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Cover Page Footnote

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Extension Education for Real Estate Professionals: Teaching Regulations and Sharing Resources That Protect Water Quality and Property Values

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Abstract. Real estate professionals can be an important source of information for home buyers and sellers about regulations and practices that protect water quality and properties from environmental damage. Lake Champlain Sea Grant (LCSG) Extension identified a deficit in real estate education covering these topics for real estate professionals. Accredited real estate workshops were initially developed by LCSG Extension and Vermont Agency of Natural Resources specialists. The program was later expanded to New York. Six-month follow-up surveys indicated that the majority of participants continued to use knowledge and tools gained in the workshops. Suggestions for replicating this program elsewhere are provided.

INTRODUCTION

Water quantity and quality are important considerations for home buyers and sellers. Water damages homes and properties through flooding and erosion. Flood-related disasters have increased in Vermont since 2000 (Whittier & Nash, 2015). This trend will likely continue with increased heavy rainfall events predicted with climate change (Galford *et al.*, 2021). Property values have also declined due to phosphorus and sediment loading in surface waters (Voigt *et al.*, 2015). Regulations attempt to address these threats through inspections, permits, and implementation of practices designed to reduce phosphorus runoff to water bodies (e.g., U.S. Environmental Protection Agency [EPA], 2016a; U.S. EPA, 2016b; Vermont Agency of Natural Resources [VT ANR], 2016). Vermont also provides resources, technical assistance, and funding to protect properties through flood hazard area and river corridor protections (Vermont Agency of Natural Resources, 2017) and through hazard mitigation assistance programs (State of Vermont, 2023).

Real estate professionals often educate (Foti & Devine, 2019) and may be the only source of information for buyers and sellers. They share information about such things as flood, erosion, and water quality risks to properties. They also educate buyers and sellers about house or property alterations that may be regulated to protect shorelines or minimize stormwater runoff, septic requirements, proximity to wetlands, and state regulations or resources regarding these topics.

State permit specialists receive calls from home buyers and sellers who do not know regulations and who unknowingly violate permit requirements or purchase a home in a flood zone (J. Nunnery, personal communication, October 15, 2021). Sometimes, fines may be levied along with orders for correction of the violation. Real estate professionals must have accurate knowledge regarding these regulations to educate their clients.

Real estate professionals in Vermont and New York must earn continuing education credits to maintain their professional licenses. However, in 2023, none of 50 courses offered by two commercial education providers addressed water quality, land use, property protection, or related regulations (McKissock Learning, 2023; The CE Shop, 2023).

METHODS

Since 2014, Lake Champlain Sea Grant (LCSG) Extension has filled the gap in education about water quality and land use regulations by offering accredited workshops to real estate professionals on these topics. From 2014 to 2022, the education program grew from two to seven Vermont workshops (see Table 1). In 2022, LCSG staff members developed one workshop for New York-based real estate professionals. Before 2020, workshops were offered in person. In 2024, most were offered virtually.

LCSG Extension staff work closely with the Vermont Agency of Natural Resources (VT ANR), the New York Department of Environmental Conservation, and real estate organizations to develop content relevant to property transactions that relate to water resources. The Vermont Office of Professional Regulation and the New York Division of Licensing Services approve workshop accreditation based on applications submitted by LCSG. Workshops are offered free of charge and award one credit per hour of instruction. Most workshops are two hours long. While all courses are facilitated by a single LCSG Extension educator in response to requests by real estate agencies, instructors include staff from the Vermont Agency of Natural Resources, the New York Department of Environmental Conservation, and LCSG Extension. This structure has been consistent since the program's inception.

Instructors explain land use and property regulations and the function of the regulations in protecting water quality and properties. Instructors share fact sheets and online resources and provide contact information for engineers, designers, and installers. Participants obtain answers to site-specific questions, discuss issues that arise during property transactions, and practice using online resources.

RESULTS

By July 2023, 1,606 real estate professionals participated in 69 workshops. Participants completed evaluations immediately following workshops. The majority of participants increased their knowledge in the topic areas and planned to share that knowledge with their clients. Real estate professionals commonly gave positive feedback about the value of course content for their work and described ways they anticipated using information and skills learned in the courses. At the most basic level, participants expanded their networks. A Vermont Use Value Appraisal Program participant observed, "I now know who to contact [with questions related to the topic of the course]!"

Participants enhanced their knowledge and confidence for educating their clients about topics addressed in the courses. For instance, a participant in the Vermont Wetlands Identification and Regulations course observed that they would be able to "help [their] clients sense the importance of stewardship of the wetlands, as opposed to considering wetlands only as reduced land value area."

Course participants believed that sharing information they learned would benefit the lives of their clients. For instance, one participant in a Vermont Shoreland Protection Act course shared, "I strongly feel my primary role is to educate my clients, so this kind of helpful information empowers my clients to make better decisions for themselves."

Moreover, the course empowered participants to improve the service they provided to their clients. A participant in a Demystifying FEMA and Floodplain Maps course noted, "I will be taking a closer look at where properties lie on a map before viewing [them] to identify if they may be at risk of any flooding. This will help me evaluate any potential risks while viewing properties with clients."

To assess the application and sharing of the knowledge and tools provided in the workshops, LCSG Extension staff conduct 6-month follow-up surveys. In surveys from workshops offered in 2022, participants commonly indicated more frequent use and sharing of resources related to workshop content with their clients following workshops as compared to before participating in them (see Table 2).

Instructors from the Vermont Agency of Natural Resources have also cited course benefits, as indicated by their comments during workshops and in email communications. An often-cited benefit is the creation of a link between real estate professionals, homebuyers, sellers, and Vermont Agency of Natural Resources. This link helps ensure that property transactions and management are in line with regulations. One instructor noted: "Our ecologists are receiving a lot of calls and requests from Realtors®, so it seems like this workshop has been effective from our standpoint." Another instructor highlighted the important role real estate professionals play in educating landowners:

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Table 1. Descriptions of Water Quality and Land Use Regulation Continuing Education Courses for Real Estate Professionals Offered by Lake Champlain Sea Grant Extension

| Course Title | Course Description | Credits |
|---|---|---------|
| Vermont's Shoreland Protection Act | Regulations, techniques, and resources for shoreland management to enhance shoreline stability, reduce stormwater runoff, and protect water quality and aquatic habitat. | 2 |
| Demystifying Federal Emergency Management Agency (FEMA) and Floodplain Maps | How to access and interpret online flood hazard and river corridor maps and understand National Flood Insurance requirements, municipal and state regulations, and flood mitigation techniques. | 2 |
| Web-Based Mapping for Real Estate Professionals | How to access and use the Vermont Natural Resources Atlas, an online tool for identifying property characteristics relevant to flood risk, permits, boundaries, and other features. How to create personalized maps with select data. | 2 |
| Vermont's Use Value Appraisal Program (Current Use Program) | Requirements for participation in a tax-incentive program designed to protect farm and forestland from development. County forester contact information. | 2 |
| Vermont Wetlands Identification and Regulations | The role of wetlands in water quality and flood risk protection. Wetland characteristics, development restrictions, and permit requirements. | 1 |
| Vermont Septic Systems | Septic system designs and maintenance guidelines. Regulations and permit requirements for on-site wastewater systems. Role of designers, engineers, and installers. | 2 |
| Drinking Water and Potable Water Supply Systems in Vermont | Identify components and functions of a residential potable water supply. Basic water chemistry and common systems for removing undesired elements from water. | 2 |
| National Flood Insurance Program for New York State Real Estate Professionals | Overview of river geomorphology and flooding issues in New York State. National Flood Insurance Program requirements, municipal and state regulations, flood mitigation opportunities. How to access and interpret FEMA map data. | 2 |

Realtors® are the most valuable audience we can have for teaching the information on the Current Use Program. Realtors® are often the first encounter new landowners have with the program. Having knowledgeable professionals with information to answer basic questions and where to direct landowners for next steps is so important.

DISCUSSION AND CONCLUSION

Accredited education workshops are an effective method to inform real estate professionals about resources and regulations associated with a variety of environmental parameters. Such workshops also provide real estate professionals with interdisciplinary (Weinstein & Worzala, 2008), technical, and technology (Galuppo & Worzala, 2004) skills, all of which are recommended as important continuing education skills for this audience. Continuing education can enhance real estate professionals' knowledge base and support sharing of that knowledge with their clients. This increases the potential for homeowners to have knowledge that allows them to protect their properties from damage, avoid violations and fines, and follow environmental best practices. The workshops offered by Lake Champlain Sea Grant Extension in partnership with Vermont and New York state agencies create an important link between real estate professionals, home buyers and sellers, and state regulatory staff. Workshop participants become familiar with online resources that can enhance their effectiveness with clients.

Table 2. Sample Results from Evaluations to Assess Actions of Course Participants Before and Six Months Following Participation in Three of the Available LCSG Extension Real Estate Professional Water Quality and Land Use Regulation Continuing Education Courses

| Course | Action | When | Frequency (% of respondents) | | | | n | |
|--|--|--|------------------------------|--------------|--------|-------|-----|----|
| | | | Frequently | Occasionally | Rarely | Never | | |
| Septic Systems in Vermont | Share information about recommended septic maintenance with clients | Before | 50% | 0% | 50% | 0% | 8 | |
| | | After | 73% | 18% | 9% | 0% | 11 | |
| | Share link to state Wastewater Systems website | Before | 25% | 25% | 13% | 38% | 8 | |
| | | After | 36% | 45% | 9% | 9% | 11 | |
| | Provide clients with information on septic permits | Before | 38% | 0% | 63% | 0% | 8 | |
| | | After | 64% | 27% | 9% | 0% | 11 | |
| | Provide clients with contact information for licensed septic designers | Before | 38% | 38% | 13% | 13% | 8 | |
| | | After | 50% | 40% | 0% | 10% | 10 | |
| | Shoreland Protection Act | Educate clients about shoreland protection requirements | Before | 22% | 44% | 11% | 22% | 9 |
| | | | After | 13% | 75% | 0% | 13% | 8 |
| Refer clients to the Vermont Lakes and Ponds Division staff for assistance | | Before | 0% | 22% | 44% | 33% | 9 | |
| | | After | 0% | 50% | 38% | 13% | 8 | |
| Discuss the benefits of the Lake Wise Program with clients | | Before | 0% | 22% | 33% | 33% | 8 | |
| | | After | 22% | 44% | 22% | 11% | 9 | |
| Web-Based Mapping for Real Estate Professionals | | Access the Vermont Natural Resources Atlas for information about a particular property | Before | 40% | 20% | 40% | 0% | 10 |
| | | | After | 20% | 70% | 10% | 0% | 10 |
| | Create a property map for a client | Before | 30% | 20% | 30% | 20% | 10 | |
| | | After | 10% | 50% | 30% | 10% | 10 | |
| | Refer a client to the Vermont Natural Resources Atlas for additional information | Before | 20% | 30% | 30% | 20% | 10 | |
| | | After | 10% | 40% | 20% | 30% | 10 | |

Note. Some totals may exceed 100% due to rounding error.

RECOMMENDATIONS FOR DEVELOPING EDUCATIONAL WORKSHOPS FOR REAL ESTATE PROFESSIONALS:

- Collaborate with real estate agencies and boards and with topic experts to identify content relevant to real estate professionals’ work, particularly information that may be missing in other continuing education offerings.
- Become informed about continuing education requirements for real estate professionals in your state, such as instructor certification, sponsoring institution status, and continuing education credits.
- Work with instructors on design and content of presentation to ensure relevance to real estate transactions and for overall quality control.
- Implement both immediate post-course evaluations and 6-month post-course surveys to assess utilization of knowledge gained.

In addition, a variety of possibilities exist to expand course offerings and to serve additional licensed professionals. A broader audience might include attorneys, engineers, home inspectors, and municipal employees such as planners, who all have ongoing professional development continuing education requirements. Current course topics would be relevant to these audiences. The need to adapt courses to meet specific professional development goals should be minimal, though meeting certification requirements may be more challenging. Separately, the current courses could be expanded. For example, the wetlands course could be expanded to two hours to include

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more content about wetlands' values for flood control (e.g., VT ANR, 2024) or to address recent updates to state regulations (VT ANR, 2023). New courses could also be developed. In Vermont, there is significant effort being placed on the value of using nature-based solutions to manage stormwater, including on private properties (Lake Champlain Basin Program, 2021). A green stormwater infrastructure-focused course may be well received and relevant to buyers and sellers. There is also an opportunity to develop additional courses for New York based real estate professionals. Having a New York based LCSG staff person take the lead to develop additional courses may be useful as that person could more easily develop relationships with various organizations in New York with which LCSG might partner to host courses.

In summary, real estate transactions provide an important opportunity for real estate professionals to educate home buyers and sellers about regulations designed to protect their properties while, at the same time, protecting water quality and shoreline habitat. Opportunity exists for Extension professionals across the nation to facilitate such trainings for this audience and other licensed professionals.

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