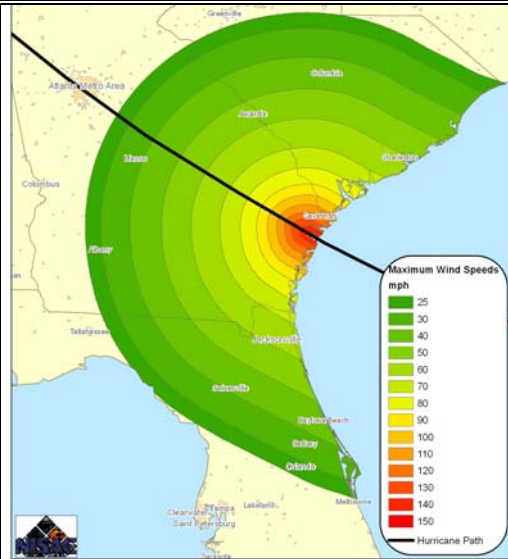




Office of Infrastructure Protection Savannah Area Hurricane Analysis Summary



Scenario Storm Characteristics

- Category 4 hurricane at landfall
- Maximum sustained winds > 150 mph
- Estimated storm surge of 15 feet
- Landfall south of Savannah, GA
- Major cities most impacted: Savannah, GA and Charleston, SC

		Population	
Population within Potential Surge Zones (population within each flood depth range)	11+ feet	4,300	
	9-10 feet	4,400	
	6-8 feet	12,400	
	1-5 feet	56,200	
Population Impacted by Potential Power Outages (widespread power outages expected in eastern Georgia and southern South Carolina; localized outages expected in remaining areas)	Affected	> 4,000,000	
	11 days	75% restored	
	21-28 days	Fully restored	
Estimated Economic Impacts			
Direct costs for business interruptions		\$2-4 billion	
Total costs for business interruptions		\$6-11 billion	
Facilities of Interest			
Major Seaports	<ul style="list-style-type: none"> • Charleston Harbor, South Carolina • Savannah, Georgia • Jacksonville, Florida 		
Major Transportation Routes	<ul style="list-style-type: none"> • I-95 (major south-north interstate) 		
Major Rail Components	<ul style="list-style-type: none"> • Waycross, GA rail yard 		
Expected Major Airport Closures	<ul style="list-style-type: none"> • Savannah International • Charleston AFB / International 		
Significant Dams (high storage capacity and major flood control dams)	<ul style="list-style-type: none"> • Santee Dam • J. Strom Thurmond Dam • Richard B. Russell Dam • Hartwell Dams 		
Major Wastewater Treatment Facilities (impacted by storm surge)	<ul style="list-style-type: none"> • President Street wastewater treatment plant • City of Brunswick treatment plants 		

NISAC





For Official Use Only

Impacts by Infrastructure Sector

Infrastructure	Level	Impacts	-Low	-Medium	-High
Agriculture		<ul style="list-style-type: none"> Local impacts to crop and livestock production 			
Banks & Finance		<ul style="list-style-type: none"> No long-term impacts expected due to backup systems but ATM and bank card service in the area could be disrupted 			
Chemical: Plants		<ul style="list-style-type: none"> Minor impacts expected, temporary shutdown of some plants 			
Commercial Facilities		<ul style="list-style-type: none"> Impacts not major, loss of business due to electric power outages 			
Dams		<ul style="list-style-type: none"> Expect water to be released from dams in preparation for potential heavy rainfall Consequences of dam failure catastrophic but low risk of failure 			
Defense Industrial Base		<ul style="list-style-type: none"> Many military and supporting defense industrial base sites in the area that may experience wind damage and telecommunications and power outages 			
Emergency Services		<ul style="list-style-type: none"> Emergency response delays expected due to transportation, electrical power, and telecommunications disruptions 			
Energy: Electric Power		<ul style="list-style-type: none"> Widespread power outages expected in eastern GA and southern SC – potential for >4,000,000 people to experience power outages Localized outages expected in the rest of GA, SC, and northern FL 75% restoration expected within 11 days Full restoration may take 21-28 days 			
Energy: Natural Gas		<ul style="list-style-type: none"> Only natural gas facility at risk is the Elba Island LNG import terminal and the compressor stations in the impacted region are gas-fired 			
Energy: Petroleum		<ul style="list-style-type: none"> Product delivered by pipeline because there is no capacity to refine transport fuels in these states 			
Government Facilities		<ul style="list-style-type: none"> Impacts not significant 			
Information Technology		<ul style="list-style-type: none"> Impacts not significant 			
National Monuments		<ul style="list-style-type: none"> Impacts not significant 			
Nuclear Facilities		<ul style="list-style-type: none"> Vogtle (2,320 MW) and Hatch (1,722 MW) nuclear power plants list within the highest electric power damage zones and will likely shutdown in advance of a major storm 			
Postal & Shipping		<ul style="list-style-type: none"> Expect delays due to transportation impacts 			
Hospitals & Nursing Homes		<ul style="list-style-type: none"> Evacuations and potential closure of some facilities in impacted area will increase demand on neighboring regional facilities 			
Telecomm: Wireline		<ul style="list-style-type: none"> Expect damage to telecommunications infrastructure (poles and overhead lines) especially in coastal areas of GA and SC Restoration of full service may take weeks 			
Telecomm: Wireless		<ul style="list-style-type: none"> Winds expected to damage many cellular towers A power outage of > 4 hours will drain cell tower backup batteries causing the towers to power down 			
Transport: Road/Rail		<ul style="list-style-type: none"> Ground transportation impacts due to flooding and debris and I-95 could be impacted due to flooding 			
Transport: Airports		<ul style="list-style-type: none"> Airport closures in Savannah and Charleston expected and could result in delays 			
Transport: Seaports		<ul style="list-style-type: none"> Expect damage or disruption at several ports and marine facilities having commercial and/or military importance Port facilities closures expected in GA and SC 			
Water: Drinking Water		<ul style="list-style-type: none"> 17 potable water treatment plants located in areas expected to experience hurricane force winds Likely need for boil orders and/or bringing water into the area Loss of water supply could impact fire fighting capabilities 			
Water: Wastewater		<ul style="list-style-type: none"> 77 wastewater treatment plants located in areas expected to experience high velocity winds 118 wastewater treatment plants are in areas that could have power outages > 4 days 			

