape Fear River basin are threatened due to the loss of habitat, reduced access to their spawning grounds and nursery areas, pollution, siltation and other pressures. The dynamics of the river are changing due to such phenomena as the intrusion of saltwater and climate change. This has caused the migration, feeding, and spawning behavior of anadromous fishes including striped bass, shad, herring and the short nosed sturgeon to change as they attempt to adapt. National Marine Fisheries estimates that the restoration of this fishery within the Cape Fear River will yield over five (5) million dollars per year in revenues to North Carolina.
- Island Creek, which is adjacent to the proposed plant, is unique in its geography and habitat. This resource must be evaluated and assessed so that we understand the role of this critical wetland ecosystem and the impact of its potential destruction. Diminishment of the water quality or any component of this wetland ecosystem, such as its role in the restoration of fisheries, must be considered. Fish stocks and all of the factors to supporting their existence, including the ability to spawn and reproduce, must be extensively studied and reported upon. This may require a multiple year study not only to establish a baseline of what exists today, but to provide a clear understanding of the dynamics of the ecosystem and its role in the restoration of the anadromous fisheries in the Cape Fear River Basin.
- Island Creek provides habitat for a variety of migratory birds. It is well known for its population of wood ducks, osprey, and owls. Bald eagles have been observed feeding and remaining in the area for extended periods of time in their migrations. Island Creek's habitat classification is bottomland hardwood forest. Bottomland hardwood forests are primary nesting grounds for a variety of neo-tropical migrant birds. Neo-tropical birds migrate long distances from the tropical latitudes in winter to temperate latitudes in summer to breed. Most notably, the prothonotary warbler is one out of 32 species of warbler that only nests in cavities of trees. The prothonotary warbler has been deemed by U.S. Fish and wildlife as a species of concern due to its breeding specialization. The senior naturalist with CFRW has concerns about the lack of bird survey work in proximity to the proposed cement factory site. During a preliminary bird count conducted by CFRW, eight prothonotary warbler breeding males were observed on a 1-mile stretch of the Island Creek site. Any change in the forest matrix could negatively impact the abundance and breeding success of warbler and other bird species. In addition, avian research has proven a direct relationship between forest fragmentation and a decline in neo-tropical species. Development at the proposed level would create an edge effect. These edge effects will concentrate song bird breeding into smaller areas making them more vulnerable to predators and kleptoparasites.
- The Northeast Cape Fear River provides excellent recreational fishing opportunities. Additionally, the Northeast Cape Fear River provides a living to those who have

invested in the development of ecotourism businesses. The future development of this industry must be considered in any evaluation for its potential impact to North Carolina and the local economy. The public uses the river for fishing, swimming, birding, and hunting. Some just like to breathe its clean air or enjoy its natural state. The introduction of a cement kiln, strip mine, and the destruction of miles of wetlands bordering the Northeast Cape Fear River and Island Creek will certainly harm these existing uses.

- The river may be used to transport fly ash, coal, and other toxic hazardous materials by barge to and from the proposed site. The impact of an accident involving a barge carrying these materials is a reasonable concern with tremendous implications. Special consideration should be given to areas of dense human population such as the downtown Wilmington area, as well as endangered species of fish, mammals, and other species, and other sensitive ecosystems on and bordering the river.
- Cement plants are typically lighted in a manner that introduces an extremely high amount of light pollution. This light pollution has a strong potential to adversely impact the feeding, breeding, and survival of nocturnal mammals, birds and reptiles. American alligator and specific bats that are on the threatened and endangered species list that reside on the applicant's property or reside within proximity to the area should be given special consideration in the applicant's review.