

Title: Port of Baltimore Scavenger Hunt

Lesson Developed by: Sari Bennett and Patricia King Robeson, Maryland Geographic Alliance

Overview of the Lesson: Photographs are documents that assist students in learning how to "read" visual material. The purpose of a scavenger hunt is to have students use information to learn how the Port of Baltimore has changed over time. In this lesson facts are provided and students must match the information to the correct photograph.

Duration: Two 45-minute class periods

MARYLAND VSC:

Geography: Grade 4

B. Geographic Characteristics of Places and Regions

1. Describe similarities and differences of regions by using geographic characteristics
 - a. Describe how geographic characteristics of a place or region change over time and affect the way people live and work

C. Movement of People, Goods and Ideas

1. Describe and analyze population growth, migration, and settlement patterns in Maryland and regions of the United States
 - b. Explain how changes in transportation and communication led to the growth and development of towns and cities in Maryland and United States

Skills and Processes: Grades 3 - 5

D. Acquire Social Studies Information

1. Identify primary and secondary sources of information that relate to the topic/situation/problem being studied
 - c. Locate and gather data and information from appropriate non-print sources, such as music, artifacts, charts, maps, graphs, photographs, video clips, illustrations, paintings, political cartoons, interviews, and oral histories

E. Organize Social Studies Information

1. Organize information from non-print sources
 - c. Find relationships between gathered information

Objectives:

Students will be able to:

- use photographs to identify and describe how the Port of Baltimore changed over time.
- explain why it is a major port city today.

Vocabulary:

Ro/Ro - roll-on, roll-off ships where cargo is driven on and off, such as automobiles, tractors, trucks

berth - a place where a ship may dock

grain elevator - a warehouse where grain is elevated, stored, and distributed

stevedore - person or a company who manages longshoremen

terminal - a place where goods or people are loaded on or unloaded from

warehouse - a building for storing goods and merchandise

Materials/Resources::

- “Advantages of the Port of Baltimore Today” (make a transparency)
- Photographs - Make one set of photographs for the class, numbered from 1-10. Depending on student ability, fewer photographs may be used.
- “Photo Info Clues” - Cut the clues into strips and place strips into envelope - (one set for each group of 4 students)
- “Port of Baltimore” - one copy for each group of 4 students
- “Dundalk Terminal” - make a transparency

Teacher Background:

Baltimore is located in the north central part of the state of Maryland, on the Patapsco River, not far from the Chesapeake Bay. It is on the western edge of the Atlantic Coastal Plain, with low hills rising in the western part of the city. Baltimore Town wasn't Maryland's first official port. Humphrey's Creek near Sparrows Point was designated the Port of Entry in 1687. Whetstone Point near Fort McHenry became Maryland's second Port of Entry 300 years ago in 1706. Davey Jones was among the first settlers to move north in 1661 to open a store in what is now the Old Town section of Baltimore. Others soon followed, and small ports sprang up. Coles Harbor, where Harborplace is now located, Joppa Town in Baltimore County located on the Susquehanna River, Whetstone Point, Humphrey's Creek and Baltimore Town eventually became the Port of Baltimore. Originally established to transport farmers' crops along the Eastern seaboard, as well as cargoes to and from international destinations, Baltimore's location near wheat fields of Pennsylvania and Maryland and near the “fall line,” gave the city great advantages. The fall line in Baltimore is where rivers like the Patapsco, Gwynn Falls and Jones Falls drop steeply from the interior plateau to the coastal plain there by providing a means of power to operate mills. Mills sprung up along the northwestern tributaries of the Patapsco and locally grown grains were milled into flour.

Baltimore grew swiftly in the mid- to late 18th century supplying wheat and flour to the sugar-producing colonies in the Caribbean. The relatively shorter distance between Baltimore and the Caribbean colonies allowed swift transport and minimized the spoilage.

Today the port thrives on diversity. In 2006, the Port had the largest container ship to ever drop anchor arrive in the harbor, the *MSC Tokyo*. It is one of the Mediterranean Shipping Company's medium-sized ships, carrying 5,600 containers. The Port's container traffic continues to increase and it has the potential to expand. One of the Port's greatest advantages is its strategic Mid-Atlantic location and an inland setting that has made it the closest Atlantic port to major Midwestern population and manufacturing centers. In addition to its geographical location, the Port of Baltimore has long maximized its enviable locale by combining on-site, state-of-the-art facilities with efficient connections to points north, south and west.

Lesson Development:

1. Tell students that just as they grow and change, places do also. Tell them that Maryland is celebrating the Port of Baltimore's 300 years of service to the state, country and the world. Show and discuss with students “Advantages of the Port of Baltimore Today” transparency.
- 50' deep channel - The Port has two deep water routes to the sea. The northernmost route with a 35' channel is through the Chesapeake and Delaware Canal to Delaware Bay. The main 50' shipping channel extends from the Atlantic Ocean at Cape Henry, north

through the Chesapeake Bay to the Port of Baltimore.

- 150 miles closer to Midwest - Port of Baltimore is within an overnight's drive of one-third of the nation's population.
 - Ranked #1 in Ro/Ro ships - Ranked #1 in Roll On/Roll Off (Ro/Ro) cargo (i.e. automobiles and agricultural vehicles), and handles nearly 50% of the United States East Coast Ro/Ro traffic
 - Industrial transportation networks - cargo moves between a ship's hold and rail cars or trucks in record time. Trains and trucks provide service to the Southeast and Midwest and connections to the rest of the continental United States and Canada.
 - Forest products - Port is the number one paper product port on the East Coast. A variety of paper and paper board products come through the Port, including paper for publishing, commercial printing and packing.
 - Cargo handling equipment - A container is a large metal box that fits on a truck, railroad car, or ship and is 20' or 40' in length.
2. Explain to students that they are going to work as teams in a scavenger hunt to find clues that match photographs of the Port. Some photographs were taken very recently and others are from the Baltimore Museum of Industry archives. Arrange students into groups of four.
 3. Distribute envelopes and one photograph to each group of students. Tell them to examine each photograph for one minute and discuss what it tells them about the Port, then find three strips of information that match the photograph. They should write the number of the photograph on strips.
 4. When finished with the first photograph, one member of the group should raise his or her hand and the teacher will give the group another photograph. Continue until each group has seen all 10 photos.
 5. Discuss each photograph with students and the clues that accurately match it.

Answer Key:

Page 11 - School Buses, Ro/Ro, Hoegh Autoliners

- *The Fairfield and Masonville Marine Terminals handle most of the automobiles shipped through the Port. More than 450,000 vehicles move annually through the Port. Each vehicle receives the utmost care from the ship to the processing facility and dealer delivery.*
- *Baltimore handles nearly half of the annual Ro/Ro cargo on the U.S. east coast. Ro/Ro are roll-on, roll-off ships. Cargo is driven on and off, such as automobiles, tractors, trucks, etc. The Port's location closer to Midwestern farm and construction equipment manufactures helped it become the leading U.S. port for farm equipment.*
- *Before there were Ro/Ro ships it was difficult to move cars, buses, tractors and other vehicles. Cranes had to lift each vehicle individually and place it on the ship. This was time consuming and expensive.*

Page 12 - Frederick Douglass - Isaac Myers Maritime Park

- *The Frederick Douglass-Isaac Myers Maritime Park is represented by a sankofa (sang-ko-fah) symbol along with a ship, the Living Classrooms Foundation symbol. The sankofa walks forward while looking back to acknowledge where it had been. It is a symbol of learning from the past.*
- *Isaac Myers and 15 other African Americans met in Baltimore and worked together to form the Chesapeake Marine Railway and Dry Dock Company. Myers also helped to form labor unions of Black workers, including a union for ship caulkers.*
- *This historic site includes a working shipyard and acknowledges Maryland's African American maritime heritage. It is named for abolitionist and statesman Frederick Douglass, who learned to work and read on the Fells Point waterfront, and Isaac Myers, who helped found the nation's first black-owned shipyard and maritime railway.*

Page 13 - Fort McHenry

- *Fort McHenry was built to defend the port of Baltimore from future enemy attacks after America won its independence. It was located on the Locust Point peninsula which juts into the opening of Baltimore Harbor. The fort served as the primary defense for the Port until about 1848, when Fort Carroll was constructed farther down the Patapsco River.*
- *It was the defense of Fort McHenry by American forces against the British attack during the War of 1812 that inspired 35-year old, poet-lawyer Francis Scott Key to write the poem which was to become our national anthem, "The Star-Spangled Banner."*
- *During the Civil War, Fort McHenry served as a Union prison camp for Confederate prisoners of war. Prisoners were confined for short periods there before being transferred to larger prisons. Life at the fort was difficult. Each prisoner was given one blanket, but was denied chairs, stools, wash basins, and eating utensils.*

Page 14 - Coal Pier

- *In 1917 Pennsylvania Railroad built a coal loading facility in the Port. Tracks along the 910' pier had railroad tracks for 60 coal cars that dumped their loads into ships. Each car held 4 tons and loaded 900 tons per hour.*
- *In 1980, Consolidated Coal Company purchased 110 acres of waterfront property. This would become a modern coal loading facility. 750 thousand tons of coal can be stored there and 100,000 railroad cars arrive annually. The coal comes from Kentucky, Pennsylvania, West Virginia and Western Maryland.*
- *The 50' deep navigational channel in the Port is very important for ships hauling heavy cargo such as coal. Today a system of conveyer belts at the CNX Marine Terminal can move coal quickly from stockpiles to waiting ships. This system can load vessels at a rate of 7,000 tons per hour. A ship can hold 100,000 tons of coal.*

Page 15 - Lehigh Portland Cement and Lazaretto Point Lighthouse

- *The original Lazaretto Point Lighthouse was built in 1831 to mark the harbor entrance for the growing number of ships entering the Port. The site had been previously used as a hospital for the treatment of smallpox and a quarantine station for contagious people entering the city.*
- *In 1926, the old lighthouse was torn down and a new one constructed 100 yards nearer the water. Lazaretto Point Lighthouse is now located on the grounds of the Rukert Terminals near the eastern end of the I-95 bridge over the Patapsco River.*
- *In 1962, Lehigh Portland Cement purchased the old Coast Guard depot at Lazaretto Point. Within three years a new distribution plant, complete with silos was operating and continues to do so today.*

Cement is used to make concrete for roads, sidewalks, and other construction projects.

Page 16 - Shipyard Repair Facility - Pier Housing

- In 1820 William Skinner, a native of Dorchester County, established a shipyard on the edge of Federal Hill. In 1921 Bethlehem Steel acquired Skinner's and other shipyards around the Port. These shipyards were used to repair ships rather than to build new ones.*
- Shipyards used "dry docks" to help repair ships. A dry dock allows a ship to sail in; then the water is removed and repairs to the bottom can be made. Dry docks were used by Bethlehem Steel in its upper yard near Federal Hill until the 1980s.*
- Land used for shipyards and other industrial activities became the sites for new developments near the Baltimore Inner Harbor. Most recently, land once used for ship repair is now used for upscale housing.*

Page 17 - Forest Products

- Port of Baltimore is the number one paper product port on the East Coast. A variety of paper and paper board products come through the Port, including paper for publishing, commercial printing and packing. Besides paper from Finland, wood pulp from Brazil arrives as break bulk cargo in the Port.*
- Maryland Port Administration signed agreement with the Finnish paper company M-real Corp in 2005 to more than double its forest product shipments coming through the Port of Baltimore. About 700,000 tons of paper are shipped through the Port each year.*
- Longshoremen in the Port have to be very careful moving the rolls of paper. If the roll is damaged it becomes worthless. Paper is unloaded at Dundalk and South Locust Point Terminals.*

Page 18 - Seagirt Container Terminal

- Containers may carry a variety of products. Using containers reduces the amount of time it takes to load and unload a ship. Quick turn-around time is important for the Port because it is located 150 miles inland, and ships take 8 to 10 hours to travel up or down the Bay. Cargo must be handled carefully and quickly.*
- The Seagirt Terminal opened in 1988 to handle container cargo. The terminal was built on land made enlarged by piles of material dredged from building the Fort McHenry Tunnel. Container ships move with ease through Baltimore's 50' channel. Seagirt is the most efficient container terminal in the North Atlantic.*
- Seagirt Terminal has the latest cargo-handling equipment. Expensive cranes average 45 - 47 container moves per hour per ship. A container is a large metal box that fits on a truck, railroad car, or ship and is 20' or 40' in length. Standards were set in the 1960s to ensure interchangeability between different modes of transportation worldwide.*

Assessment:

Look at the photograph "Dundalk Terminal" which is just one of the many terminals in the Port of Baltimore. Use the photograph and what you know and have learned to write an article for a newspaper to accompany the photograph. The article should explain why Baltimore grew to become a major port city on the East Coast of the U.S. Be sure to include five facts and supporting details in your article.

Scoring Rubric:

- | | |
|------------------|---|
| <i>Excellent</i> | <i>Student included five facts and supporting details and/or examples.</i> |
| <i>Good</i> | <i>Student included at least four facts and supporting details and/or examples.</i> |

Satisfactory Student included at least three facts and supporting details and/or examples.
Needs Improvement Student included fewer than two facts and supporting details and/or examples.

Closure:

Tell students that before this lesson when they heard the words “ Port of Baltimore” they probably thought of the the Inner Harbor, a popular waterfront area with retail stores, restaurants and attractions. Tell them to now think about the photographs and facts they have just discussed, and how the entire port area looked before the Inner Harbor was built. Also, think how Baltimore continues to be a major port city today. Give each group of four students the worksheet “How the Port Grew and Changed” and tell them to use what they have just learned to complete it.

Answer Key:

1. What industry no longer exist? (*ship repair*)
2. Why is there a Frederick Douglass Isaac Myers Maritime Park in the Port? (*Frederick Douglass and Isaac Meyers were African Americans who worked in the Port. Myers formed the Chesapeake Marine Railway and Dry Dock Company.*)
3. Why was Fort McHenry build? (*to defend the Port of Baltimore against future attacks.*)
4. Explain how moving coal in the Port has changed over time. (*First tracks for little railroad cars were used to load the ships. Now conveyor belts are used to move coal at a rate of 7,000 tons per hour.*)
5. Explain how the location of Lazaretto Point Lighthouse shows changes in land use. (*Original light - house marked the entrance of the port. Old lighthouse was torn down and a new one was built nearer the water. Later Lehigh Portland Cement built a distribution plant near the site.*)
6. Why is Ro/Ro cargo a major business in the Port? (*The Port’s inland location makes it closer in the Midwest than any of the other East coast ports. Because the Port handles this cargo swiftly and carefully.*)
7. Describe two ways building the Fort McHenry Tunnel modified the natural environment. (*Land was cleared to build the tunnel and the dredged material was used to build Seagirt Terminal.*)
8. What are containers and how has their use affected the Port? (*A container is a large metal box that fits on a truck, railroad car, or ship and is 20’ or 40’ in length. Containers reduce the amount of time it takes to load and unload a ship.*)
9. How might the paper you are writing on now be connected to the Port of Baltimore? (*The Port is number one in paper imports. The paper students are using might have come from Finland.*)

Advantages of the Port Today



50' deep navigational channel is very important for ships hauling heavy cargo



150 miles closer to the Midwest region than any other East Coast port



Ranked #1 in the USA in Roll On/Roll Off (Ro/Ro) cargo (i.e. automobiles and agricultural vehicles), and handles nearly 50% of the United States East Coast Ro/Ro traffic



One of America's premier industrial transportation networks - rails, roads and other ports



Ranked #1 port for paper products in the United States



Latest cargo-handling equipment - cranes average 45 - 47 container moves per hour per ship

Photo Info Clues

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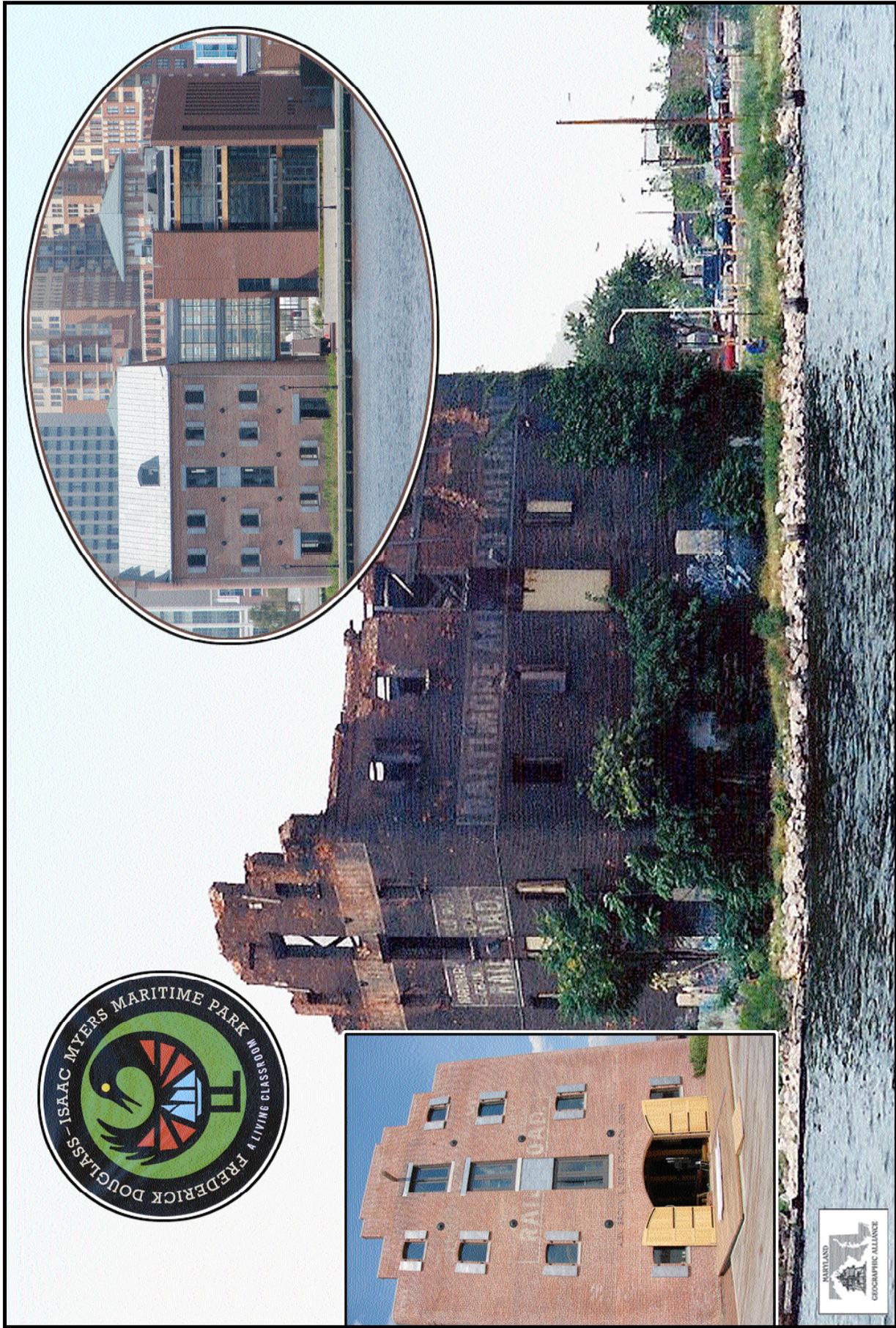
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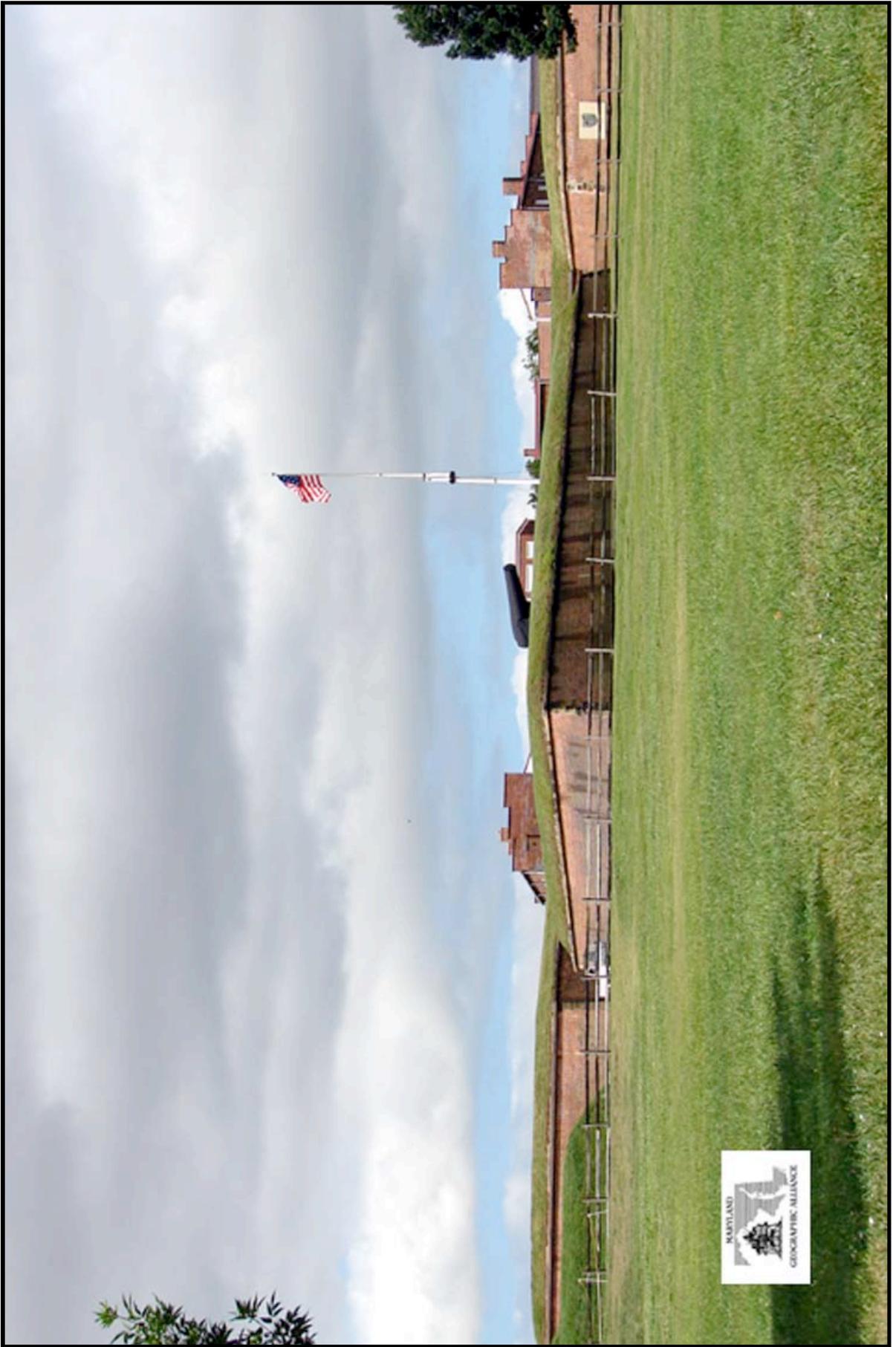
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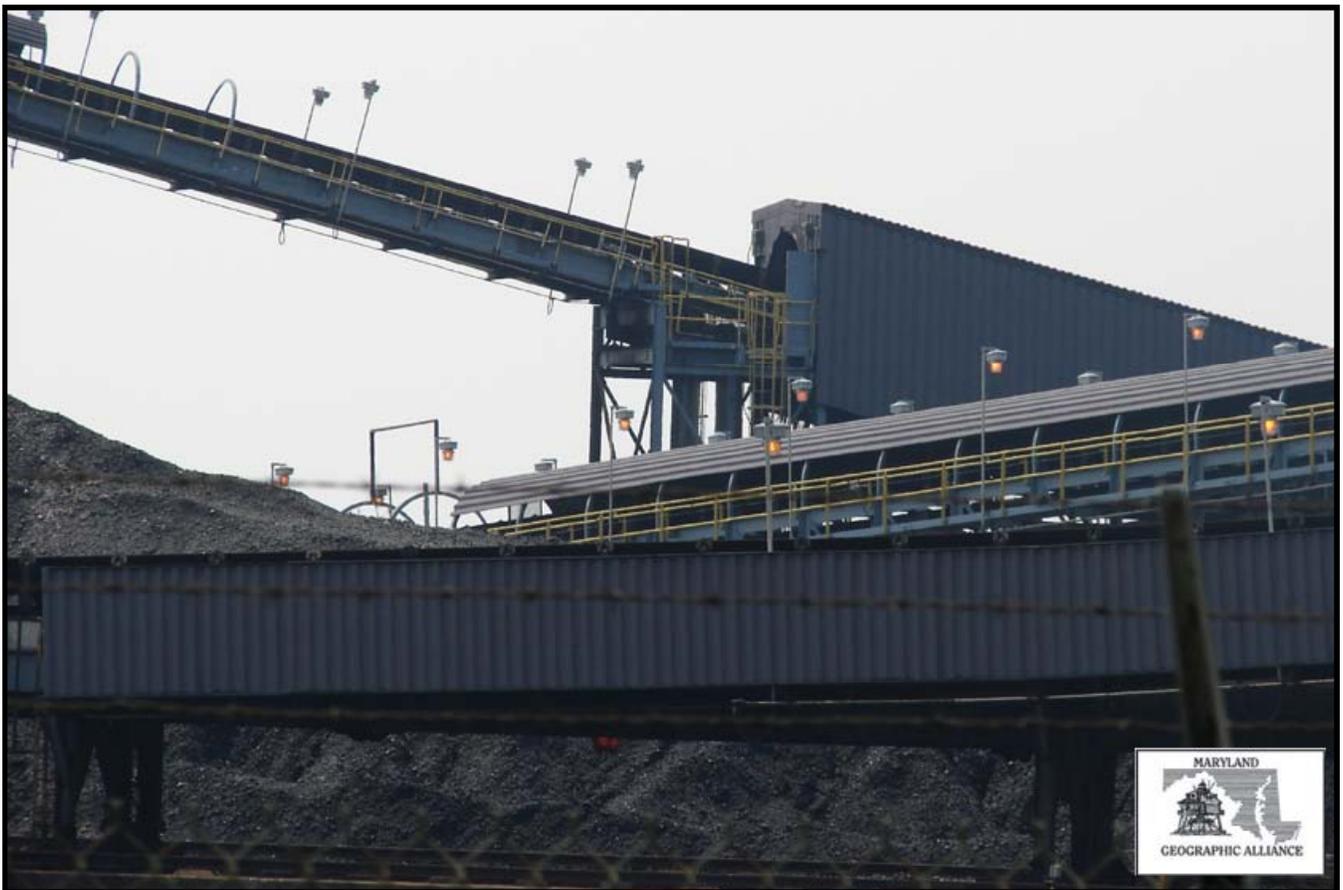
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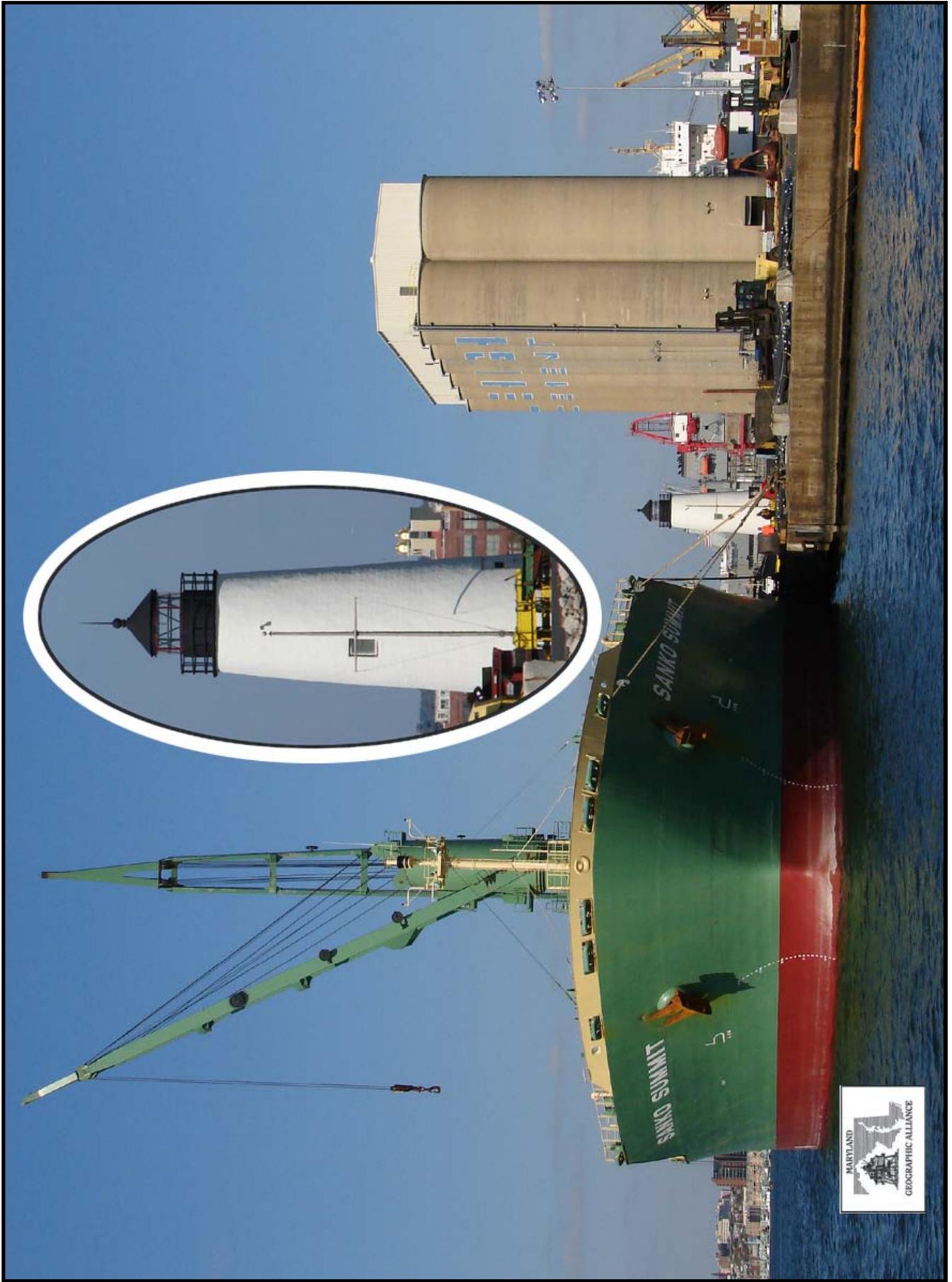
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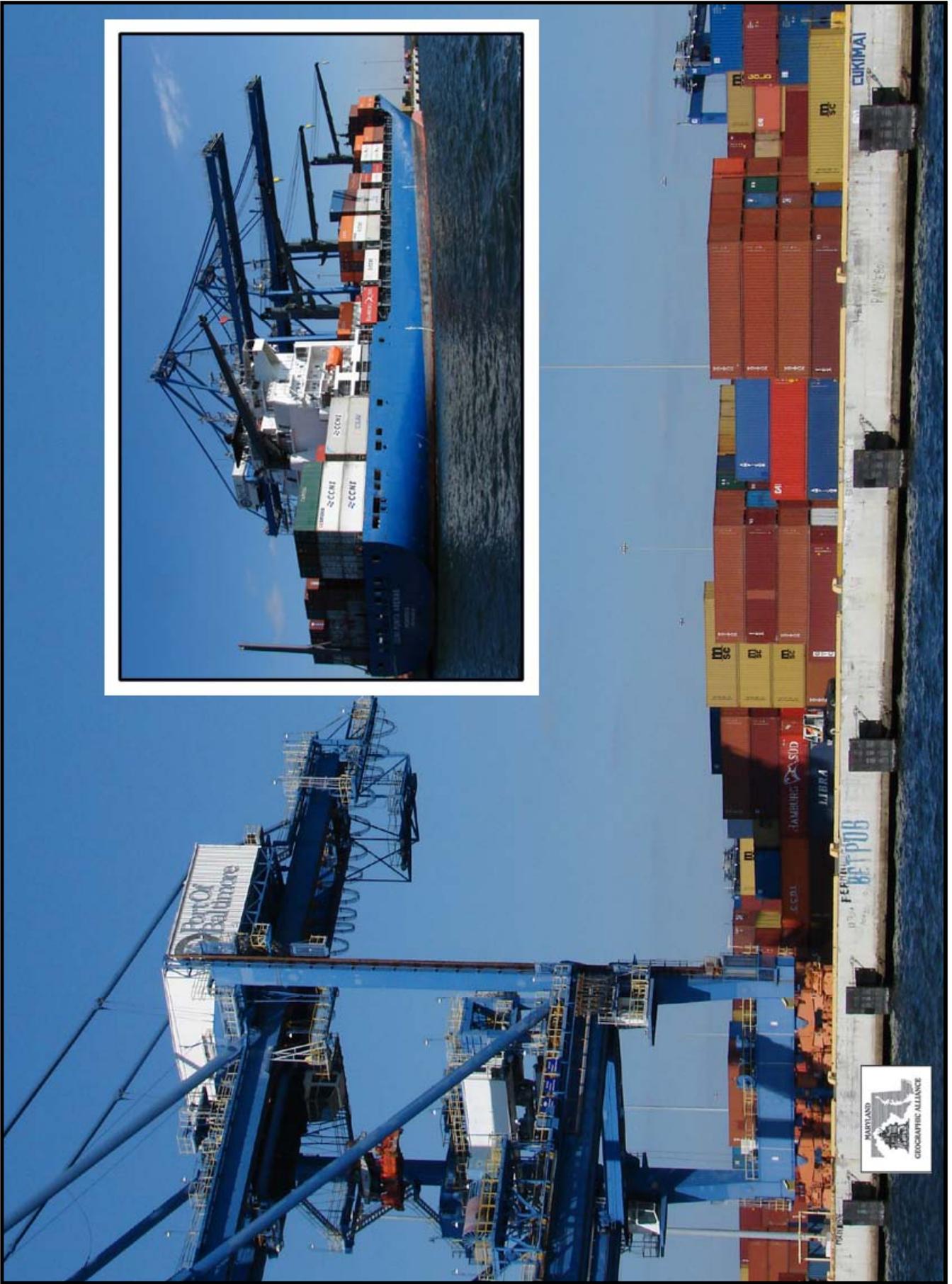












How the Port Grew and Changed

Names _____ Date _____

Answer the questions below using what you know and have learned.

1. What industries no longer exist in the Port of Baltimore?

2. Why is there a Frederick Douglass Isaac Meyers Maritime Park in the Port?

3. Why was Fort McHenry built?

4. Explain how moving coal in the Port has changed over time.

5. Explain how the location of Lazaretto Point Lighthouse shows changes in land use.



Names _____ Date _____

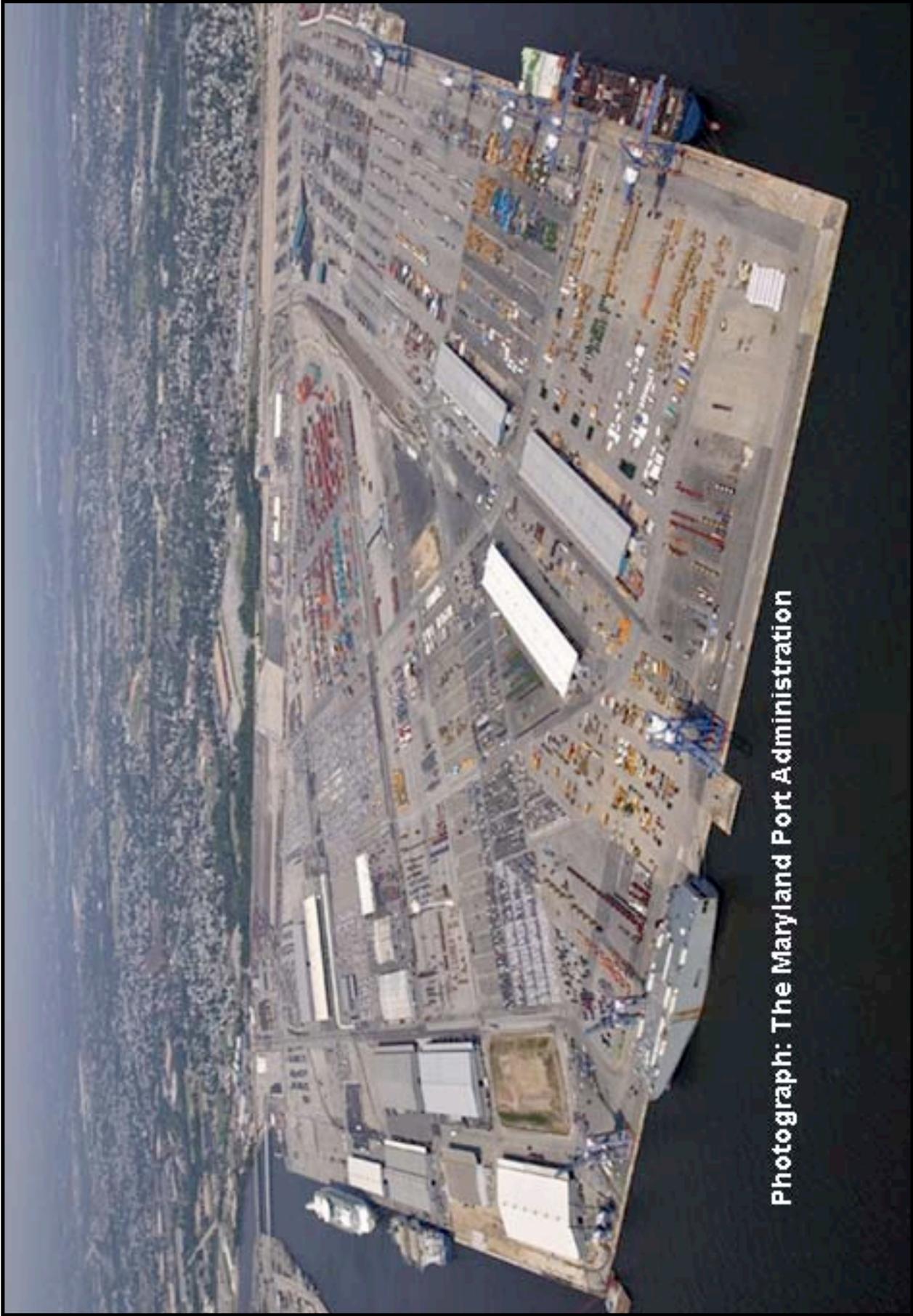
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7. Describe two ways building the Fort McHenry Tunnel modified the natural environment.

8. What are containers and how has their use affected the Port?

9. How might the paper you are writing on now be connected to the Port of Baltimore?





Photograph: The Maryland Port Administration