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Responding to Nuisance Flooding of Coastal Highways: Options for Massachusetts Municipalities

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This fact sheet was produced by the Marine Affairs Institute at Roger Williams University School of Law/Rhode Island Sea Grant Legal Program with funding from Rhode Island Sea Grant. This is one of a series of fact sheets designed to highlight key concepts of state and local government liability risks as those governments prepare for the effects of climate change throughout New England. This fact sheet was produced in partnership with MIT Sea Grant and Woods Hole Sea Grant.

Scope of this fact sheet

Massachusetts has 78 coastal communities, which in 2010 were home to 4,924,916 people, the seventh highest coastal population in the country.¹ During storms or exceptionally high tides, roads in these coastal communities often flood and may be subject to closure.² As sea levels rise, coastal roads will face increased damage from tidal flooding, commonly known as nuisance flooding. When flood waters subside, the roads may require costly repairs.³ Frequent road flooding may also disrupt daily life for residents, interfere with the movement of goods, and affect property values and associated property taxes. In addition to the political and financial concerns over highway flooding, municipalities may face liability for failing to maintain a roadway in a condition safe for travel.

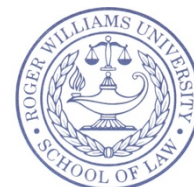
Municipalities must be prepared to make informed decisions to address the threat and consequences of increased nuisance flooding of public roads. In Massachusetts, municipalities are responsible to maintain town and county roads in good repair and may be liable if a traveler is injured due to a failure to maintain the roadway. This fact sheet provides information for municipalities about their responsibilities for maintaining public roads and discusses the possible responses to nuisance flooding: elevation, discontinuance, relocation, and discontinuance of maintenance.

This fact sheet will help explain municipal options and answer common questions:

- What options are available for a town to defend or discontinue a highway subject to nuisance flooding?
- What effect will a town's highway decisions have on public rights-of-way?



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- Under what conditions may a town cease maintenance of a roadway?
- Could a town owe damages to an abutting property owner for its decision to defend or discontinue a coastal highway?

Background

In Massachusetts, public roads are divided among state, county, town, and statutory private ways.⁴ The Commonwealth has long recognized that municipalities are legally obligated to maintain their town ways in a reasonably safe and convenient condition for travelers.⁵ They are responsible for maintaining county roads within their borders, as well.⁶ The Massachusetts Department of Transportation (DOT) Highway Division is responsible for the maintenance of state highways.⁷ In addition to their maintenance responsibilities, the applicable responsible entities are also liable for injuries sustained by persons traveling on roadways if the injuries are caused by a failure to maintain the roadways.⁸ Statutory private ways are roads laid out for access for local inhabitants.⁹ Although established for the benefit of the local residents, a private statutory way is open to public access.¹⁰ Unlike public ways, however, no government entity is responsible for the maintenance of statutory private ways.¹¹ This fact sheet will focus on town ways, although references to the other categories will be included when helpful for comparison.

As sea levels rise, a new challenge in maintaining coastal roads is coming to light: nuisance flooding, recurrent flooding caused by high tides.¹² Tide gauge studies show that the Northeast is one of the areas of the United States most vulnerable to increases in nuisance flooding, with observed increases from 3.4 days to 6 days per year from 2000 to 2015.¹³ “Although nondestructive in an immediate sense, [nuisance flooding] is indeed capable of causing substantial negative socioeconomic impacts,” including harms to transportation infrastructure.¹⁴ In addition to the direct costs of flooded and damaged roadways, property values may also be affected. In a recent study of the impact of future tidal flooding on property values in Miami-Dade County, researchers found that the loss of property value due to projected flooding of nearby roads was approximately three times greater than the loss due solely to flooding of the subject properties.¹⁵ With the high value of many coastal properties, a comparable loss of value in Massachusetts represents a potentially significant tax loss for coastal communities.¹⁶

Municipalities facing the challenge of nuisance flooding of roadways have several options to defend roads against nuisance flooding. After weighing the potential liabilities and costs, a municipality may elect to elevate, discontinue, relocate, or discontinue maintenance of a roadway.

Elevation

Elevation of a roadway above projected nuisance flood levels ensures that a given roadway remains passable. Municipalities that decide to elevate a road need to choose whether to address current tidal flooding or projected future flooding. The decision may be rooted in the available budget, projections for future sea level rise, and the project’s expected design life.

Minor elevation changes may be executed by the town's applicable roadway authority without approval at a town meeting.¹⁷ However, extensive roadway changes for elevation will constitute an alteration and require town approval.¹⁸ The selectmen or road commissioners of a town have the authority to alter town ways by voting for alterations at a town meeting.¹⁹ Prior to voting on an alteration, the planning board must be given an opportunity to report on the plan or amend the official map, if one exists.²⁰

Approval from the Commonwealth may be required. If the elevation will require any work on a state highway, a state highway access permit is needed.²¹ Approval from the DOT is required for most projects that affect traffic control devices, particularly if the project affects a state highway or is performed with federal or state funds.²² If the elevation work will involve removal, filling, dredging, or alteration of "any bank, riverfront area, fresh water wetland, coastal wetland, beach, dune, flat, marsh, meadow or swamp bordering on the ocean or on any estuary, creek, river, stream, pond, or lake, or any land under said waters or any land subject to tidal action, coastal storm flowage, or flooding," then the municipality must provide written notice of the work to its local conservation commission, including a description of "the effect of the proposed activity on the environment."²³ The conservation commission will hold a public hearing on the proposed activity and either approve or impose conditions upon the work.²⁴ If any work will take place in Massachusetts tidelands, then the Massachusetts Department of Environmental Protection and Massachusetts Department of Conservation and Recreation share jurisdiction over the work.²⁵ Federal review or permitting could also be triggered depending upon the project's specifications.²⁶ Consultation with local counsel will be critical to determine which agencies have jurisdiction over any given project.

In addition to the costs of obtaining permits and executing the elevation work, a municipality may exercise its right to eminent domain to accomplish the elevation.²⁷ Under state law, "[t]he selectmen or road commissioners may enter upon, use or survey or take by eminent domain...any land they may deem necessary for the purpose of securing or protecting a public way."²⁸ However, any landowner whose property is taken or "sustain[s] damage" from this process is entitled to compensation for a taking of his/her property.²⁹

Combining all of these costs of elevating a roadway may make the project a prohibitively expensive solution to nuisance flooding. In that case, the municipality may prefer to discontinue, relocate, or discontinue maintenance of the road.

Discontinuance

Discontinuing a roadway means that the road ceases to be a public way.³⁰ Not only does the town no longer have to maintain it, but the way is no longer open for public travel.³¹ A municipality may desire to discontinue a public way in order to (1) avoid the costs of maintaining the road; (2) avoid liability for injuries on the road; and (3) reduce the potential for new development in the area of the road by eliminating lot frontage on public ways.³²

Municipalities can discontinue only town ways.³³ The authority to discontinue county ways and state highways lie with the county commissioners and DOT Highway Division, respectively.³⁴ To discontinue a town way, the municipality must hold a town meeting and vote for the discontinuance.³⁵ Like approving alterations, a report from the planning board is required before the vote.³⁶ Although there is no requirement to provide notice to abutters, receive public comments, or even provide a reason for the discontinuance, a municipality may desire to take these additional measures to reduce political repercussions.³⁷

Discontinuing a roadway can have negative legal as well as political consequences: (1) travelers or residents may be inconvenienced; (2) property owners could become landlocked with no access to their property; (3) undeveloped lots could become unbuildable due to lack of road frontage; (4) state or federal highway funds could decrease; and (5) if infrastructure is not removed, it could cause environmental or other harms.³⁸

The potential for previously buildable but undeveloped lots to lose their legally buildable status could give rise to takings claims.³⁹ Whether such lots may lose their buildable status will be determined by whether the local zoning law requires frontage on a public way for development.⁴⁰

Takings liability may also result when a developed lot becomes landlocked due to a road discontinuance.⁴¹ Because discontinuance eliminates the public right of access, a lot may become landlocked if the discontinued road was its only point of ingress and egress.⁴² If discontinuing a road does cause a property to become landlocked, the owner may be able to bring a takings claim against the municipality.⁴³ However, Massachusetts courts have generally limited the right of recovery to true landlocked scenarios. In *Nylander v. Potter*, the Supreme Judicial Court denied a claim for damages when the plaintiff lost access to a discontinued road but retained access to a public road on the far side of her property, noting that a “claim for monetary damages is only available if a parcel is rendered landlocked by the discontinuance of a public way.”⁴⁴ Further, Massachusetts case law has limited the ability of a plaintiff to recover under a takings claim to instances where the plaintiff suffers damages unique to his or her property.⁴⁵ Decrease of property value or inconvenience in a longer access path is typically insufficient as long as access to the property remains.⁴⁶

Relocation

Rather than exclusively discontinuing a road, a municipality may be able to relocate the road to a location that still provides access for property owners but is not at risk for nuisance flooding. Dedication of a new road as a substitute for an existing road “where it will serve all the purposes” of the old road constitutes a discontinuance of the old road.⁴⁷ Relocation follows the same procedural steps as creation of a new road.⁴⁸

Relocation, where feasible, may be a better option than elevation or discontinuance because it may be cheaper than elevation, may be more politically popular than discontinuance, and may avoid takings claims by providing alternative access to otherwise isolated lots. Relocation may not be

feasible in all instances, such as if no alternative location can be identified above the nuisance flood level that will still provide adequate access to properties.

Discontinuance of maintenance

Finally, a Massachusetts municipality may cease maintenance without actually discontinuing certain roads no longer utilized by the public. Discontinuance of maintenance can be initiated by the municipality's board of selectmen.⁴⁹ The board must hold a public hearing with notice to "all property owners abutting an affected road" as well as published notice.⁵⁰ After the hearing, the board may vote to discontinue maintenance if it finds "that a city or town way or public way has become abandoned and unused for ordinary travel and that the common convenience and necessity no longer requires said town way or public way to be maintained in a condition reasonably safe and convenient for travel."⁵¹ In this circumstance, the road will remain open to travel, and the town must place notice of discontinued maintenance at each end of the affected portion of the town way.⁵² The town is no longer responsible for roadway maintenance or liable for injuries due to roadway defects, but the road remains open to public travel.⁵³ This route offers municipalities an option to eliminate maintenance fees and liability on roads that are no longer regularly utilized without opening themselves up to the takings claims associated with discontinuing the way entirely.

Conclusion

Coastal communities rely on coastal roads for access. However, as sea levels continue to rise, coastal roads risk daily inundation from high tides, with costly and disruptive consequences. As outlined above, municipalities in Massachusetts have four options in addressing nuisance flooding of coastal highways: elevate the roads above flood levels, relocate the roads upland, discontinue the roads entirely, or discontinue maintenance of the roads. Each option comes with its own benefits as well as costs and liability risks. The location, needs, and resources of the municipality affect which option is most appropriate for the community. Proactive planning and informed decision-making will help coastal Massachusetts communities protect public roads from rising sea levels and protect themselves from increased costs and liabilities. It is important for a community to consult its local counsel to ensure that all potential liability risks are considered when evaluating options for a specific project.

¹ NAT'L OCEANIC AND ATMOSPHERIC ADMIN., NATIONAL COASTAL POPULATION REPORT: POPULATION TRENDS FROM 1970 TO 2020 9 (2013); Mass. Office of Coastal Zone Mgmt., *CZM Regions, Coastal Communities, and Coastal Zone Boundary*, MASS.GOV, <https://www.mass.gov/service-details/czm-regions-coastal-communities-and-coastal-zone-boundary> (last visited Jan. 15, 2019).

² Monica Madeja, *Massachusetts Coastal Communities Continue Clean Up Amid Flooding Concerns*, NECN.COM (Mar. 6, 2018 12:07 PM), <https://www.necn.com/news/new-england/Massachusetts-Coastal-Communities-Continue-Clean-Up-Amid-Flooding-476008673.html> (reporting that "residents [of Marshfield] said the 2 a.m. high tide was the eighth in a row that breached the seawall" and residents of Duxbury were traveling by paddle board due to flooded streets).

³ See Richard D. Ray and Grant Foster, *Future Nuisance Flooding at Boston Caused by Astronomical Tides Alone*, 4 EARTH'S FUTURE 578, 578 (2016).

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- ⁴ F. SYDNEY SMITHERS, MASSACHUSETTS STREETS AND WAYS FOR SURVEYORS § 1.1 (2011), available at <https://web.archive.org/web/20150709132727/http://cainhibbard.com/wp-content/uploads/2011/03/Streets-Ways-May-2011.pdf>. Massachusetts statutory language refers to municipal roads as “town roads” regardless of whether the municipality is a city or town.
- ⁵ MASS. GEN. LAWS ANN. ch. 84, § 1 (West 2018); *Lobdell v. Inhabitants of New Bedford*, 1 Mass. 153, 154 (1804).
- ⁶ LYNN RUBINSTEIN AND ALEXANDRA D. DAWSON, DISCONTINUING TOWN AND COUNTY ROADS, 17 (The Trustees of Reservations’ Highland Communities Initiative 2003); *see* MASS. GEN. LAWS ANN. ch. 82, § 8. County commissioners, councils of governments, or other county governing authorities are authorized to “lay out, alter, relocate, order specific repairs, discontinue and discontinue maintenance of” county roads, but they are not charged with carrying out roadway maintenance. MASS. GEN. LAWS ANN. ch. 82, § 1.
- ⁷ *Id.* ch. 81, § 13.
- ⁸ *Id.* ch. 81, § 18 (Commonwealth responsible for injuries on state highways), ch. 84, § 15 (responsible county, city, town, or person responsible for injuries on county or town ways); *see* *Sloper v. City of Quincy*, 16 N.E.2d 14, 16 (Mass. 1938) (recognizing a cause of action when a governmental entity fails in its legal duty to “maintain [a] way in repair”).
- ⁹ *U.S. v. 125.07 Acres of Land, More or Less*, 707 F.2d 11, 14 (1st Cir. 1983) (applying Massachusetts law).
- ¹⁰ *Id.*
- ¹¹ *Id.*
- ¹² NAT’L OCEANIC AND ATMOSPHERIC ADMIN., TECHNICAL REPORT NOS CO-OPS 086: PATTERNS AND PROJECTIONS OF HIGH TIDE FLOODING ALONG THE U.S. COASTLINE USING A COMMON IMPACT THRESHOLD vii (2018).
- ¹³ *Id.* at vii-viii.
- ¹⁴ Hamed R. Moftakhari, Amir AghaKouchak, Brett F. Sanders, and Richard A. Matthew, *Cumulative Hazard: The Case of Nuisance Flooding*, 5 EARTH’S FUTURE 214, 214 (2017).
- ¹⁵ Steven A. McAlpine and Jeremy R. Porter, *Estimating Recent Local Impacts of Sea-Level Rise on Current Real-Estate Losses: A Housing Market Case Study in Miami-Dade, Florida*, 37 POPULATION RESEARCH AND POLICY REVIEW 871, 892 (2018).
- ¹⁶ *See id.* at 893.
- ¹⁷ *Mitchell v. Inhabitants of Bridgewater*, 64 Mass. 411, 413 (1852) (recognizing the authority of the surveyor of highways to change the grade of a road “without any instructions from the selectmen”).
- ¹⁸ *See* MASS. GEN. LAWS ANN. ch. 82, § 21 (West 2018).
- ¹⁹ *Id.* For county ways, the county commissioners, councils of governments, or other authorized bodies hold this authority. *Id.* ch. 82, § 1.
- ²⁰ *Id.* ch. 41, §§ 81F (official map), 81I (report in absence of official map).
- ²¹ DOT Highway Division, *State Highway Access Permits*, MASS.GOV, <https://www.mass.gov/state-highway-access-permits> (last visited Jan. 7, 2019).
- ²² MASS. GEN. LAWS ANN. ch. 85, § 2.
- ²³ *Id.* ch. 131, § 40.
- ²⁴ *Id.*
- ²⁵ *Id.* ch. 91, § 2. Tidelands are defined as “present and former submerged lands and tidal flats lying below the mean high water mark. *Id.* ch. 91, § 1.
- ²⁶ *See, e.g.*, Rivers and Harbors Act, 33 U.S.C.A. § 403 (West 2018) (requiring permitting for construction or dredging in navigable waters of the United States); Endangered Species Act, 16 U.S.C.A. § 1539 (West 2018) (requiring a permit for acts otherwise prohibited under the Endangered Species Act).
- ²⁷ MASS. GEN. LAWS ANN. ch. 82, § 24; *see also id.* ch. 81, § 7 (state highways), ch. 82, § 7 (county ways).
- ²⁸ *Id.* ch. 84, § 10.
- ²⁹ *Id.*; *Mitchell v. Inhabitants of Bridgewater*, 64 Mass. 411, 414 (1852) (recognizing causes of action when raising a highway physically intrudes upon or restricts access to a land owner’s property).
- ³⁰ RUBINSTEIN AND DAWSON, *supra* note 6, at 3; *see* *Nylander v. Potter*, 667 N.E.2d 244, 246 n.7 (Mass. 1996).
- ³¹ *Nylander v. Potter*, 667 N.E.2d at 246 n.7.
- ³² *See* RUBINSTEIN AND DAWSON, *supra* note 6, at 2.

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- ³³ See MASS. GEN. LAWS ANN. ch. 82, § 21. If a municipality wishes to discontinue a county road, it must petition the county commissioners for a discontinuance. *Id.* ch. 82, § 2.
- ³⁴ *Id.* ch. 81, § 12 (DOT Highway Division authority); ch. 82, § 1 (county commissioner authority).
- ³⁵ *Id.* ch. 82, § 21; *Erickson v. Clancy Realty Trust*, 43 N.E.3d 322, 325 (Mass. App. Ct. 2016). If a municipality desires to discontinue a roadway within five hundred yards of its point of connection with an adjoining city or town, consent of that neighbor is required. MASS. GEN. LAWS ANN. ch. 82, § 1.
- ³⁶ *Id.* ch. 41, § 81I; *see supra* text accompanying note 20.
- ³⁷ See *Newburyport Redevelopment Auth. v. Commonwealth*, 401 N.E.2d 118, 132 (Mass. App. Ct. 1980) (noting that there is no notice requirement to discontinue town ways); RUBINSTEIN AND DAWSON, *supra* note 6, at 5.
- ³⁸ RUBINSTEIN AND DAWSON, *supra* note 6, at 2; *see also* MASS. GEN. LAWS ANN. ch. 81, § 31 (basing a municipality's Highway Fund proportion in-part upon street mileage within the municipality).
- ³⁹ RUBINSTEIN AND DAWSON, *supra* note 6, at 5-6.
- ⁴⁰ *Id.* at 6. For example, Franklin, Massachusetts requires "continuous frontage" of fifty to two hundred feet, depending upon the underlying zoning district. FRANKLIN, MASS., ZONING ORDINANCE ch. 185 attachment 9 (2017).
- ⁴¹ See *id.* at 247 n.10. A landlocked property owner is not entitled to an easement over neighboring property because an easement by necessity may only arise when the two adjacent properties in question originally had common ownership and one property became landlocked upon sale by the original owner. See *id.* at 247.
- ⁴² *Nylander v. Potter*, 667 N.E.2d 244, 247 (Mass. 1996).
- ⁴³ See *id.* at 247 n.10. A landlocked property owner is not entitled to an easement over neighboring property because an easement by necessity may only arise when the two adjacent properties in question originally had common ownership and one property became landlocked upon sale by the original owner. See *id.* at 247.
- ⁴⁴ *Id.* at 246, 247 n.10.
- ⁴⁵ *Smith v. City of Boston*, 61 Mass. 254, 255 (1851).
- ⁴⁶ *Id.* at 255-56 (denying a plaintiff's claim of damages when the closure of a road necessitated use of a longer access route to several of his properties and allegedly resulted in decreased property values).
- ⁴⁷ *Erickson v. Clancy Realty Trust*, 43 N.E.3d 322, 325 (Mass. App. Ct. 2016) (citing *Commonwealth v. Boston & Albany R.R.*, 150 Mass. 174, 176 (1889)).
- ⁴⁸ See MASS. GEN. LAWS ANN. ch. 82, § 21 (West 2018); *Mahan v. Town of Rockport*, 190 N.E. 810, 810 (Mass. 1934); *see also* MASS. GEN. LAWS ANN. ch. 82, § 11 (authority for relocation of county ways), ch. 81, § 6 (authority for relocation of state highways).
- ⁴⁹ MASS. GEN. LAWS ANN. ch. 82, § 32A; *Coombs v. Bd. of Selectmen of Deerfield*, 528 N.E.2d 136, 137 (Mass. App. Ct. 1988). A municipality may apply to the county commissioners for discontinuing maintenance of county ways.
- ⁵⁰ MASS. GEN. LAWS ANN. ch. 82, § 32A.
- ⁵¹ *Id.*
- ⁵² *Id.*
- ⁵³ *Nylander v. Potter*, 667 N.E.2d 244, 246 n.7 (Mass. 1996).