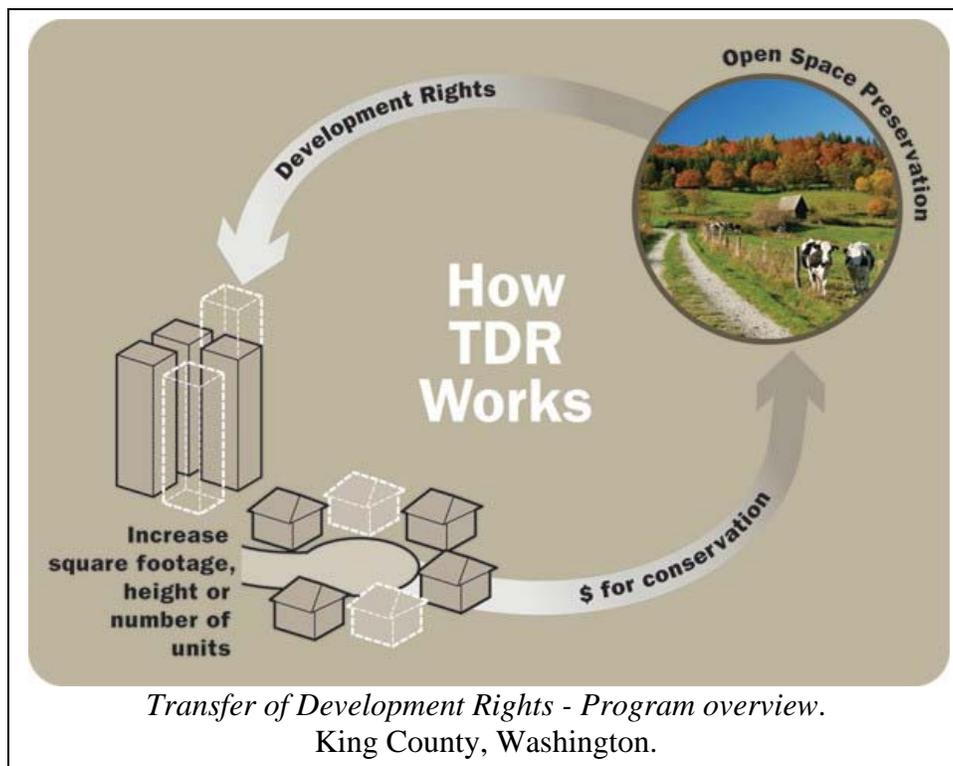


Coastal Transfer Development Rights in Rhode Island

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Intern, Statewide Planning Program - 2013
Final Report
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Abstract:

Climate change poses real threats to Rhode Island's ecological, economic, and cultural assets. Along with more frequent and intense storms, RI Coastal Resources Management Council predicts 3 to 5 feet of sea level rise by 2100. In order to prepare for storms and rising sea levels, RI must adapt its coastal areas. Directing vulnerable development away from RI's coast, further inland, should be a top priority. This report examines a novel adaptation tool, coastal Transfer of Development Rights (TDR), as a possible technique RI could use to direct development out of environmentally sensitive shores. TDR, a voluntary and market-based land use tool, has been used nationwide to preserve environmentally sensitive land and attract investment and development in areas with desire and capacity for more growth. Coastal TDR is no panacea, however, and there are major challenges that the tool would face. But on the spectrum of available coastal adaptation options, from a "Do Nothing" option to a "Buyback Plan" option, coastal TDR could bring unique benefits to RI as an adaptation tool that does not require major public investment. This report recommends that RI's municipalities and state agencies should implement a statewide TDR program, backed by enabling legislation, as a means to adapt RI to climate change.



Acknowledgments

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Introduction

Climate change poses serious threats to Rhode Island's future. As Rhode Island Coastal Resources Management Council (CRMC) wrote in its 2010 Ocean Special Area Management Plan (SAMP), "Ecologically, economically, and culturally, Rhode Island is inexorably linked to the ocean and therefore faces a number of challenges from climate change that are specific to the coastal and marine landscape."¹ Rising sea levels and more intense storms will pummel the state's 400 miles of coast, home to a multi-billion dollar tourism industry and a priceless collection of ecosystems.² Indeed, if Rhode Island is to retain its distinct ecological, economic, and cultural assets then the state's response to climate change must be comprehensive.

Mitigation: Efforts to reduce greenhouse gas emissions such as carbon dioxide pollution, which comes from burning coal, oil, and natural gas, and methane from livestock and landfills.

Adaptation: Efforts to reduce the damaging impacts of climate change, by observing and anticipating its manifestations, and preparing the communities that are or will be impacted, to avoid some of the worst possible consequences."

-Brown University Center for Environmental Studies (2010)

Strategies of mitigation, like reducing greenhouse gas emissions, as well as strategies of adaptation, like directing vulnerable development away from the coast, should be implemented at state and local levels. Initial steps have been taken. In 2008 CRMC amended its Coastal Resources Management Plan (CRMP) to include "Section 145: Climate Change and Sea Level Rise," mainstreaming a projection of 3 to 5 feet rise of sea level rise in RI by 2100.³ The Rhode Island Climate Risk Reduction Act of 2010

¹ See CRMC's [2010 Ocean SAMP](#) Chapter 3, page 5.

² [Summary: Preliminary Assessment of Rhode Island's Vulnerability to Climate Change and its Options for Adaptation Action](#) (2010) by Brown University Center for Environmental Studies.

³ See [Section 145: Climate Change and Sea Level Rise](#) (2008).

established the RI Climate Change Commission (RICCC), mandated to study the impacts of climate change on RI, to identify and report on methods of adaptation, and to identify potential mechanisms for mainstreaming climate adaptation into existing state and municipal programs and plans.⁴ The amendments to the Comprehensive Planning and Land Use Regulation Act in 2011 included a new mandatory element for municipal comprehensive plans, *Natural Hazards*, requiring municipalities to identify “areas that could be vulnerable to the effects of sea-level rise, flooding, storm damage, drought, or other natural hazards” as well as “goals, policies, and implementation techniques” that might help to “avoid or minimize” damage caused by natural hazards.⁵

Further, the Statewide Planning Program within the Division of Planning of the Department of Administration has been working with other RI agencies, the National Oceanic and Atmospheric Administration (NOAA) and the United State Geological Survey (USGS) to develop visualizations of potential sea level rise inundation scenarios in RI using a “LiDAR” enhanced digital elevation model. LiDAR technology (light detection and ranging) is defined by NOAA’s Coastal Resources Center as a “method for collecting very dense and accurate elevation levels. This active remote sensing technique is similar to radar but uses light pulses instead of radio waves.”⁶ Although there is ample scientific evidence for climate change’s effects on sea levels, actually visualizing the effects of sea level rise on existing development has been difficult. But with new LiDAR-enhanced digital elevation model capabilities, RI, and the states that also participated in

⁴ [Adapting to Climate Change in the Ocean State: A Starting Point](#) (2012) by RICCC.

⁵ Rhode Island General Law (RIGL) [§ 45-22.2-6 \(b, 10\)](#).

⁶ [Lidar 101: An Introduction to Lidar Technology, Data, and Applications](#) (2008) by NOAA.

the 2011 Northeast LiDAR Project,⁷ can better depict inundation scenarios for highly developed coastal communities like Wickford Village in North Kingstown, RI.

The damage caused by Hurricanes Irene (2011) and Sandy (2012) has drawn



Westerly, RI after Hurricane Sandy. [The Providence Journal](#)

attention to the acute need for RI's agencies to continue and expand on the state's adaptation strategies. RI has a spectrum of options available for responding to sea level rise. On one end of the spectrum is a

“Do Nothing” option, a laissez faire policy that would inevitably result in costs at least comparable to those experienced by New York and New Jersey after Hurricane Sandy.⁸

On the other end of the spectrum is a “Buyback Plan” option of purchasing vulnerable coastal property, as suggested by NY Governor Andrew Cuomo in Sandy's aftermath.⁹

Although buying back coastal property to be left undeveloped would in effect create a natural buffer for inland assets, the cost of paying fair market value for every property most likely exceeds RI's already strained budget. Statewide Planning's interest in exploring less costly adaptation strategies is in part the impetus for this report.

⁷ [Project Brief: LiDAR for the North East](#) (2010) by New England Chapter of the Urban & Regional Information Systems Association (NEURISA).

⁸ [Tropical Cyclone Report: Hurricane Sandy](#) (February, 2013) by the National Hurricane Center.

⁹ See [“Cuomo Seeking Home Buyouts in Flood Zones”](#) (February 3, 2013), NY Times. Accessed August 8, 2013. NY Governor Andrew Cuomo proposed a \$400 million Buyback plan in February 2013.

Statewide Planning is examining a variety of strategies that RI could use to adapt to climate change. The Program is authorized by RIGL § 42-11-10 as the central planning program for the state. Statewide Planning is guided by the Statewide Planning Council, which is comprised of federal, state, local, public representatives, and other advisors.¹⁰ The Council is also responsible for approving the State Guide Plan. The State Guide Plan, “a means for centralizing, integrating, and monitoring long-range goals, policies, plans, and implementation activities,” provides the basis for Statewide Planning’s assessment of alternative tools that might enable it to better meet its outlined objectives.¹¹ These objectives are laid out in the current State Guide Plan, #121, *Land Use 2025*:

- Sustain Rhode Island’s unique character through use of the Urban Services Boundary, rural centers, and holistic approaches to planning.
- Permanent Greenspace throughout the rural, urban, and waterfront areas.
- Development concentrated in well-designed centers, neighborhoods, and special places.
- A diverse and affordable housing stock.
- Public infrastructure maximized and coordinated with development.
- Reform of the property tax system in a manner that supports Smart Growth.
- Excellent land use information and technology systems.

This report addresses the *Land Use 2025* priority objective to promote Smart Growth strategies that create “Permanent Greenspace throughout the rural, urban, and waterfront areas.”¹²

¹⁰ [Water 2030](#) (2012) by RI Statewide Planning Program. The central objectives of the Program are to:

- prepare Guide Plan Elements for the State,
- coordinate activities of the public and private sectors within the framework the State Guide Plan,
- assist municipal governments with planning, and
- advise the Governor and others on physical, social, and economic planning related topics.

¹¹ RIGL [§ 42-11-10](#).

¹² [Land Use 2025](#) (2006) by RI Division of Planning.

One adaptation technique available to Rhode Island’s municipalities for creating permanent greenspace in waterfront areas is Transfer of Development Rights (TDR). TDR is a voluntary and market-based land use tool that communities nationwide have used to direct development out of environmentally sensitive “sending” areas and into “receiving” areas with the capacity and desire for more development. TDR programs can achieve the same results as conservation easements and typical acquisitions of property can, without using public funds. Property owners voluntarily sell their right to develop their land, usually undeveloped, to a “TDR bank,” which purchases the right. The TDR bank makes back the difference by selling the development right, sometimes in the form of a Transfer Development Credit (TDC), to a developer interested in building in areas designated more appropriate for additional growth. Sending and receiving areas are established using zoning overlay districts that local planning commissions, boards, and city councils approve. TDR programs have received national acclaim because of the unique win-win scenarios achieved through the exchange: landowners all across America have voluntarily relinquished their right to develop and communities have attracted investment with new development, all without public funds.

A number of Rhode Island projects have been started to explore, develop, and implement traditional TDR programs. Statewide Planning has previously examined TDR through its Planning Challenge Grant Program, supported with planning funds provided through the Federal Highway Administration. Challenge Grants have sponsored and facilitated RI Department of Environmental Management (RIDEM),¹³ Grow Smart RI,¹⁴

¹³ [*Transfer of Development Rights Report*](#) (2001) by RIDEM.

¹⁴ [*Transfer of Development Rights: A study of its use in other states and the potential for use in Rhode Island*](#) (2007) by Grow Smart RI.

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the Towns of North Kingstown and Exeter,¹⁵ and Washington County's¹⁶ reports and inquiries into the prospects of TDR in RI. These efforts have generated provocative and constructive discussions about how TDR might be used in RI, although the state's TDR programs remain in their infancy.

This report assesses how coastal communities could use TDR to direct development away from environmentally sensitive coastal sending areas and into inland receiving areas, identified by RI communities. TDR is one of many adaptation tools RI should consider. But with or without a TDR program, coastal communities in RI will ultimately be confronted by a need to adapt to climate change.

TDR in RI

I. Current Status

In March of 2013, Statewide Planning, RIDEM, Narragansett Bay Research Reserve Coastal Training Program, and Rhode Island Housing held a "Mini-Conference" on TDR in RI. The Mini-Conference's specific focused on successful programs nationwide and considered how RI and its municipalities could implement best TDR practices locally. As a precursor to an analysis of RI's potential sending and receiving areas, presenter Rick Pruetz, FAICP, highlighted TDR success factors based on his extensive research¹⁷ of TDR programs nationwide. These factors included but were not limited to:

¹⁵ [Transfer of Development Rights and Identification of Village Centers Phase I Assessment](#) (2011) by Horsley Witten Group and [A Vision for Exeter: Implementing the Game Plan for Our Future](#) (2011) by Dodson Associates, Ltd.

¹⁶ [Washington County Transfer of Development Rights Study: Final Report](#) (2012) by Horsley Witten Group.

¹⁷ See Pruetz's [website](#) for his extensive work on TDR.

- a demand for bonus development in receiving areas,
- strict sending area regulations,
- few alternatives to obtaining density except TDR,
- market incentives for TDR programs, and
- strong public preservation support.¹⁸

Other critical discussions of particularly successful TDR programs in the Pinelands, New Jersey and Montgomery County, Maryland, also emphasize these factors.¹⁹ Additionally, successful TDR programs have thrived because of long term commitments from communities to allow the program to grow over time. Begun in 1980, Montgomery County, Maryland's TDR program has successfully preserved over 50,000 acres of sensitive land. While bolstered by strict sending area regulations, few alternatives to TDR, market incentives for TDR programs, and strong public preservation support, Montgomery County's program was most active and successful when there was a demand for bonus development in receiving areas. As the demand for bonus development is often dictated by market conditions, TDR programs must be assessed by a long-term performance.

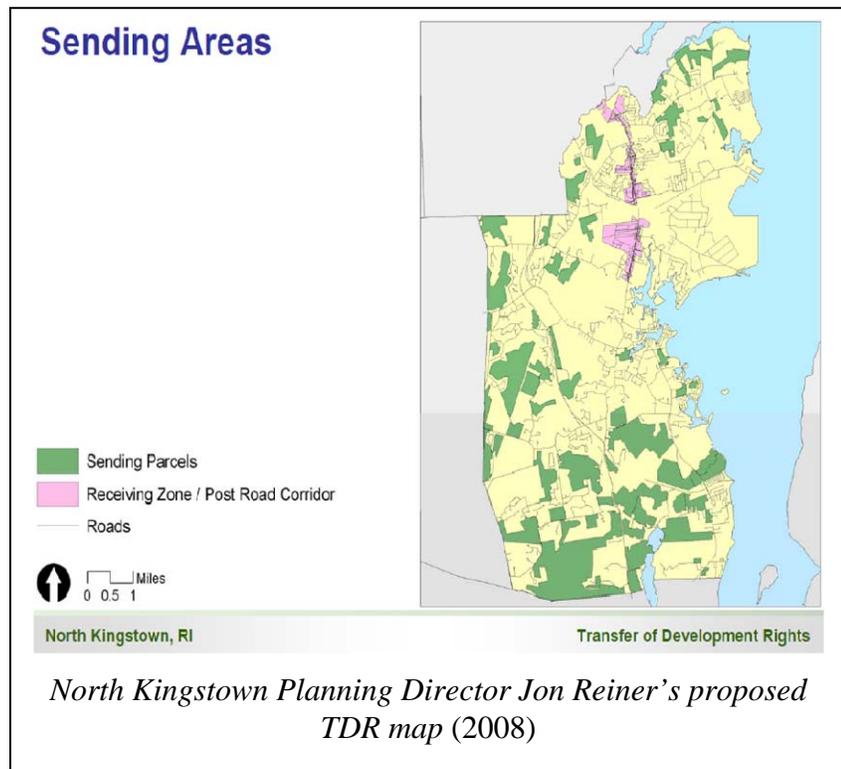
RI currently has two TDR programs, in North Kingstown (NK) and in Exeter, enabled by RI General Law. RIGL [§ 45.24.33](#) allows TDR as an acceptable municipal zoning practice. RIGL [§ 45-24-46.2](#) and [§ 45-24-46.3](#) provide specific legislation for inter-municipal transfers between NK and Exeter. But despite the enabling legislation, neither municipality has actually seen development rights transfer from a sending area to

¹⁸ Rhode Island Transfer of Development Rights Mini-Conference, "[TDR 101 presentations](#)" (2013).

¹⁹ [Takings and Transferable Development Rights in the Supreme Court: The Constitutional Status of TDRs in the Aftermath of Suitum](#) (1999) by R.S. Radford, [Transferable Development Rights and Alternatives After Suitum](#) (1999) by Julian C. Juergensmeyer, [Transfer of Development Rights in U.S. Communities](#) (2007) by Resources For the Future, [Transferable Development Rights Legislation: A Proposal for Solving Maryland's Land Use Problems](#) (2008) by the Maryland Governor's Office, and [Realizing the Promise: Transfer of Development Rights in New Jersey](#) (2008) by the New Jersey TDR Statewide Policy Task Force.

a receiving area. This can, in part, be attributed to how the programs' inception coincided with the burst of the housing bubble and the recession. But NK's program, officially begun in 2010, is gaining momentum. Interest has been expressed in developing in NK's designated receiving area, a four mile strip on the Post Road Corridor. Home to the Naval Air Station Quonset Point before the naval base's deactivation in 1974, North Kingstown's Post Road Corridor was once a lively area. But without new development and community investment, the properties slowly decayed. NK Planning Director Jon Reiner articulates his hopes for the area succinctly: *"We want to direct growth away from green fields and into grey fields,"* out of lush rural areas and into the neglected Post Road

Corridor. Questions remain as to how NK will provide all of the requisite drinking water and septic infrastructure for its receiving area. NK's TDR program is young, however, so the progress it has made in identifying



receiving areas is no insignificant feat.

In contrast, Exeter has not yet identified a receiving area into which the municipality could send development rights of environmentally sensitive land. Exeter has

also received funds through a Planning Challenge Grant Program to assist with its TDR program, during both the 2009 and 2012 grants rounds. Although Exeter's TDR program has yet to be used, the legislation is in place for it to preserve rural land while developing a town center.

The enabling legislation for NK and Exeter's TDR programs allows for inter-municipal TDR program, the only of its kind currently allowed in the state by existing law. Inter-municipal transfers between other municipalities are currently without legislative backing. Legislation enabling all inter-municipal transfers could also create a statewide TDR bank or program. Horsley Witten Group's 2012 *Washington County Transfer of Development Rights Study: Final Report* addresses the possibilities and challenges for a statewide TDR program in RI in detail:

"All municipal leaders agreed that it would be a challenge to convince local councils to accept growth from other areas of the state, even with incentives. Of particular concern was the issue of housing and municipal costs related to added school children. Further, accepting additional housing may be related to affordable housing units as they are defined by the State's affordable housing mandate. This raised concerns not only with the added costs to provide needed social services to lower-income populations that would occupy these units, but also with the equitable distribution of affordable housing throughout the state.

*Acceptance of development rights to leverage higher density of commercial and/or industrial types of uses might be more plausible after extensive education of local councils and decision makers on the benefits to a receiving community. However, it does not appear likely that a community would send away an opportunity to build its local tax base and relieve some of the residential tax burden, a primary goal in most comprehensive plans. Therefore, this scenario would most likely work by sending the development rights for housing in Sending Communities to commercial/industrial areas in Receiving Communities. This issue would need further exploration."*²⁰

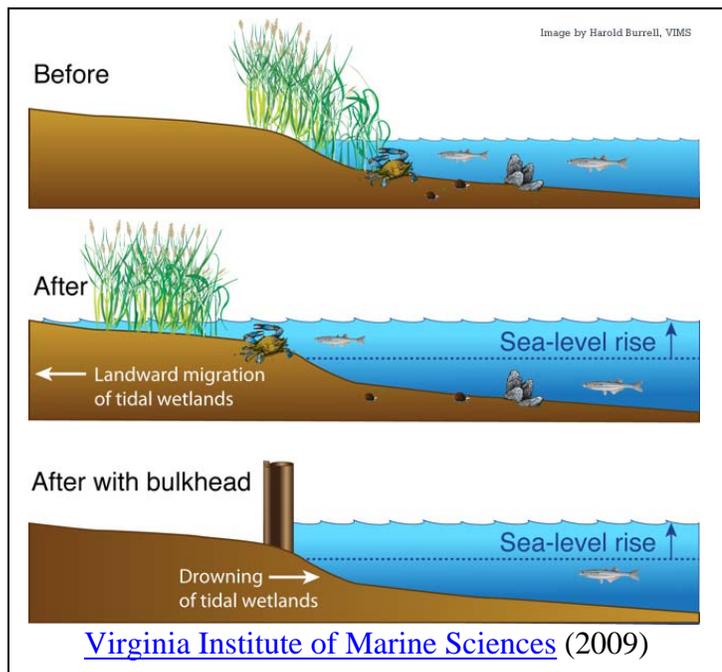
²⁰ [Washington County Transfer of Development Rights Study: Final Report](#) (2012) by Horsley Witten Group.

Indeed, the task of implementing a statewide TDR bank in RI is difficult and complex, especially in regards to addressing other state mandates as well as service costs in receiving areas. But given RI's hopes to reduce sprawl and its desire to preserve sensitive land, a coordinated preservation program in RI is recommended. A program that would allow transfers of development rights between interested municipalities, some of which may have identified sending but not receiving areas and some that have receiving but not sending areas, would be a strong asset for RI.

In regards to the potential coastal usage of TDR, the costs and complexities of a statewide TDR program are modest when evaluated alongside the costs of "Do Nothing" and "Buyback Plan" options to the public. RI will need to pay for irresponsible coastal development eventually, and TDR, a voluntary and market-based tool, could drastically reduce the costs of adaptation.

II. Potential Coastal Usage

In accordance with *Land Use 2025*, RI should consider using TDR as a means of creating "permanent Greenspace throughout the rural, urban, and waterfront areas." A coastal TDR program could facilitate the



transfer of development rights from two types of receiving areas: coastal areas with homes and businesses and coastal areas onto which wetlands and salt marshes will

naturally migrate due to rising sea levels.²¹ With worse and more frequent storms as well as rising sea levels, these two types of areas on RI's coast will become especially vulnerable and costly. Brown University's Center for Environmental Studies predicts that a "Do Nothing" option in response to hurricanes exacerbated by climate change could cost RI over \$6 billion.²² While TDR has not yet been used as a tool for adapting to sea level rise in coastal states, many have suggested it could be.²³

Unlike the "Do Nothing" or the "Buyback Plan" options, a voluntary statewide TDR bank could facilitate transfers from coastal sending areas to inland receiving areas without major public investment. But for a coastal TDR program to successfully function in RI, the following preconditions would need to be met:

- Communities recognize environmentally sensitive land on the coast.
- There is the capacity, market, and desire for development inland.
- Higher flood insurance premiums, more detailed Flood Insurance Rate Maps (FIRMs), and coastal homes with less value.
- TDR is used in conjunction with other adaptation tools available to Rhode Island.

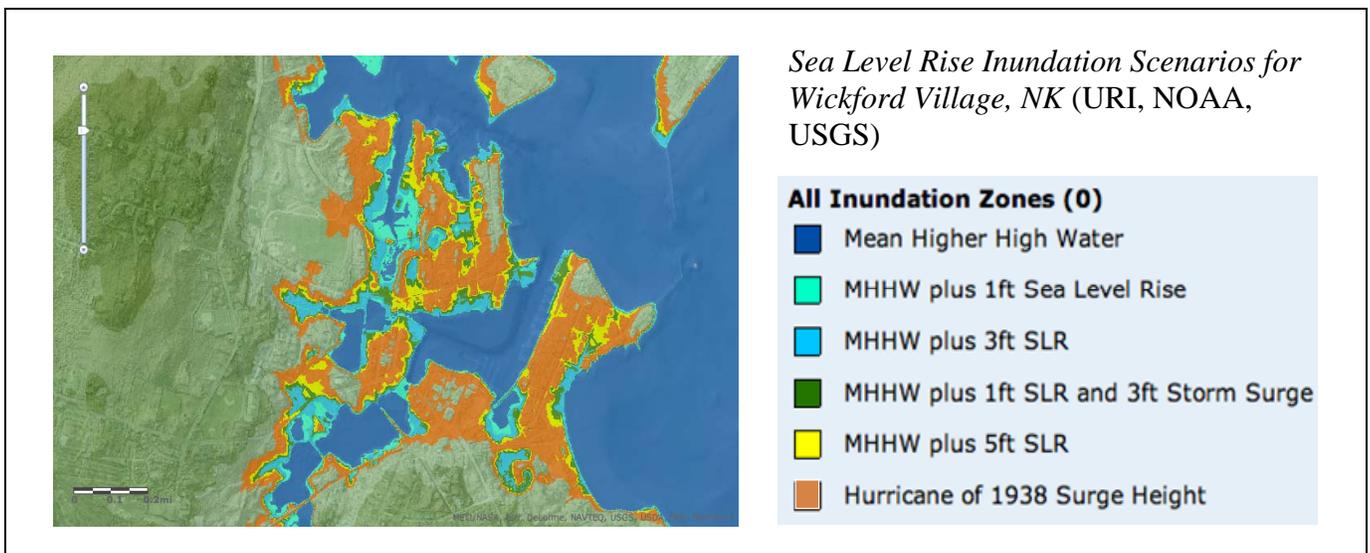
As discussed, environmentally sensitive coastal land is better recognizable with Rhode Island's new LiDAR data. LiDAR-enhanced digital elevation models enable RI to visualize which coastal assets at low elevations could be identified as sending areas in a

²¹ For an overview of wetland and salt marsh migration caused by sea level rise see [Greenhouse Effect, Sea Level Rise, and Coastal Wetlands](#) (1988) by USEPA and [Global Warming and Property Interests: Preserving Coastal Wetlands As Sea Levels Rise](#) (1991) by Robert L. Fischman.

²² [Summary: Preliminary Assessment of Rhode Island's Vulnerability to Climate Change and its Options for Adaptation Action](#) (2010) by Brown University Center for Environmental Studies.

²³ For discussions about the prospects of coastal TDR see [Transferable Development Rights and Density Transfers](#) by University of Florida Levin College of Law, [Rolling Easements](#) (2011) by James G. Titus, [Improving Sea Level Rise Adaptation in Rhode Island: Seeking Insight from Other States to Better Prepare the Coast](#) (2012) by Marissa Hobbs, [When Retreat Represents the Better Part of Valor: A Takings Analysis of Strategies to Incentivize Retreat from the Shore](#) (2012) by Hyo Charlene Kim and Caroline Karp, [The Implications of Rolling Easements and Transferred Development Rights in New Hampshire and Rhode Island](#) (2012) by Kaitlyn E. Cox, and [Coastal Management in the Face of Rising Seas: Legal Strategies for Connecticut](#) (2012) by Jessica Grannis.

coastal TDR program. For instance, new inundation maps show that Wickford Village in NK is an especially vulnerable community to sea level rise and storm surge. NK, in partnership with University of Rhode Island Climate Resources Center (URI CRC) and Rhode Island Sea Grant College Program (Sea Grant), has already begun to use LiDAR-based inundation maps in its development of a comprehensive plan element addressing climate change adaptation. Funded by a Planning Challenge Grant, NK's project is currently in "Phase II: Engage the Community in Adaptation Planning." Crucially, NK's efforts to "provide a public process for the government, community, and private sector" are contingent upon the inundation map visuals that show which areas are vulnerable during different inundation scenarios. Public concern for historic coastal villages like Wickford and valuable ecological assets and natural buffers like wetlands²⁴ is an important asset for any coastal adaptation measure to succeed.



²⁴ CRMC has used LiDAR data to assess saltmarsh migration using the Sea Levels Affecting Marsh Migration (SLAMM) model. See http://www.crmc.ri.gov/news/2013_0201_climate.html for more details.

A unique precondition for a TDR program that does not apply to other coastal adaptation measures is the requisite capacity, market, and desire for development inland. This precondition is essential. Without receiving areas that are actively interested in new development, Transfer of Development Right programs, in effect, become Purchase of Development Right (PDR) programs. PDR programs tend to use fee-in-lieu options, purchasing the development rights with public funds. In these scenarios, sending areas are preserved but the promised higher density inland is not delivered on. In contrast, the famed win-win scenarios from TDR programs are achieved when developers voluntarily buy development rights from a TDR bank, enabling the bank to break even on the initial acquisition of the development rights. In the context of avoiding to a PDR option in RI, the state would need not only to have developers interested in developing in areas like the Post Road Corridor but also to have municipalities willing to have more service costs. If RI were to adopt a PDR program, development rights in vulnerable areas like Wickford Village could be purchased, creating a natural coastal buffer for the rest of NK. But while such a PDR program would work effectively as a preservation tool, it would, like the “Buyback Plan,” be at a great expense to the public.

Another precondition for a coastal TDR program’s success is legislative action like Biggert-Waters Act of 2012. Also known as the Flood Insurance Reform Act, Biggert-Waters will “require the National Flood Insurance Program (NFIP) to raise rates to reflect true flood risk, make the program more financially stable, and change how Flood Insurance Rate Map (FIRM) updates impact policyholders. The changes will mean premium rate increases for some—but not all—policyholders over time.”²⁵ Passed with bi-partisan support, Biggert-Waters reflects policy-makers’ understandings that the NFIP,

²⁵ See FEMA’s explanation of the Biggert-Waters Act of 2012 at its [website](#). Accessed August 5, 2013.

which has provided incentives for homeowners to rebuild time and time again in vulnerable locations, needs reform. By discontinuing many “grandfathered” flood insurance rates and creating more accurate FIRMs, which determine the zones of risk that stratify policyholders into different premiums, many coastal homeowners will face costs that may make living in flood zones untenable. Some coastal homeowners can expect to see their rates climb 100 times higher than those they paid with federal subsidies.²⁶

With more frequent and intense storms as well as rising sea levels, coastal homeowners may find that assessments of the fair market value of their property, based on projected risks, are far lower than they had hoped. In order for homeowners to retain the value, or at least some of the value, of their coastal property, a TDR program could work with vulnerable homeowners and purchase development rights of properties. With interested developers seeking to build in designated receiving areas, the purchase could be made, and a natural coastal buffer for inland assets could be created, all without public funds. In contrast, of course, are the still-dramatic costs of a “Do Nothing” option, with repetitive losses to the federal and state tax payer. In a scenario in which there coastal homeowners unable to regain the value of their property from markets as well as inland receiving areas interested in new development, a TDR program could save federal and state taxpayers millions if not billions of dollars.

But for self-insured homes like that of pop singer Taylor Swift in Watch Hill, Westerly, which she purchased for \$17.75 million in cash,²⁷ there may not be an impetus for participation in a TDR program. Vanity Fair magazine recently profiled coastal

²⁶ See [“FEMA should halt excessive flood insurance rate hikes: Editorial”](#) (July 7, 2013), The Times-Picayune of New Orleans. Accessed August 7, 2013.

²⁷ See [“Pop singer Taylor Swift linked to record-setting mansion sale in Westerly”](#) (April 28, 2013), Providence Journal. Accessed August 5, 2013.

homeowners on Malibu and Nantucket who have sponsored multi-million dollar beach nourishment projects in response to erosion.²⁸ These homeowners may, eventually, want to sell their homes because of storm damage and erosion. But based on the amount of capital currently being invested in maintaining coastal properties by certain homeowners, a coastal TDR program should not expect to appeal to the “Taylor Swift” demographic. Rhode Islanders mostly likely to participate in a TDR program are homeowners already dependent on NFIP subsidies to live on the coast.



Taylor Swift's \$17 million home in Watch Hill, Westerly. [Forbes](#)

The final precondition for the success of a coastal TDR program in RI is the usage of additional tools to facilitate coastal adaptation. RI cannot use TDR alone to create “permanent Greenspace throughout the rural, urban, and waterfront areas.” A strong regulatory framework for protecting coastal features is vital. Fortunately, RI has such a framework, embedded into the state constitution as well as RIGL.²⁹ In particular, CRMC’s permitting authority, which covers land 200 feet from coastal features like beaches, dunes, wetlands, and salt marshes, helps ensure responsible coastal development.

As sea levels rise and RI experiences dramatic levels of erosion, CRMC’s jurisdiction will move inland with the new shoreline. Already cognizant of the impacts of

²⁸ See [From Coast to Toast](#) by William D. Cohen and Vanessa Grigoriadis in Vanity Fair (August, 2013).

²⁹ For in depth discussions of the regulatory framework for RI’s coast see the work [RWU Law and RI Sea Grant](#), especially [Applying the Public Trust Doctrine in Rhode Island](#) by Megan Higgins. Additionally, see Higgins and Janet Freedman’s [What Do You Mean by Mean High Tide? The Public Trust Doctrine in Rhode Island](#).

sea level rise, CRMC is currently evaluating the possibility of amending various sections of the CRMP to address sea level rise adaptation through new policies and standards.³⁰ CRMC policies might require that all new structural shoreline protection structures are built to withstand sea levels predicted to rise 3 to 5 feet by 2100.

Compared to a “Buyback Plan” option, homeowners’ voluntary participation in a TDR program should not be overlooked. With voluntary participation in TDR, many legally contentious issues other coastal adaptation efforts have faced could be avoided.³¹ RI Sea Grant and Roger Williams University (RWU) Law, in conjunction with CRMC, are currently evaluating the legal basis for coastal TDR programs in RI. Sea grant and RWU’s research will be invaluable to coastal municipalities interested in TDR as a climate change adaptation technique.

Whether a coastal TDR program is implemented on a municipal or state level, a program would direct development away from vulnerable coastal areas and into areas with the capacity and desire for growth. This voluntary and market-based process could create a natural coastal buffer for RI’s inland assets, direct development into promising areas for growth, and further RI’s preparedness for climate change.

³⁰ Conversation with James Boyd, CRMC.

³¹ For an in depth examination of the legal basis for coastal adaptation techniques see [Adaptation Tool Kit: Sea-Level Rise and Coastal Land Use](#) (2011) by Jessica Grannis and [Coastal Retreat Measures](#) (2012) by J. Peter Byrne and Jessica Grannis. Also, while the legal basis for involuntary TDR programs is beyond the scope of this report, see [Suitum v. Tahoe Regional Planning Agency](#) (96-243), 520 U.S. 725 (1997) for the Supreme Court’s ruling on the legitimacy of involuntary TDR programs.

Challenges

Coastal TDR is no panacea, however. There are many drawbacks to the tool, especially given that traditional TDR programs send development rights out of undeveloped properties. Coastal sending areas will have most often reached development capacity, so questions remain how transferring development rights from those properties could be translated in an inland context. Also, RI would need to evaluate whether it would be worth implementing a coastal TDR program considering that the state can reasonably expect homes to eventually become uninhabitable over time. In other words, if nature will do the work of getting certain homeowners to leave the coast, why should RI strain preemptively by trying to coordinate a TDR program?

But even if a coastal TDR program were implemented, on a state or municipal level, it is unclear who would be responsible for dismantling vulnerable coastal structures. CRMC has permitting authority within 200 feet of all coastal features, so it would take another agency that does own property, like RIDEM, to actually break down structures. The specifics of such a multi-agency arrangement would have to be negotiated, which is no easy task.

But the central challenge, whether with a statewide TDR program or a series of municipal programs, is how to get municipalities to accept more service costs associated with more development. As the second densest state in the US, RI may not be willing to accommodate much more density anywhere. In order for a TDR program not to become PDR program, RI will need more areas like the Post Road Corridor, areas actively interested in getting development and service costs. Without receiving areas, TDR programs are unable to produce the unique win-win scenarios in which environmentally

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sensitive land is preserved and new development attracts investments. A successful coastal TDR program in RI will need to consider and overcome these complex challenges.

Conclusion

Statewide Planning is assessing coastal TDR options in two ways: as a tool for preemptively adapting to the disastrous effects of sea level rise and as a tool for municipalities to expand growth centers in conjunction with the values of *Land Use 2025*.

Coastal TDR is one of many tools available to RI, thanks to the state's strong regulatory framework for its coasts.

The culture of coastal homeownership in America is problematic for states concerned with adapting to sea level rise. It is important to consider the possibility that there might not be a way for



Block Island Beaches. [Destination 360](#)

planners to change the culture of homeowners. But storms and rising sea levels, by causing repetitive losses for property owners, may make living on the coast an untenable economic option for many Rhode Islanders. RI's municipalities, with or without a

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statewide TDR bank or legislation that allows for inter-municipal transfers, should evaluate TDR as an option on the same spectrum as more publicly expensive options.

Sea level rise is an unprecedented historic event that will dramatically impact RI. Given the costs of different options on the spectrum, RI should look with an open mind at every adaptation tool available. RI's municipalities should determine which adaptation technique to adopt by critically examining the different costs associated with different sea level rise scenarios in their comprehensive plans. Indeed, the costs and complexities associated with implementing a TDR bank today are modest in comparison to repairing the damage caused by storms and rising sea levels tomorrow. Many coastal homeowners, when bombarded by natural forces and pressured by the expenses from the NFIP and CRMC, will be driven inland. A coastal TDR program could facilitate RI's adaptation to climate change and might just save lives in the process.