

NEAARST Annual Conference
Portsmouth, NH
June 15, 2015

Radon Policy in Vermont



We're glad that the times have changed. Stay up to date on your child's safety by checking your home for radon.

Radon is a radioactive gas that is invisible, tasteless, and odorless. It is the second leading cause of lung cancer in the state. Luckily, testing your home is easy. Call 1-800-439-8550 or send an email to radon@state.vt.us to order your free test kit today.

TEST. FIX. BREATHE EASY.

 VERMONT
DEPARTMENT OF HEALTH

Rebecca Roe and Scott Gilman
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Middlebury College

Spring 2015

Overview

Class Objectives

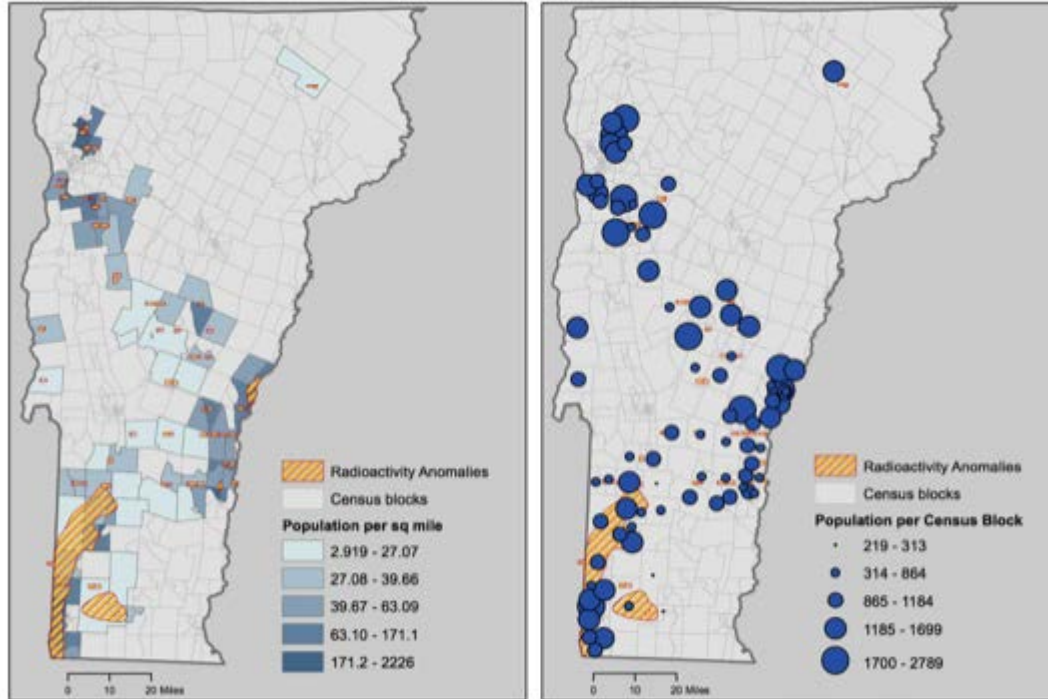
- Integration of many environmental studies concentrations
- Fostering community connections
- Creating a four-pronged approach
 - Geospatial Analysis, Cost-Benefit Analysis, Saliency Program, Policy Brief

Research Methods

- Student-led discussions
- Collaboration with mentors, industry experts
- Intensive group work

Geospatial Risk Assessment

Indoor Radon Testing Priority Areas
Based on Population and Radioactivity Anomalies

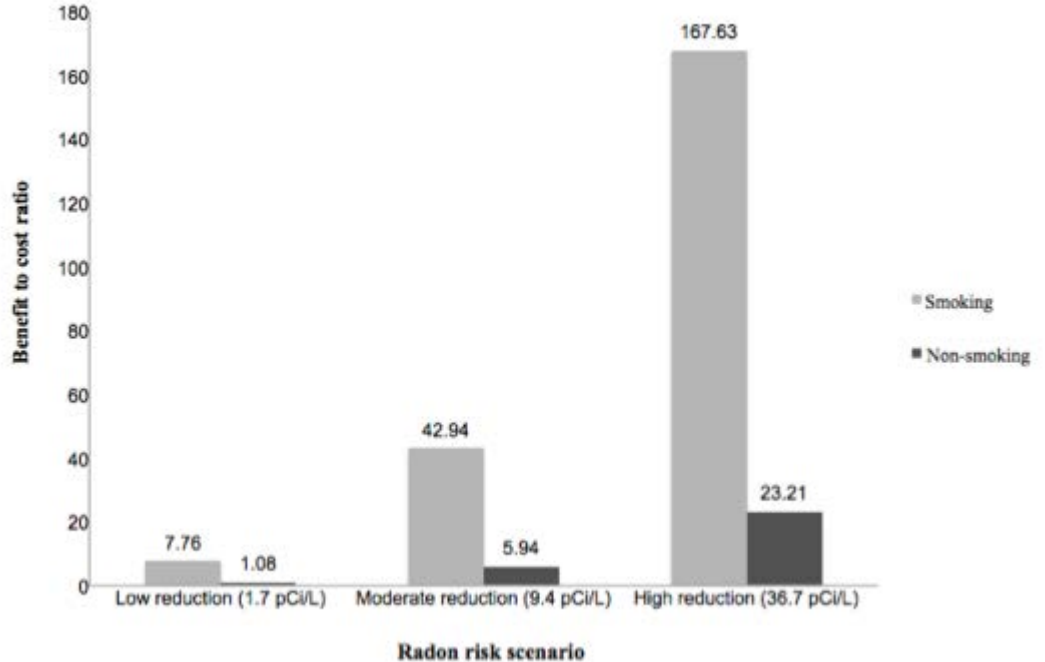


Fernando Sanabria, Mary Richards, Dylan Swanson and Inesent Teasdale
Sources: Vermont Geological Survey
Middlebury College (Department of Geography)
April 28 2013

- Relies on National Uranium Resource Evaluation (NURE) data to predict risk
- Independent Vermont Geological Survey analysis compares radon test data and geological risk factors
- Products: GIS analysis, risk map

Cost-Benefit Analysis

- Compares radon mitigation with other potential uses of money
- Results: Mitigation is always cost-effective
- Implications: addressing radon should be higher priority



Saliency Programs

- **Research and Outreach**

- examined existing literature
- created targeted materials for Vermont residents: print ads, informational handouts, and a [Radon Commercial](#)

- **Narratives**

- created an article, to be published, concerning the mitigation process at the Tinmouth School in Rutland, Vermont

- **Education**


- developed a replicable model for a high-school service-learning project

1 out of 8 Vermont homes has unsafe levels of Radon

Make sure it's not yours.

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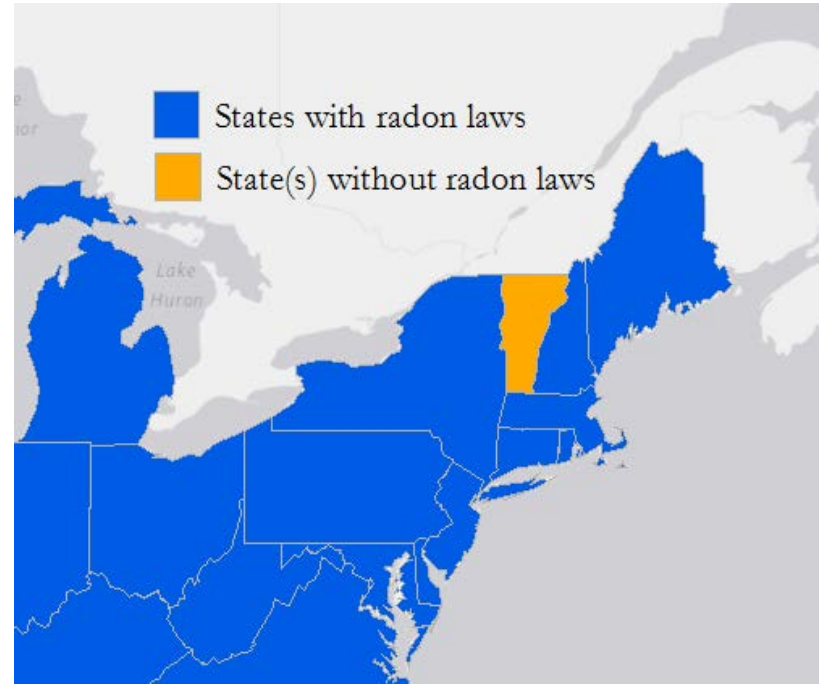
 **VERMONT**
DEPARTMENT OF HEALTH

History of Vermont's Radon Policy

- Radon salience peaked in '90s
- VPIRG highly involved, 1993-1995
 - outreach efforts
 - radon bills: residential testing at point of sale and one on school testing
- Bills failed due to real estate industry opposition

A General Picture of Radon in Vermont

- 58 cases of lung-cancer attributable to radon / year:
\$4.56M to health care system
- No policy addressing airborne radon
- Goal: Design policy to increase testing and mitigate the risk of radon-induced lung cancer



States with airborne radon laws in the Northeastern U.S.

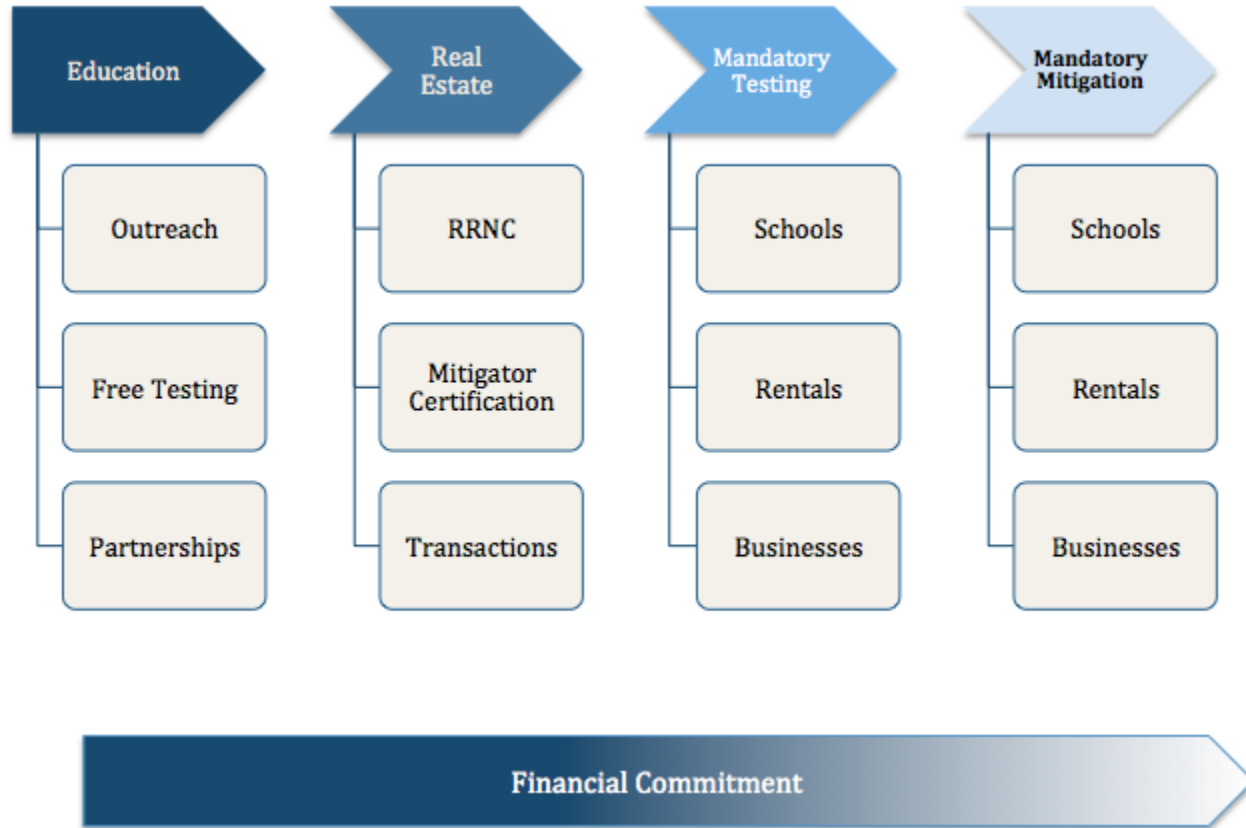
Policy Team Research Goals

1. Identify potential policy strategies
2. Identify high-priority targets
3. Talk with stakeholders to find policies that benefit all involved

Ultimate goal: high-impact, low-cost policies

Final product: policy brief for Vermont legislature

Approach



Education & Outreach

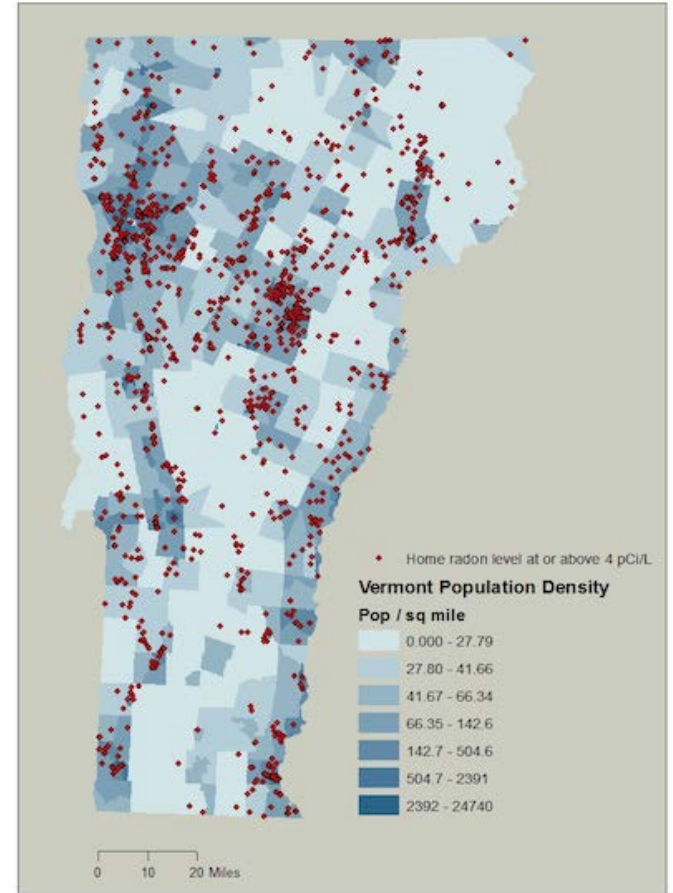
Action Priorities

1. Budget Security
2. Free Test-Kit Program
3. Commercial Partnerships
 - Utilities
 - Retail Outlets

1. Community Service

Geospatial Risk Targeting
Funding Sources

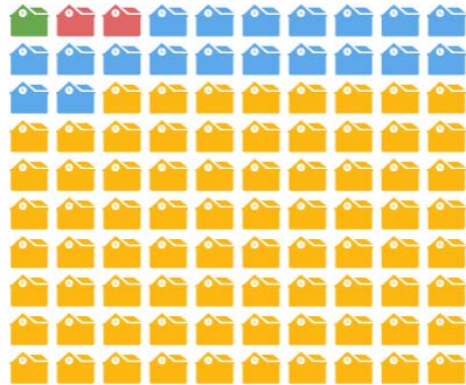
Vermont Homes with Elevated Indoor Radon



Public Schools

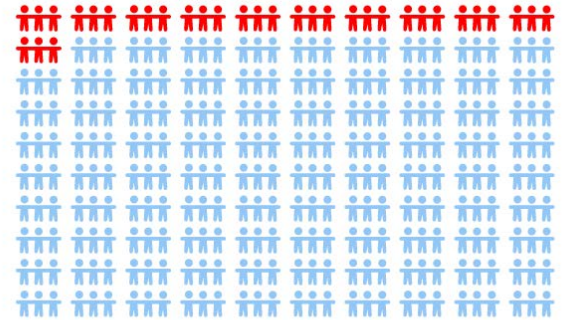
Importance

- Children *may* face greater radon risk



10.8%
tested high

radon will claim
3 lives every 10 years
in VT schools



■ Exposed to elevated radon ■ Not exposed

Public Schools

Recommendations

- Require testing and disclosure statewide
- Pro-bono work as part of certification program
- Reinstate Envision grants
- Establish revolving renovation fund
- Connect schools with other grants



Prisons

Importance

- High concentration of at-risk individuals
- State responsible for medical bills

Recommendation

- Require testing, then develop informed management strategy
- Reconsider testing standards for large buildings

Rented Residential Buildings

Importance

- 29% of Vermonters rent
- Tenants do not control health of living space

Recommendations

- “General habitability” not strong foundation for legal action
- Require testing and disclosure
- Encourage collaboration amongst tenants

Private Businesses

Importance

- Affects 260,000 employed individuals throughout the state
- OSHA radon exposure levels 100 pCi/L, not updated since 1970's

Recommendations

- Require testing and disclosure
- Encourage mitigation through competition for a healthy workplace; VDH supports by selling test kits at cost

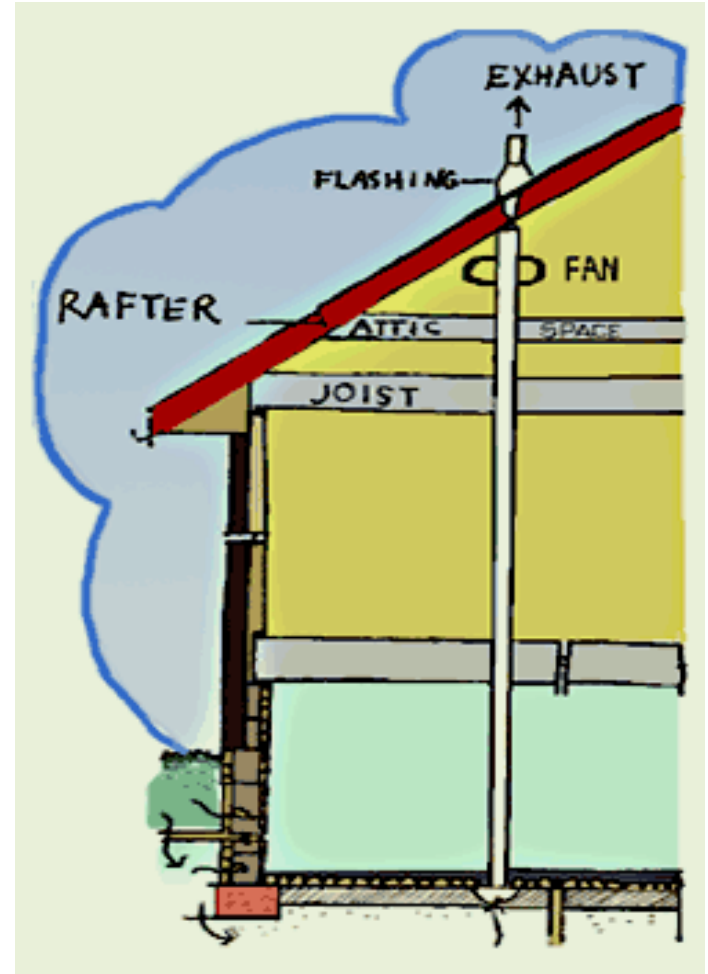
Radon Resistant New Construction

Importance

- Preventative
- Cheaper than mitigation
- Increases home value

Recommendation

- Direct local zoning boards to adopt RRNC building codes



Certification

Importance

- Sets an industry-wide standard
- 27% of Vermonters in 2014 declined to use a certified mitigator
- Potential for revenue, school mitigation requirements

Recommendations

- Certification of every Vermont mitigator by AARST
- Public, state-maintained directory of professionals

Real Estate Transactions

6. ADDITIONAL INFORMATION CONCERNING THE PROPERTY

(a)	Age of Building(s): Main Bldg. <input type="text"/> Additions to Main Bldg. <input type="text"/> Additional Building(s): (a) <input type="text"/> (b) <input type="text"/>			
(b)	Is Seller currently occupying the Property? If "No," how long has it been since Seller occupied? <input type="text"/>	<input type="checkbox"/> YES	<input type="checkbox"/> NO	
(c)	Has Seller built or caused to be built any of the buildings on the Property, or made any additions, modifications, alterations or renovations to any building on the Property? If "Yes," please explain: <input type="text"/>	<input type="checkbox"/> YES	<input type="checkbox"/> NO	
(d)	If "yes," did you obtain all necessary permits and approvals for such work?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	
(e)	Are any property or development rights (e.g. conservation easements to Land Trusts, etc.) owned by others? If "Yes," by whom: <input type="text"/>	<input type="checkbox"/> YES	<input type="checkbox"/> NO	
(f)	Has Seller received written notice of any violations of local, state or federal laws, building codes and/or zoning ordinances affecting the Property?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	
(g)	Are there any property tax abatements, land use tax stabilization agreements or other special property tax arrangements applicable to the Property?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> DON'T KNOW
(h)	Has Seller received notice that the Property will be reassessed by any taxing authority during the next 12 months?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	
(i)	Does the property have Urea-Formaldehyde Foam Insulation?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> DON'T KNOW
(j)	Does the Property have Asbestos and/or Asbestos Materials in the siding-walls-plaster-flooring-insulation-heating system?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> DON'T KNOW
(k)	Has the Property been tested for Radon Gas?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> DON'T KNOW
(l)	If "Yes," when? <input type="text"/> By whom? <input type="text"/> Results: <input type="text"/>			
(m)	Does the Property have evidence of mold?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> DON'T KNOW
(n)	If "Yes," what has been done about the mold? <input type="text"/>			
(o)	Are you aware of any off-site conditions in your neighborhood/community that could adversely affect the value or desirability of the Property, such as noise, proposed major new development, relocation or major construction of roads or highways, proposed zoning changes, etc.? If "Yes," explain in detail: <input type="text"/>	<input type="checkbox"/> YES	<input type="checkbox"/> NO	

Importance

- Increased information prompts action

Recommendation

- Distribution of radon-related materials during transaction

Acknowledgements

Peter Crowley, Association of Vermont Radon Industry Professionals (AVRIP)

David Grass, Vermont Department of Health (VDH)

Rebecca Ryan, American Lung Association of the Northeast (ALA)

Claire Ayer and Ginny Lyons, Vermont State Senators

Students, Professors, Mentors, Collaborators of Middlebury College

Environmental Studies Senior Seminar, Spring 2015

Gloria Linnertz, Citizens for Radioactive Radon Reduction

Pat Everett, NEAARST

Thank You

Questions?