

## Background

Water quality in Lake Champlain has been a prevalent issue in Vermont with excess phosphorous loading being identified as a strong factor contributing to the degradation of the health of the lake. In an attempt to remedy this problem the federal Environmental Protection Agency set a Total Maximum Daily Load, or TMDL, on phosphorous contamination for Lake Champlain. Vermont's proposal was approved in 2002, but the EPA reevaluated and disapproved the TMDL for the state of Vermont, following a lawsuit from the Conservation Law Foundation. The EPA mandated a new stringent TMDL proposal from the state, or they would take over regulation of this issue. This has motivated me to analyze the evolution of water quality legislation since the disapproval of the EPA established TMDL in 2011, up until the signing of the water quality bill H.35 in the summer of 2015 through tracking the framing of key actors and agents through a content media analysis to identify the use of frames as a political tool.

The role of media content analysis can help reveal public perception around pertinent issue. The way an issue is framed in the news can evolve in systematic and observable ways over time, often prompting shifts in public and/or policy response to the issue (Boydston, Glazier 2013). Since news media affects formulation of opinions and impressions of events, studying media discourse allows us to understand the influencing forces inherent in media. These forces are often key factors in policy debates and public perceptions of pressing issues, Brandt, N. E. (2014).

This research addresses the following questions:

- How has the media framed the evolution of water quality policy from the EPA disapproval of the TMDL for phosphorous in the state of Vermont, up until the signing of the water quality bill H.35?
- How has the media portrayed key actors and agents that are working on water quality legislation?

## Materials/Methods

### Data Collection

I began with an extensive compilation of a legislative and media database. I compiled the legislative database through the state legislature website through a combination of search parameters for bills related to water quality. Then I extracted proposed bills between the TMDL disapproval in the 2011-2012 legislative session, up until the H.35 proposal in 2015-2015 legislative sessions. After reading the legislation I identified the key water quality bills with the largest media traction and impact on Lake Champlain and create a timeline of key policy events. The media collection was a multi-method approach requiring the use of ProQuest, LexisNexis, and direct sources databases. After I identified the 5 key news sources in the state of Vermont: Brattleboro Reformer, Burlington Free Press, Vermont Digger, Vermont Public Radio, and WCAX Television, I extracted relevant articles through Bouillon Search parameters such as: *water quality*, *Lake Champlain*, *TMDL*, *lake clean up*, collecting a total of 234 articles during the establish 4 year time span.

### Content Media Analysis

I used the Two-Tiered Method for identifying trends in media framing of policy issues (Boydston, Glazier 2013). Through random sampling I extracted a sample of n=10 from each of the five sources. Then I developed a coding frame for key actors, generalizable trends and issue-specific frames. I completed my analysis through coding with HyperRESEARCH Version 3.5.1 and compiled a total 588 codes.

## Results

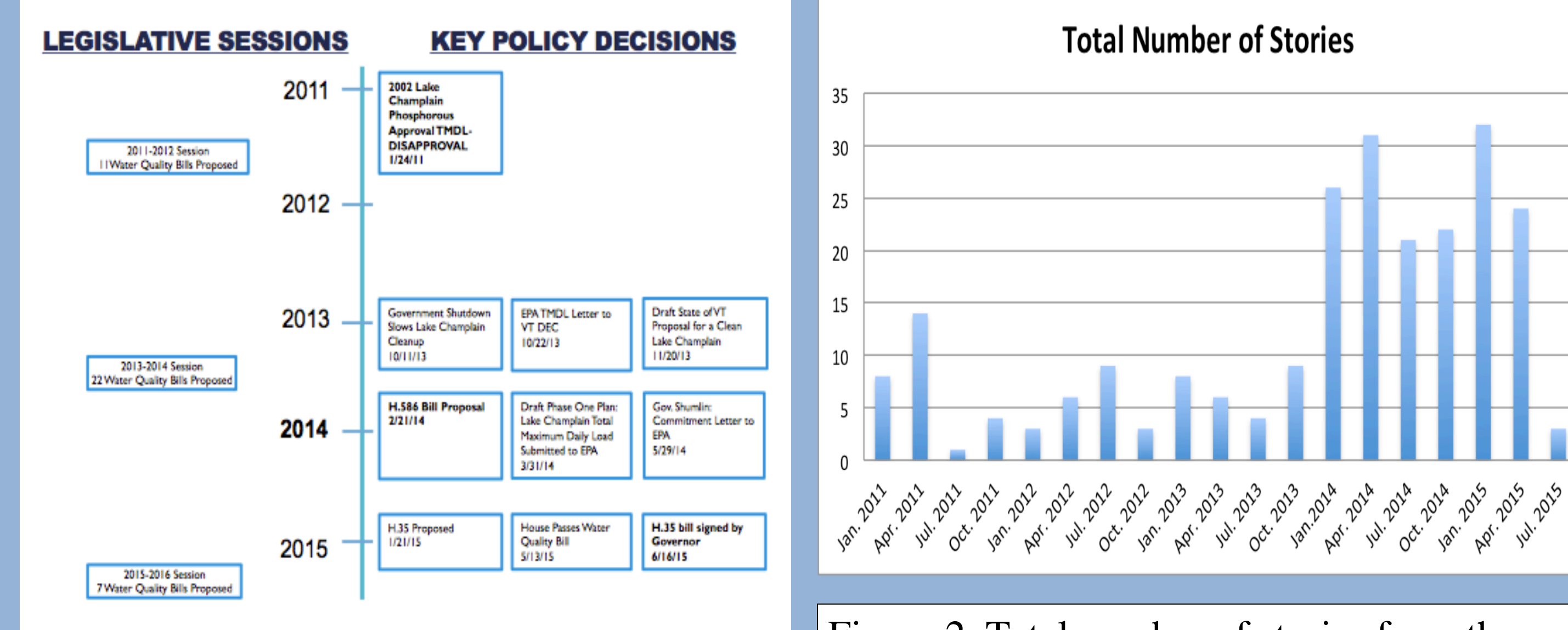


Figure 1. Timeline of key policy decisions occurring in the last three legislative sessions.

Figure 2. Total number of stories from the five selected media sources from the disapproval of the TMDL in Jan 2011 through the signing of H.35 water quality bill.

## Key Actors



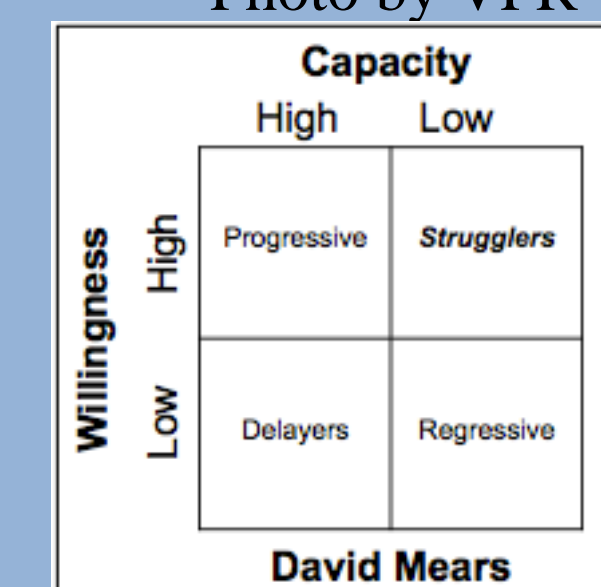
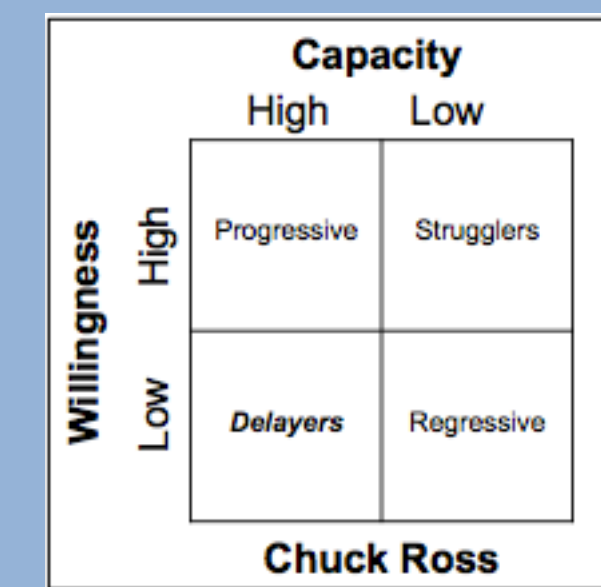
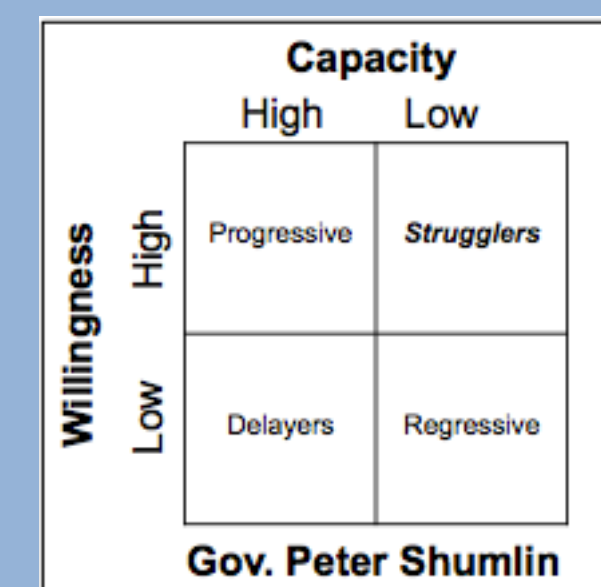
Governor Peter Shumlin  
Photo by John Herrick/VT Digger



Agriculture Secretary Chuck Ross  
Photo by John Herrick/VT Digger



Former VT DEC Commissioner David Mears  
Photo by VPR



Chris Kilian, Vermont director of the Conservation Law Foundation  
Photo by John Herrick/VT Digger



Rep. David Deen- House Committee on Fish, Wildlife and Water Resources  
Photo by John Herrick/VT Digger

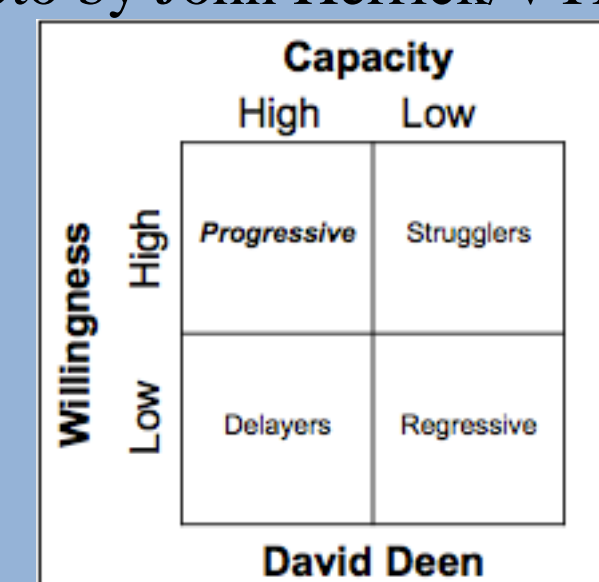
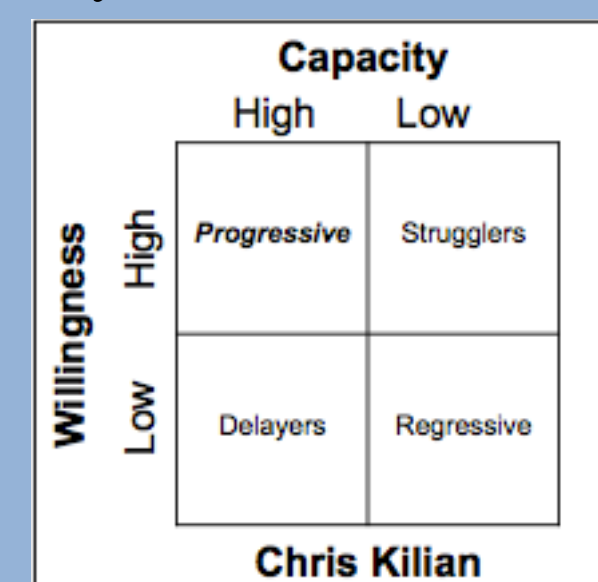


Figure 3. This figure charts the way the media has frames the five key actors, according to four classifications. Lester, J. P. (1994).

## Discussion/Conclusions

Issue Specific Frames with Example Arguments			
<b>Accountability</b> <ul style="list-style-type: none"> <li>"This press briefing and the submission of the plan to the U.S. EPA under the governor's signature is a level of commitment to this issue that we haven't really seen from any recent prior administration," said Kilian.</li> <li>"At a certain point, the Agency of Natural Resources has to step up and embrace an approach that is also about regulating and enforcing the law."</li> <li>Mears and other state officials outlined some of the changes that will be required in the coming years to reduce phosphorus going into the lake, focusing on agriculture and roadways. "We realized we had not done enough with agriculture," Mears said. "We had not addressed back roads."</li> </ul>	<b>Political Leadership</b> <ul style="list-style-type: none"> <li>"It's an issue of leadership and will, says Chris Kilian, director of the Conservation Law Foundation of Vermont. It's not an issue of technical ability or money. It's an issue of political leadership and resolve and commitment to get a clean lake."</li> <li>"What we need is leadership. I will concede that true leadership – the selfless call to place the needs of others ahead of oneself in the attainment of a greater good – may seem like a miracle in today's world, but I believe when good people get together to achieve a common goal great things happen."</li> <li>In his letter to the EPA accompanying the plan, Shumlin says he would withdraw his commitment if the EPA decides to require further restrictions against wastewater treatment plants. Wastewater treatment plants have been one of the biggest points of contention between the state and the EPA, as the EPA routinely considers them a standard source to target.</li> </ul>	<b>Regulation</b> <ul style="list-style-type: none"> <li>In a decision announced Monday, the EPA reversed its approval of a 2002 plan it now says didn't give adequate assurance that phosphorus reductions from polluted runoff would be achieved and didn't provide an adequate margin to account for uncertainty in the analysis.</li> <li>H.586 endeavors to address some of the factors that may be contributing to the phosphorus loading of the lake. The goal is to be proactive in light of the Environmental Protection Agency's requirement that we have a plan to address the Total Maximum Daily Load (TMDL), which is the allowable amount of phosphorus that can enter the lake. H.586 would require the certification of small farms to assure they are in compliance with Accepted Agricultural Practices (AAP), which are the basis of Vermont's Agricultural Nonpoint Source Water Quality Program.</li> <li>From a business point of view, the lake is the real calling card for Vermont, Tyler says. But there's very little in the way of enforcement. We're studying it to death and there are a lot of people working on it, but the small farms are pretty much</li> </ul>	<b>Urgency</b> <ul style="list-style-type: none"> <li>"Everyone acknowledges that there's a problem that we need to fix. So the real question in my mind is how quickly we get to a resolution to solving this problem," Mears said. "And the longer we put it off, the longer it will take to solve it. But I am confident that we will get there."</li> <li>"We've been humbled to learn that climate can and will have a dramatic effect on every aspect of our life in Vermont. Now we can do everything possible to reduce carbon emission. But we have to realize that climate change is upon us and unfortunately it's the sort that can accelerate."</li> <li>Kilian continues to have some reservations. His organization has filed a petition with the state Agency of Agriculture calling on the agency to require farms to follow best management practices. If the agency fails to act, the foundation could sue. The plan outlined Wednesday would start those requirements in two years. "We think that can be done now," Kilian said.</li> </ul>

Figure 4. This table offers example of arguments of each core frame.

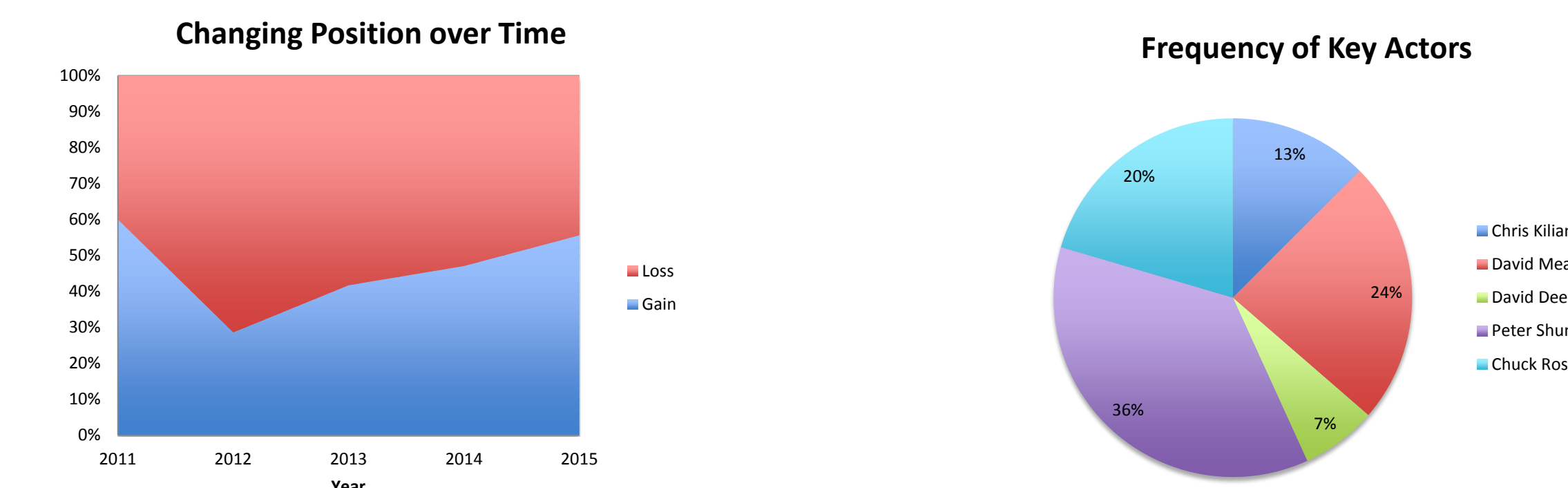


Figure 5. Changing positions code over time shifting from loss to gain.

Figure 6. Total occurrence of Key Actors in the media sources.

The results reveal clear trends in media's framing of the water quality debate affecting Lake Champlain. It is important that the media is covering this environmental policy debate since "research on prospect theory clearly demonstrates that when individuals are in the domain of losses—a placement that can be influenced by framing—they are more risk-accepting" Boydston, A. E., & Glazier, R. A. (2013). There is currently a positive transition and it is important to track these changes in the future to watch the way that public opinion continues to with the prevalent frames in the news.

## Literature Cited

- Brandt, N. E. (2014). Changing Actors and Discourse: An Analysis of Ten Years of Media Coverage In Vermont's Wind Power Debate.
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