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Climate Adaptation Academy Fact Sheet #5

Responding to Nuisance Flooding of Coastal Highways: Options for Municipalities

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Sea level rise and the increased power of storms have led to frequent flooding in low-lying coastal areas.¹ The U.S. Federal Interagency Sea Level Rise and Coastal Flood Hazard Task Force predicts that by 2050, high tide flood frequencies will affect the Northeast Atlantic region of the United States between 45 to 130 days a year, compared to 3.4 to 6 days per year between 2000 and 2015.² This increase in flooding will cause increased “sunny day” and nuisance flooding of coastal highways (including all types of streets and roads),³ requiring governments to make difficult choices about how to maintain and manage this infrastructure. This fact sheet provides information for municipalities about the legal context for three possible responses to highway flooding: elevation, discontinuance, and abandonment.

Background

Nuisance and storm-related flooding of coastal highways presents a difficult challenge for affected municipalities. Local governments must balance the costs and benefits of these highways across both short- and long-term time scales.

Nuisance flooding of coastal highways can cause substantial economic damage.⁴ Municipalities may incur cleanup and repair costs along with indirect economic losses from highway disruption, such as impacts on business and tourism.⁵ Cumulative costs of long-term nuisance flooding may be higher than those incurred after powerful, but infrequent, events.⁶ These cumulative costs may increase with the frequency and severity of flooding from sea level rise and changing weather patterns.⁷ While there are no reliable estimates of the total economic impact due to flooding in Connecticut,⁸ continued maintenance and improvement needs may place a substantial financial strain on municipalities.

While the costs of road maintenance and improvement are high, municipalities also have compelling fiscal reasons to pay for them. Property in coastal areas is valuable.⁹ If municipalities do not take proactive steps to ensure resilient coastal highways, the value of these properties may suffer, with cascading impacts on municipal tax revenues and programs.¹⁰

Coastal highways are also a public safety issue. Connecticut’s coastal population exceeds two million people.¹¹ Emergency responders need safe access to coastal areas to serve these residents, and coastal residents need means to evacuate landward when facing natural disasters,

such as coastal storms.¹² State law requires municipalities to consider public safety in coastal planning: under the Connecticut Coastal Management Act, municipal planning and zoning requirements must be consistent with state policies in coastal areas.¹³ These policies include consideration of the potential impacts of sea level rise to “minimize damage to and destruction of life and property” when considering coastal development and “rehabilitation, upgrading and improvement of existing transportation facilities” to meet coastal “transportation needs” in coastal areas.¹⁴

The human and economic costs of current and anticipated flooding and value of affected highways require state and local governments to plan strategically for the future of their infrastructure. By evaluating the implications of each option for affected highways, municipalities can develop reasoned approaches to each vulnerable highway under their jurisdiction.

Highway Infrastructure

There are three types of highway classifications within the Connecticut state highway system. State highways provide for the “predominant flow of traffic” between municipalities.¹⁵ Municipalities, including towns, cities, and boroughs,¹⁶ own and maintain highways within their limits.¹⁷ Finally, non-governmental entities, such as individuals or beach associations, own and maintain private highways.¹⁸ Municipalities are not legally responsible for maintaining these private roads. This fact sheet is focused on municipal highways, which pose the greatest challenge to local governments.

Municipalities generally construct or accept highways voluntarily, but courts can also order them to create or alter highways. A person may present an application and summons to the superior court if a municipality refuses “to make any necessary alterations in any existing highway.”¹⁹ The court may then appoint a committee that will determine whether “such highway or alteration will be of common convenience and necessity” and will “survey and . . . estimate the damages.”²⁰

Municipalities have a legal duty to maintain their highways.²¹ If a municipality does not maintain such a highway within its limits “in good and sufficient repair, . . . the superior court for the judicial district in which such highway is located” may order the municipality to make such repairs.²² A person who is injured due to a municipality’s failure to maintain a highway may file a civil action for damages.²³ To prevail, the plaintiff must prove “the existence of the [highway] defect” and the municipality’s “actual or constructive knowledge of and failure to remedy that defect.”²⁴

Nuisance flooding may create a damaging condition, placing municipalities under a legal obligation to respond and adapt to the conditions. Moreover, failure to address the situation may create liability if the flooding results in injury. Municipalities in such a situation have three basic options in response to coastal highway flooding—elevation, discontinuance, or abandonment. The following sections discuss legal implications of each of these options.

Elevation

Highway elevation projects, such as physical elevation of the road bed or bridge construction, may end nuisance flooding and limit flooding caused by coastal storms. Elevation has advantages in that access to coastal areas is protected. However, elevation projects are costly and may require difficult decisions regarding design and permitting. This study focuses on legal aspects of physical elevation of the roadway. Other approaches, such as bridges, may present different constraints and challenges in some

respects. However, the permitting process and basic liability analysis will be consistent regardless of the approach deployed.

Connecticut state law does not explicitly establish a minimum height of road projects relative to sea level.²⁵ As a result, municipalities may choose any elevation—a decision that may be driven by available financing and current flood conditions rather than sea level rise projections.²⁶ As sea level rise will occur during each project’s expected design life, consideration of future conditions may be warranted.

Highway elevation may cause damage after flood events.²⁷ Damage may occur when water becomes trapped on the landward side of a highway.²⁸ If the road height is lower than the high water line from the flooding, “the embankment can begin to act like a dam holding the flood waters” as the flood waters recede.²⁹ The water will flow to low spots, cause erosion, and damage the highway and, potentially, properties landward of the road.³⁰ Foreseeable temporary flooding of private property due to highway elevation could result in takings liability.³¹

When a highway is elevated, the roadbed must also be widened to maintain side slopes.³² This widening will trigger permitting requirements if the highway encroaches past the coastal jurisdiction line into “tidal, coastal or navigable waters,” including wetlands.³³ Before “maintain[ing] any structure, dredging or fill[ing]” in such areas, the municipality must receive a certificate or permit from the Department of Energy and Environmental Protection (DEEP)³⁴ as well as appropriate permits from the U.S. Army Corps of Engineers.³⁵

Highway elevation projects can also require payment of compensation to neighboring landowners, which increases the cost of these projects. Highway widening may encroach onto property not owned by the municipality, either through the roadbed itself or for a sidewalk or right-of-way along the roadbed. A municipality has the authority to take or acquire property for “any public use or purpose,” including creation or maintenance of highways.³⁶ When a municipality asserts its authority to acquire private property, the property owner must receive just compensation.³⁷ Where municipal highway widening will require occupation of private property, compensation of private property owners will be required.

A taking may also occur if private property abutting the highway “sustains special damage” due to “any change in the grade of such highway.”³⁸ For example, in *Corbin Development Company, Inc. v. Commissioner of Transportation*, the Supreme Court of Connecticut held that a change in highway grade resulting in a loss of access to and from private property was a taking.³⁹ Under this precedent, municipalities may be required to pay the costs associated with raising driveways to the extent required to provide continued access. The standard measure for damages is “the difference between the market value of the whole tract as it lay before the taking and the market value of what remained of it thereafter[.]”⁴⁰ In assessing damages, the municipality must also consider “the changes contemplated in the improvement [of the highway]” and likely future improvements that “may reasonably be held to affect market value [of the private property].”⁴¹ Municipalities should consider required compensation to affected property owners for loss of access when determining the elevation of the highway.

Discontinuance

Discontinuance relieves municipalities of their duty to maintain highways.⁴² Property owners abutting the discontinued highway “have a right-of-way” over the discontinued highway.⁴³ The right-of-way “includes the right to travel over and to improve the roadbed of the former highway.”⁴⁴ The

discontinuance generally does not affect title to the highway, but the local government can grant the discontinued highway to abutting property owners.⁴⁵ If the owners accept, such a grant would create a private road which the owners are responsible for maintaining.⁴⁶ Additionally, the municipality may discontinue the highway for vehicle use but maintain it as a sidewalk or bike path.⁴⁷

A highway is discontinued “by direct action through governmental agencies.”⁴⁸ In most cases, a municipality can discontinue a highway by majority vote⁴⁹ after referral of the proposal to the planning commission for a report.⁵⁰ Residents who have property bounding the highway in question must be notified in writing prior to the meeting where the vote is to be taken.⁵¹ If a highway was designated by a court or legislature, however, an application to discontinue the highway must be presented to the Superior Court, which will determine whether to discontinue the highway.⁵²

Connecticut courts have held that discontinuance is not a taking as long as property owners’ access rights are not terminated.⁵³ In *Luf v. Southbury*, the town left a section of a highway undeveloped for approximately two years until it voted to discontinue the undeveloped section.⁵⁴ The Supreme Court of Connecticut held that this was not an unconstitutional taking because there was only a small diminution in property value and some impairment of access rights.⁵⁵ The court in *Luf* further held that property owners adjacent to the discontinued highway were not entitled to damages because their access rights were not terminated along with the discontinuation of the highway.⁵⁶

Abandonment

A municipality is relieved of its duty to maintain a highway if a court finds that the public abandoned the highway.⁵⁷ Unlike discontinuance, abandonment requires no affirmative act by the local government. Instead, the municipality may cease maintaining or supporting use of the highway. In abandonment cases, the highway “remains a public road” until a court declares it abandoned.⁵⁸ Abandonment “may be inferred from circumstances or may be presumed from long-continued neglect.”⁵⁹ Usually, there is “some affirmative act indicative of an intention to abandon;” however, “negative or passive conduct may be sufficient.”⁶⁰ The party “seek[ing] to establish the abandonment of a highway” has the burden of proof.⁶¹

The public abandons a highway by not using it “for a long period of time with the intention to abandon.”⁶² The municipality cannot legislate nonuse of the highway—“nonuse [is] by the public, not the municipality.”⁶³ There is no definition of “long period of time” by case law or statute; a court must determine whether there has been substantial time of intended nonuse.⁶⁴ In *Stohlts v. Gilkinson*, the Appellate Court of Connecticut held that a highway was not abandoned because a property owner received an approved permit to construct a driveway off of the highway approximately seventeen years before the court action.⁶⁵ On the other hand, in *Nichols v. Town of Oxford*, the Appellate Court of Connecticut held that a highway was abandoned when there was little public use and it received “sporadic but insubstantial” maintenance by the town for approximately sixty years.⁶⁶ Abandonment decisions thus are highly factual inquiries involving not only the length of nonuse but also municipal actions during the period of nonuse.

If a court finds that a highway is abandoned, property owners abutting the highway have the same right-of-way as applies in discontinuance.⁶⁷ This right-of-way “includes the right to travel over and to improve the roadbed of the former highway.”⁶⁸ Alternatively, a property owner may file for title or interest to all

or part of the abandoned highway.⁶⁹ As *Luf v. Southbury* applies to abandonment, abandonment is unlikely to result in takings liability where abutters' access rights are retained.⁷⁰

Abandonment does not require the municipality to make an affirmative action, but it carries potential for liability as a consequence. An unmaintained highway will inevitably degrade, while the public continues to use it and it remains a public highway.⁷¹ A person who is injured during this period may bring legal action against the municipality and may well succeed unless the municipality can show that the highway was abandoned.⁷² As a result, abandonment inherently involves some risk of harm to the public and resulting liability to the municipality.

Conclusion

Repetitive flooding of coastal highways presents municipalities with difficult choices about whether and how to respond. The choice is not easy, as it requires balancing of economic costs and benefits, public safety, and environmental concerns. These decisions will become more difficult as sea level rise increases the frequency of flooding.

Elevation may be the only mechanism that can keep highways continuously open and usable to residents, the public, and emergency responders. By raising the road surface above the reach of the tide, flooding can be avoided outside of storm events, at least for a period of time. However, such projects are expensive and may become less effective as sea level rises. From a legal perspective, elevation projects often require a permit from the state and payment to abutting landowners where property must be taken to widen the right-of-way.⁷³ In addition, it is possible that elevated roadways can trap flood waters or cause erosion, which may result in takings liability during subsequent flooding.

Discontinuing a highway appears to be the most effective way for a municipality to end its duty to maintain a highway. Discontinuance processes require affirmative acts by the local government, but can avoid construction and maintenance costs for highways that are no longer desired. In such cases, municipalities can avoid both takings liability as long as affected landowners retain a right-of-way for access to their property and there is a small diminution of property value.

Abandonment requires the public to no longer use a highway for a long period of time—often stretching to decades.⁷⁴ As a result, abandonment does not appear to be an effective tool in most instances for municipalities seeking to make an affirmative decision about the future of a threatened coastal highway. In addition, allowing a highway to degrade exposes the municipality to liability if a person is injured by the unmaintained highway before a court would find it abandoned.⁷⁵

Municipalities can benefit by considering the legal implications of highway management decisions related to coastal highways that are subject to repetitive flooding. Municipalities have a duty to maintain all of their highways, but they can take action to end this duty. A careful evaluation of particular highways may yield an optimal strategy for managing liability through elevation, discontinuance, or abandonment.

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¹ NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, NOS CO-OPS 086, PATTERNS OF PROJECTIONS OF HIGH TIDE FLOODING ALONG THE U.S. COASTLINE USING A COMMON IMPACT THRESHOLD, at vii (2018).

² *Id.* at 15.

³ The term “‘highway’ includes streets and roads.” CONN. GEN. STAT. § 13a-1a(2).

⁴ Hamed R. Moftakhari et. al., *Cumulative Hazard: The Case of Nuisance Flooding*, 5 EARTH’S FUTURE, 214, 218-19, (2017), <https://agupubs.onlinelibrary.wiley.com/doi/full/10.1002/2016EF000494>.

⁵ *Id.*

⁶ *Id.*

⁷ *Id.*

⁸ STATE OF CONNECTICUT, DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF LONG ISLAND SOUND PROGRAMS, COASTAL HAZARDS IN CONNECTICUT, at 28-29 (2010).

⁹ Di Jin et al., *Shoreline Change, Seawalls, and Coastal Property Values*, 114 OCEAN & COASTAL MGMT. 185 (2015) (collecting sources on coastal property value premium).

¹⁰ *Id.*

¹¹ NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, NATIONAL COASTAL POPULATION REPORT: POPULATION TRENDS FROM 1970 TO 2020, at 11 (2013).

¹² STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS, RESILIENT RHODY: AN ACTIONABLE VISION FOR ADDRESSING THE IMPACTS OF CLIMATE CHANGE IN RHODE ISLAND 53-54 (2018) (discussing emergency preparedness and transportation resilience).

¹³ CONN. GEN. STAT. § 22a-104(e).

¹⁴ CONN. GEN. STAT. § 22a-92 (a)(5) (sea level rise), 22a-92 (b)(1)(F) (transportation).

¹⁵ CONN. GEN. STAT. § 13a-1a(4).

¹⁶ CONN. GEN. STAT. § 13a-1a(4)(b).

¹⁷ CONN. GEN. STAT. § 13a-99. “‘Selectmen’ . . . [is] construed to mean the board, officer or commission having charge of the care and maintenance of such highways.” CONN. GEN. STAT. § 13a-1b. If a city or borough’s charter does not authorize it to “lay out, alter, grade and discontinue” highways within its limits, “the common council of cities and the warden and burgesses of boroughs may exercise such power in the same manner as selectmen of towns.” CONN. GEN. STAT. § 13a-7.

¹⁸ *Robinson v. Faulkner*, 306 A.2d 857, 861 (Conn. 1972).

¹⁹ CONN. GEN. STAT. § 13a-63.

²⁰ *Id.*

²¹ CONN. GEN. STAT. § 13a-99.

²² CONN. GEN. STAT. § 13a-103.

²³ CONN. GEN. STAT. § 13a-149.

²⁴ *Machado v. City of Hartford*, 972 A.2d 724, 734 (Conn. 2009).

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- ²⁵ Some other jurisdictions have implemented minimum road elevation requirements. *See Louisiana Sea Grant, REGULATORY BEST PRACTICES TO MAKE LOUISIANA COASTAL COMMUNITIES MORE RESISTANT TO NATURAL HAZARDS* 9 (2013) (discussing St. Tammany parish subdivision ordinance requiring roads to be a minimum of 6' above sea level, based on a modeled 10-year storm surge level).
- ²⁶ Interview with Marilyn Ozols, Land Use Administrator, Borough of Fenwick, Conn. (July 20, 2018). Other constraints may apply.
- ²⁷ U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION, FHWA-NHI-07-096, *HIGHWAYS IN THE COASTAL ENVIRONMENT* 133 (2008).
- ²⁸ *Id.*
- ²⁹ *Id.*
- ³⁰ *Id.*
- ³¹ Ark. Game & Fish Comm'n 568 U.S. 23, 38 (2012) (“[G]overnment-induced flooding temporary in duration gains no automatic exemption from Takings Clause inspection.”); *St. Bernard Parish Gov’t v. U.S.*, 887 F.3d 1354, 1359-60 (Fed. Cir. 2018) (“[T]he issue presented is whether the increased flooding from MRGO constituted a temporary taking. Proof of such a claim requires the plaintiffs to establish that government action caused the injury to their properties—that the invasion was the ‘direct, natural, or probable result of an authorized activity.’ Establishing liability for a temporary taking also requires proof that the invasion was either intentional or foreseeable.” (internal citations omitted)).
- ³² CONNECTICUT DEPARTMENT OF TRANSPORTATION, *HIGHWAY DESIGN MANUAL* (2013).
- ³³ CONN. GEN. STAT. § 22a-361(a)(1).
- ³⁴ *Id.*
- ³⁵ *See Audrey Elzerman, FLOOD AND EROSION CONTROL STRUCTURES, Adapt CT Climate Adaptation Academy Fact Sheet #4, at 2* (2017) (discussing Army Corps of Engineers permitting authorities in the context of coastal development).
- ³⁶ CONN. GEN. STAT. § 7-148(c)(3)(A).
- ³⁷ CONN. CONST. art. 1, § 11.
- ³⁸ CONN. GEN. STAT. § 13a-82.
- ³⁹ *Id.*
- ⁴⁰ *Corbin Dev. Co. v. Comm’r of Transp.*, 404 A.2d 882, 885 (Conn. 1978).
- ⁴¹ CONN. GEN. STAT. § 13a-82.
- ⁴² CONN. GEN. STAT. § 13a-49.
- ⁴³ CONN. GEN. STAT. § 13a-55.
- ⁴⁴ *Gagnon v. Mun. Planning Comm’n of the City of Ansonia*, 521 A.2d 589, 596 (Conn. App. Ct. 1987).
- ⁴⁵ ROBERT A. FULLER, *PRIVATE RIGHTS IN PRIVATE ROADS; PAPER ROADS*, 9B CONN. PRAC., LAND USE LAW & PRAC. § 49:13 (4th ed. 2017).
- ⁴⁶ *Id.*
- ⁴⁷ CONN. GEN. STAT. § 13a-141(b).
- ⁴⁸ *Savalle v. Hilzinger*, 1 A.3d 1098, 1101 (Conn. App. Ct. 2010).
- ⁴⁹ CONN. GEN. STAT. § 13a-49. While statutory discontinuance authority is specific to actions by town selectmen, city and borough governments may exercise identical authority for discontinuance. *Id.* § 13a-7.
- ⁵⁰ CONN. GEN. STAT. § 8-24.
- ⁵¹ CONN. GEN. STAT. § 13a-49.
- ⁵² CONN. GEN. STAT. § 13a-50.
- ⁵³ *See Luf v. Southbury*, 449 A.2d 1001, 1006-08 (Conn. 1982).
- ⁵⁴ *Id.* at 1003.
- ⁵⁵ *Id.* at 1010.
- ⁵⁶ *Id.* at 1006-1008.
- ⁵⁷ *Stohlts v. Gilkinson*, 867 A.2d 860, 867 (Conn. App. Ct. 2005).
- ⁵⁸ *Friedman*, 717 A.2d at 867.

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- ⁵⁹ Appeal of Phillips, 154 A. 238, 240 (Conn. 1931).
- ⁶⁰ Friedman v. Town of Westport, 717 A.2d 797, 800 (Conn. App. Ct. 1998).
- ⁶¹ Appeal of St. John’s Church, 75 A. 88, 89 (Conn. 1910).
- ⁶² Savalle, 1 A.3d at 1101.
- ⁶³ Benjamin v. City of Norwalk, 153 A.3d 669, 682 (Conn. App. Ct. 2016).
- ⁶⁴ Stohlts, 867 A.2d at 868.
- ⁶⁵ *Id.*
- ⁶⁶ Nichols v. Town of Oxford, 182 Conn. App. 674, 684-85 (Conn. App. Ct. 2018).
- ⁶⁷ CONN. GEN. STAT. § 13a-55.
- ⁶⁸ Gagnon v. Municipality Planning Comm’n of the City of Ansonia, 521 A.2d 589, 596 (Conn. App. Ct. 1987).
- ⁶⁹ CONN. GEN. STAT. § 47-31.
- ⁷⁰ Luf v. Southbury, 449 A.2d 1001, 1006-08 (Conn. 1982). This holding is not consistent with one recent case from Florida, where abandonment of a coastal highway was determined to be a taking. *See* Jordan v. St. Johns County, 63 So. 3d 835, 839 (Fla. Dist. Ct. App. 2011) (holding that abandonment of a highway is effectively a taking due to inaction because the County had “an affirmative duty to act” which can “support a claim for inverse condemnation”).
- ⁷¹ Friedman, 717 A.2d at 867.
- ⁷² CONN. GEN. STAT. § 13a-103; Appeal of St. John’s Church, 75 A. at 89 (“The burden of proof is on him who seeks to establish the abandonment of a highway, and its continuance is to be presumed until satisfactory evidence is produced to rebut it.”).
- ⁷³ CONN. GEN. STAT. § 22a-361(a)(1).
- ⁷⁴ Stohlts, 867 A.2d at 867.
- ⁷⁵ CONN. GEN. STAT. § 13a-103.

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