

SEA LEVEL RISE AND VULNERABLE INFRASTRUCTURE: ROADS

Issue

Roads are susceptible to **sea level rise** in Virginia's coastal regions. The responsible authority will need to address vulnerable roads to ensure **continued local access** and **reduce future liability for inadequately maintained roads**.

Solutions

Bolster Existing Infrastructure

- **Additional drainage canals, dikes, and restoring ditches** may help alleviate road flooding.
- **Elevating roads** is a popular option among some areas and counties to avoid flooding by stormwater or tides.

Abandon or Discontinue the Road

- **VDOT or a county may determine**, through a process outlined in VA Code § 33.2-900 et seq., **whether a road is no longer necessary** and therefore does not warrant continued maintenance by the responsible authority.
- **Abandonment** may be a practical option for roads that do not provide meaningful access to nearby properties or where other access alternatives are available.

Transfer to Private Ownership

- **Roads used by a particular community may be transferred to private person(s)** who will oversee the road's maintenance.
- Those private persons may then address road flooding with a solution that best fits the local community.



Who maintains the roads?

Primary or Secondary Roads in the Highway System	→	VDOT
Public or County Roads not in the Highway System	→	Municipality in which the road is located
Private Roads	→	Private Person(s)

For more information about potential liability associated with abandoning roads, see [Closing Roads Due to Increased Flooding: Potential Liability Issues in Virginia](#) (VCPC Policy Paper, 2020).





Considerations for Solutions

Bolster Existing Infrastructure

- **Expensive:** Raising a road is expensive and doing so often entails considering implementing other forms of infrastructure, such as drainage canals, and acquiring additional land.
- **Drainage:** The governing authority should consider how building up infrastructure will affect surrounding areas.
- **Lack of Local Autonomy:** Because roads may be managed by VDOT, the local authority will need to work in conjunction with VDOT to identify which roads require attention.

Abandon the Road

- **Liability Considerations:** Abandoning roads may cut off access to properties and raise taking concerns, but continually maintaining repeatedly flooding roads is costly and may expose residents to risk.
- **Local Access:** The governing authority should consider how abandoning a road will affect the community's access to certain property and essential and emergency services.
- **Redundancy:** The locality should consider abandonment where bolstering infrastructure is not a viable option and there are alternative routes available for the community.

Transfer to Private Ownership

- **Concentrated Population:** Transferring a road to private ownership is a better option for neighborhoods or other concentrated populations that rely on a road for access and have the economic resources to take over maintenance.
- **Burden Shifted:** For roads that serve only a few residents, the burden and cost of repeated and increasing maintenance is shifted to the users of the road.

Resources

- [VDOT Resilience Plan \(Nov. 2022\)](#)
- [Virginia Coastal Resilience Funding Database](#)
- [National Association of Counties](#)
 - See Open Notices of Funding under "Implementing Infrastructure Investments at the County Level"

Case Studies

Ditch Program | Mathews County

Mathews County created an Outfall Ditch Maintenance Program in cooperation with VDOT to address poor road drainage due to inadequately maintained ditches. The county accepts applications from residents to identify public ditches that require attention.

Jolly Pond Road | James City County

James City County Board of Supervisors abandoned a section of Jolly Pond Road once it was deemed unsafe for crossing. The county constructed turnarounds at either end to allow traffic to reroute. The abandoned section is now privately owned.

The [VDOT Resilience Plan](#), published in November 2022, includes an objective to identify and implement resiliency measures into the planning, design, and adaptation of road infrastructure. For example, Strategy 4a states that VDOT's Location & Design Division will determine whether there is a need to add primary evacuation routes.