

Adapting to Rising Tides



Telecommunications Infrastructure Vulnerability and Risk Profile

Telecommunication services are typically provided by underground cables (e.g. fiber optic lines), overhead lines, or cellular (wireless) facilities. Underground cables are usually buried 2 to 5 feet deep with access points that allow for periodic maintenance and replacement. Many underground and overhead lines in the ART project area are located in railroad and state road or highway right-of-ways. The system of cellular telecommunication facilities located throughout the project area are necessary for wireless communications that support day-to-day and emergency response communication.

Key Issues

Impacts to telecommunications infrastructure could disrupt service which would potentially hamper emergency response activities and harm the everyday communications of residents and businesses alike. People who rely on one form of telecommunication, such as landlines or cellular telephones, will be less resilient - this has implications for low-income or otherwise vulnerable populations. Information on the location of telecommunication infrastructure is not readily available, and this lack of publicly available data will hinder climate resilience planning.

<h3>Vulnerabilities</h3>	<h3>Consequences</h3>
<p>Timing</p> <ul style="list-style-type: none">• Due to a lack of data on the location of telecommunications infrastructure, it is unclear when specific assets will be vulnerable. <p>Physical and Functional Qualities</p> <ul style="list-style-type: none">• Some cables buried underground may be exposed to rising groundwater tables and saltwater intrusion which could damage or disrupt their function.• Buried cables could be unearthed due to erosion, which could result in direct exposure and possible damage during storm events.• Power is required for many cellular telecommunication facilities to operate, and on-site backup power is generally not required. <p>Information</p> <ul style="list-style-type: none">• Data on the location, depth or elevation of telecommunications infrastructure in the ART project area is not publicly available.	<p>Scale</p> <ul style="list-style-type: none">• Disruption to telecommunications infrastructure could have consequences across the subregion and the entire region, especially during emergency response activities. <p>Ecosystem Services</p> <ul style="list-style-type: none">• N/A <p>People</p> <ul style="list-style-type: none">• Impacts to telecommunications infrastructure could hamper emergency response and everyday communications, with more severe consequences for people who rely on a single form of service (i.e. landlines versus wireless), including the elderly and low-income populations. <p>Economy</p> <ul style="list-style-type: none">• Widespread and longer lasting service disruptions could harm many businesses, with consequences for the region's economy.