

Engaging the Public in Water Policy: Do Political Affiliation and Ideology Matter?

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Abstract: Unsustainable human activities are rapidly depleting freshwater resources in many parts of the United States. Public policy surrounding water conservation is arguably one of the most essential strategies for targeting the preservation of water. Increased public engagement in environmental policy may bolster sustainable consumption of water resources if nuances in human behavior are targeted through communication messages. A quantitative research design using an online survey of the general United States public was used to explore if political affiliation and political ideology predicted how respondents prepared to vote on a policy that impacts water. The study revealed that respondents neither agreed nor disagreed on the level to which they would take specific actions to become prepared to vote on a policy that impacts water, indicating there is room for improvement. Results from a multiple linear regression revealed political affiliation and political ideology significantly predicted how respondents prepared to vote on a policy that impacts water; however, they accounted for a small amount of variance in the models. Future studies should identify additional predictors to determine how respondents prepare to vote on a policy that impacts water since political affiliation and political ideology were not a major influence on how respondents prepare to vote. Environmental communicators should focus their outreach efforts on increasing public preparedness to vote on policies that impact water.

Keywords: *environmental communication, political affiliation, political ideology, water resource engagement*

Water resources around the globe are rapidly depleting and degrading due to increasing demands for freshwater (Araya and Moyer 2006). In the United States (U.S.), freshwater resources are locally and regionally strained in many parts of the country (Sankarasubramanian et al. 2017). For example, extreme long-term drought conditions exist in southern California and many parts of the western U.S. (NDMC 2021). Environmental pollution also poses a serious threat to water resources (Pimentel et al. 2004). For example, the Red River, which supplies drinking water for many residents in Moorhead, Minnesota and Fargo, North Dakota, experiences nitrate spikes that are unsafe for human consumption (MPCA 2019). The freshwater supply will continue to diminish unless the public is demonstrably committed to water resource protection, creating sustainable human consumption of water resources (Araya and Moyer 2006; Eck

Research Implications

- Political affiliation and ideology accounted for a small amount of variance in the multiple linear regression models; thus, future studies should identify additional predictors to determine how respondents prepare to vote on a policy that impacts water.
- The mean public preparedness to vote on policies that impacts water can be improved as it indicated respondents neither agreed nor disagreed on the level to which they prepared to vote on a policy that impacts water.

et al. 2020). Thus, environmental communicators are tasked with engaging the public in a way that promotes water resource protection behaviors while also empowering the public to engage in policies that protect their water (Araya and Moyer 2006; Warner et al. 2020).

Information-driven environmental campaigns that aim to promote sustainability are often unsuccessful in generating long-term public behavior changes (Kollmuss and Agyeman 2002; Steg and Vlek 2009; Cote and Wolfe 2018). The assumption behind information-only campaigns is that awareness of a problem will lead to positive behavioral change (Dickinson 2009; Cote and Wolfe 2018); however, this assumption is problematic as there are numerous factors that contribute to changes in behavior (Kahneman 2011). In order for environmental campaigns to promote pro-environmental behavior they must strategically target nuances in human behavior (Cote and Wolfe 2018). Mmojieje (2015) examined the effect of major principals from different theoretical models on public learning from environmental campaigns, finding that political climate, environmental knowledge, infrastructure, technology, habits, social norms, values, motivation, and self-efficacy influenced pro-environmental behavior change.

The political climate in the U.S. surrounding environmental protection has shifted since the 1980s, causing environmental issues to no longer be viewed as a non-partisan issue but rather as harmful to the free market and economic growth by the Republican party (Hejny 2018). Recently, political viewpoints on environmental issues have become increasingly polarized (Antonio and Brulle 2011; Hejny 2018). Political viewpoints may dictate how individuals vote on policies that protect water (e.g., Pew Research Center 2019b), regardless of the long-term impact on human health. In addition, the public may ignore issues related to the environment for policies they consider more pressing (e.g., Novacek 2008). Thus, it is important that the public is knowledgeable about policies that impact water so they make informed decisions when voting.

Literature Review

A need exists for greater public engagement with environmental issues so that policy decisions are more aligned with public interests (Parkins et al. 2017). For example, numerous studies have found that increasing public knowledge on the benefits of protecting freshwater ecosystems through educational activities increased public

acceptance and policy support (Johnson and Pflugh 2008; Wagner 2008; Davenport et al. 2010; Mann et al. 2013). Davenport et al. (2010) investigated community support for a wetland restoration project in southern Illinois and found local engagement in project planning may benefit community commitment for the restoration project. Huang and Lamm (2015) explored Florida residents' water conservation behavior engagement and found civic engagement in water conservation behaviors was predicted by residents' experiences with water policies and issues.

Political affiliation and ideology have historically been strong indicators of environmental protection efforts (Owens and Lamm 2017), especially related to climate change (Bieniek-Tobasco et al. 2020). For the purpose of this study, political affiliation was defined as an individual's "political party identification" (Botzen et al. 2016, 354) and political ideology was defined as the principals, beliefs, and values that people use to view the world around them (Botzen et al. 2016). Recent studies examining political affiliation and/or political ideology in the U.S. explore water conservation behavior (e.g., Owens and Lamm 2017; Holland et al. 2019) or attitude (e.g., Callison and Holland 2017), indicating research that encompasses water conservation voting behavior in relation to political affiliation and ideology is needed.

The Democratic (31% of the public) and Republican (26% of the public) Parties are the two major political affiliations within the U.S. (Pew Research Center 2019a). Independent voters account for 38% of the U.S. public (Pew Research Center 2019c). Democratic Party members are generally concerned about environmental protection, and their political agenda contains environmental issues (Botzen et al. 2016). The Democratic Party has made substantial efforts to preserve and protect natural resources for future generations in the U.S. (Owens and Lamm 2017). Conversely, Republican Party members are generally not as concerned with environmental protection as the Democratic Party and think government spending for environmental issues is too high (McCright et al. 2014; Owens and Lamm 2017). Republican Party members believe the protection of natural resources harms the U.S. economy and threatens numerous jobs (Owens and Lamm 2017). In addition, water

conservation behaviors are more likely to be adopted by Democrats than Republicans (Pew Research Center 2013).

Political ideology broadly divides the public into conservatives, moderates, and liberals. Individuals who identify as liberal are more likely to engage in pro-environmental behavior than individuals who identify as conservative (Callison and Holland 2017). Literature on environmental relationships with political affiliation and ideology indicates they should be examined separately (Cruz 2017). Historically, scholars hypothesized environmental concern may be a nonpartisan issue (see Dunlap 1975); however, early studies contradicted this hypothesis, with conflicting findings on how political affiliation predicts environmental concern (e.g., Dillman and Christenson 1972; Buttel and Flinn 1974; Dunlap 1975; Buttel and Johnson 1977; Mazmanian and Sabatier 1981). For example, Mazmanian and Sabatier (1981) found political affiliation explained minimal amounts of environmental behavior and policy preferences. Dunlap (1975) found Democrats were more concerned about the environment than Republicans. More recent studies have found a “widening gap” (p. 27) between Republicans and Democrats in regard to environmental concern (Dunlap and McCright 2008). Findings concerning political ideology, however, have remained consistent in the literature, with liberalism consistently positive and significant in relation to environmental concern (e.g., Constantini and Hanf 1972; Dillman and Christenson 1972; Buttel and Flinn 1978; Van Liere and Dunlap 1980).

Public policy surrounding water conservation is arguably one of the most essential strategies for targeting the preservation of water (Holland et al. 2019). Having a firm understanding of how the public interacts with issues surrounding water conservation will help educators and policy makers work with the public to benefit future water policy (Holland et al. 2019). Therefore, environmental communicators must determine if political affiliation and political ideology provide a basepoint for disseminating information about water conservation to the public to inform the development and use of effective communication practices.

Purpose and Objectives

The purpose of this study was to determine if political affiliation and political ideology predicted how respondents prepared to vote on a policy that impacts water. The study was guided by the following objectives:

1. Describe respondents’ political affiliation, political ideology, and how they prepared to vote on a policy that impacts water; and
2. Determine if political affiliation and political ideology predicted how respondents prepared to vote on a policy that impacts water.

Methods

The study described here, which utilized a quantitative research design, was part of a larger research effort to investigate public perceptions of water resources and climate change. Three sections of the survey were germane to this study: respondents’ political affiliation, political ideology, and how respondents prepared to vote on a policy that impacts water.

Survey Measures

The instrument contained demographic and Likert scale questions. Respondents’ political affiliation was determined with one multiple-choice question (Owens and Lamm 2017). Respondents were asked to indicate the option that best described their political affiliation: *Republican*, *Democrat*, *Independent*, *Nonaffiliated*, and *Other*. A five-point Likert-type scale (1 = *Very Liberal*; 3 = *Moderate*; 5 = *Very Conservative*) was used to determine respondents’ political ideology (Ferguson et al. 2020). Political affiliation and political ideology were self-identified by respondents. Political affiliation and political ideology were subsequently coded as dichotomous variables for inferential statistics. Specifically, if a respondent indicated they aligned with a particular affiliation or ideology they were coded with one and if a respondent indicated they did not align with a particular affiliation or ideology they were coded with zero.

Five questions adapted from Patterson (2012) were used to determine how respondents prepared to vote on a policy that impacts water. The

questions asked respondents when preparing to vote on policy that impacts water, if they would: seek factual information from multiple sources, seek to fully understand the policy, consider both the positive and negative implications that could result, discuss their opinion with others, and ask others what their opinions are. The respondents indicated their level of agreement or disagreement using a five-point Likert-type scale (1 = *strongly disagree*; 2 = *disagree*; 3 = *neither agree nor disagree*; 4 = *agree*; 5 = *strongly agree*). The question assumed respondents answering the survey have the ability to vote. Reliability was calculated *post hoc* and found reliable ($\alpha = .90$). An overall scale for how respondents prepared to vote on a policy that impacts water was created by taking the mean score of the responses to the five items.

Experts in survey design, natural resource management, educational research, and water conservation reviewed the survey for face and construct validity and the research was approved by the University of Georgia Institutional Review Board (IRB #00001893). Fifty individuals, representative of the sample, pilot-tested the survey instrument for face validity.

Data Collection

The population of interest was U.S. residents 18 years of age or older. Respondents were recruited via Qualtrics using non-probability opt-in sampling (Baker et al. 2013) with a sample of 1,049 U.S. residents obtained. Using *a priori* quotas for gender, age, race/ethnicity, and geographic location based on the 2010 Census and *post hoc* weighting techniques, the sample was deemed representative of the population of interest (Lamm and Lamm 2019). Weighting techniques were also applied to reduce bias (Baker et al. 2013). Qualtrics compensated respondents according to their standard protocols.

Opt-in sampling techniques recruit groups of people via the internet to participate in studies and often include an incentive (Baker et al. 2013; Lamm and Lamm 2019). Communication research regularly accepts and uses non-probability opt-in sampling as a sampling method (Lamm and Lamm 2019). For example, Chaudhary et al. (2018) used non-probability opt-in sampling to collect data

on high-level water users to understand their lack of interest in conserving water. However, one limitation of this study is that non-probability opt-in sampling may result in a biased sample because not all types of individuals have access to the internet and not all types of individuals will answer surveys (Lamm and Lamm 2019).

Demographics

The respondents were 50.0% male and 50.0% female (Table 1). The majority of respondents were White (72.4%) and had a total family income (before taxes) of less than \$149,999 (85.4%). More than half of respondents had at least a two-year college degree (59.2%). Respondents' detailed demographics are in Table 1.

Data Analysis

Objective one was analyzed descriptively. Prior to analysis of objective two, multicollinearity diagnostics were conducted and interpreted following the work of Cohen (1998) to ensure issues of high collinearity did not impact regression coefficients. Objective two was analyzed inferentially with multiple regression. The dependent variable in the regression analysis was the overall scale for how respondents prepared to vote on a policy that impacts water. Independent variables in the regression analysis included demographics (e.g., age, family income, and education level), political affiliation, and political ideology. Family income and education level were coded as dichotomous for inferential statistics. Data were analyzed via SPSS 26 (Chicago, IL).

Results

Respondents' political affiliation was mainly distributed between Republicans (33.2%), Democrats (41.3%), and Independents (19.7%; Table 2). There were very few respondents who were non-affiliated (5.1%) or Other (0.8%). Respondents' political ideology was fairly distributed among those who self-identified as Moderate (36.6%), Liberal (19.6%), or Conservative (17.9%).

Respondents were asked to indicate how they prepared to vote on a policy that impacts water (Table 3). The majority of respondents agreed

Table 1. Demographics of respondents ($N = 1,049$).

		<i>n</i>	%
Sex:	Male	525	50.0
	Female	524	50.0
Age:	18-34 years	353	33.7
	35-54 years	349	33.3
	55+ years	347	33.1
Race*:	White	759	72.4
	Black	148	14.1
	Asian	102	9.7
	American Indian or Alaska Native	33	3.1
	Other	22	2.1
Ethnicity:	Hispanic	99	9.4
	Non-Hispanic	950	90.6
Education:	Less than 12th grade	22	2.1
	High school diploma	202	19.3
	Some college	204	19.4
	2-year college degree	109	10.4
	4-year college degree	272	25.9
	Graduate or Professional degree	240	22.9
Family Income:	Less than \$24,999	185	17.6
	\$25,000 - \$49,999	240	22.9
	\$50,000 - \$74,999	215	20.5
	\$75,000 - \$149,999	256	24.4
	\$150,000 - \$249,999	101	9.6
	\$250,000 or more	52	5.0

*Respondents were allowed to select more than one race.

Table 2. Respondents' self-reported political affiliation and ideology ($N = 1,049$).

		n	%
Political Affiliation:	Republican	348	33.2
	Democrat	433	41.3
	Independent	207	19.7
	Non-affiliated	53	5.1
	Other	8	0.8
Political Ideology:	Very Liberal	146	13.9
	Liberal	206	19.6
	Moderate	384	36.6
	Conservative	188	17.9
	Very Conservative	125	11.9

Table 3. Respondents' self-reported preparedness to vote on policy that protects water ($N = 1,049$).

	Strongly Disagree (%)	Disagree (%)	Neither Agree nor Disagree (%)	Agree (%)	Strongly Agree (%)
I would seek factual information from multiple sources	4.9	2.8	16.6	52.7	23.1
I would seek to fully understand the policy	4.0	3.1	17.6	47.4	27.8
I would consider both the positive and negative implications that could result	3.6	2.0	17.1	50.2	27.1
I would discuss my opinion with others	5.6	6.9	27.5	39.9	20.1
I would ask others what their opinions are	6.1	8.0	24.1	41.3	20.5

or strongly agreed they would consider both the positive and negative implications that could result (77.3%), seek factual information from multiple sources (75.8%), seek to fully understand the policy (75.2%), ask others what their opinions are (61.8%), and discuss their opinion with others (60%). A notable number of respondents neither agreed nor disagreed they would discuss their opinion with others (27.5%) and ask others what their opinions are (24.1%). Respondents' self-reported actions to become prepared to vote on a policy that impacts water, which was the average

response to the five items, indicated they neither agreed nor disagreed they prepared to vote on a policy that impacts water ($M = 3.80$, $SD = 0.84$).

Prior to the multiple regression analysis, correlations were used to determine any issues of multicollinearity (Table 4). The Republican political affiliation had a strong, negative relationship with the Democrat political affiliation ($r = -0.591$).

In addition, Variance of Inflation Factor (VIF) and multicollinearity tolerance coefficient (MTC) were used to assess multicollinearity (Table 5).

Table 4. Relationships between political affiliation, political ideology, and preparedness to vote variables (N = 1,049).

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Preparedness to vote	-													
2. Age	0.00	-												
3. White	-0.01	0.366**	-											
4. American Indian or Alaska Native	0.071*	-0.127**	-0.231**	-										
5. Asian	-0.05	-0.155**	-0.502**	-0.06	-									
6. Black	0.00	-0.271**	-0.643**	-0.04	-0.124**	-								
7. Other	0.04	-0.072*	-0.222**	0.01	-0.05	-0.06	-							
8. Less than \$24,999	-0.151**	-0.02	-0.077*	0.103**	-0.05	0.085**	0.05	-						
9. \$25,000 - \$49,999	0.02	0.093**	0.02	0.02	-0.03	0.01	0.02	-0.252**	-					
10. \$50,000 - \$74,999	-0.03	0.00	-0.04	0.00	0.03	0.02	-0.01	-0.235**	-0.277**	-				
11. \$75,000 - \$149,999	0.00	0.00	0.02	-0.064*	0.068*	-0.071*	-0.01	-0.263**	-0.309**	-0.288**	-			
12. \$150,000 - \$249,999	0.142**	-0.06	0.064*	-0.04	-0.03	-0.03	-0.05	-0.151**	-0.178**	-0.166**	-0.185**	-		
13. \$250,000 or more	0.085**	-0.068*	0.04	-0.04	0.00	-0.03	-0.03	-0.106**	-0.124**	-0.116**	-0.130**	-0.075*	-	
14. Less than 12 th grade	-0.03	-0.03	-0.01	-0.03	0.00	0.06	-0.02	0.05	0.03	0.03	-0.05	-0.05	-0.03	-
15. High school diploma	-0.184**	0.01	0.02	0.078*	-0.079*	0.01	0.00	0.256**	0.097**	0.01	-0.171**	-0.159**	-0.100**	-0.071*
16. Some college	-0.065*	-0.02	-0.073*	0.105**	-0.02	0.078*	0.03	0.082**	0.128**	0.01	-0.089**	-0.120**	-0.079*	-0.072*
17. 2-year college degree	0.01	0.078*	0.03	-0.01	-0.05	0.02	0.02	0.03	0.082**	0.06	-0.063*	-0.090**	-0.078*	-0.05
18. 4-year college degree	0.02	-0.01	-0.03	-0.069*	0.136**	-0.06	-0.01	-0.143**	-0.069*	0.05	0.160**	0.04	-0.075*	-0.087**
19. Graduate or Professional degree	0.216**	-0.03	0.073*	-0.085**	-0.02	-0.05	-0.02	-0.210**	-0.210**	-0.125**	0.140**	0.307**	0.315**	-0.080**
20. Republican	-0.02	0.154**	0.245**	-0.069*	-0.088**	-0.210**	0.01	-0.04	-0.090**	-0.02	0.071*	0.086**	0.04	-0.02
21. Democrat	0.107**	-0.086**	-0.183**	-0.03	0.05	0.205**	-0.03	-0.03	0.03	0.01	-0.04	0.01	0.05	0.01
22. Independent	-0.05	-0.02	-0.05	0.103**	0.02	-0.01	0.03	0.02	0.05	0.05	-0.01	-0.081**	-0.080**	-0.01
23. Non-affiliated	-0.064*	-0.091**	-0.03	0.03	0.03	0.02	-0.03	0.110**	0.04	-0.063*	-0.03	-0.05	-0.03	0.03
24. Other	-0.096**	-0.01	0.01	-0.02	0.01	-0.04	0.064*	0.074*	-0.02	0.04	-0.05	-0.03	-0.02	-0.01
25. Very Liberal	0.145**	-0.0087**	0.00	-0.01	-0.05	0.01	0.06	-0.04	0.00	0.00	0.00	0.01	0.06	0.02
26. Liberal	0.066*	-0.074*	-0.075*	0.02	0.02	0.06	-0.02	-0.02	0.01	-0.01	-0.03	0.066*	0.01	0.01
27. Moderate	-0.096**	-0.06	-0.114**	0.06	0.078*	0.084**	0.00	0.06	0.06	0.01	0.00	-0.127**	-0.05	0.01
28. Conservative	-0.068*	0.111**	0.105**	-0.04	-0.03	-0.104**	0.00	-0.02	-0.02	-0.02	0.04	0.02	0.01	-0.02
29. Very Conservative	-0.01	0.140**	0.135**	-0.05	-0.061*	-0.081**	-0.03	0.01	-0.074*	0.03	0.00	0.079*	-0.02	-0.03

Note: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Table 4 Continued. Relationships between political affiliation, political ideology, and preparedness to vote variables (N = 1,049).

Variables	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
1.															
2.															
3.															
4.															
5.															
6.															
7.															
8.															
9.															
10.															
11.															
12.															
13.															
14.															
15.	-														
16.	-0.240**	-													
17.	-0.166**	-0.167**	-												
18.	-0.289**	-0.291**	-0.201**	-											
19.	-0.266**	-0.268**	-0.185**	-0.322**	-										
20.	0.06	-0.106**	-0.02	-0.03	0.098**	-									
21.	-0.085**	-0.04	0.064*	0.02	0.05	-0.591**	-								
22.	-0.02	0.132**	-0.04	0.05	-0.122**	-0.349**	-0.416**	-							
23.	0.097**	0.074*	-0.02	-0.06	-0.095**	-0.163**	-0.193**	-0.114**	-						
24.	0.04	0.01	-0.03	-0.03	0.00	-0.062*	-0.073*	-0.04	-0.02	-					
25.	-0.064*	-0.05	-0.01	0.00	0.109**	-0.125**	0.250**	-0.130**	-0.04	-0.04	-				
26.	-0.071*	0.02	-0.03	0.01	0.05	-0.206**	0.283**	-0.06	-0.081**	-0.02	-0.199**	-			
27.	0.101**	0.067*	-0.01	0.01	-0.159**	-0.199**	-0.094**	0.270**	0.150**	0.00	-0.306**	-0.376**	-		
28.	-0.01	0.02	-0.01	0.01	-0.01	0.267**	-0.205**	-0.06	-0.02	0.02	-0.188**	-0.231**	-0.355**	-	
29.	0.02	-0.099**	0.077*	-0.04	0.066*	0.366**	-0.231**	-0.123**	-0.06	0.04	-0.148**	-0.182**	-0.279**	-0.172**	-

Note: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Table 5. Results of Variance of Inflation Factor (*VIF*) and Multicollinearity Tolerance Coefficient (*MTC*) used to determine multicollinearity ($N = 1,049$).

		Model 1		Model 2	
		<i>MTC</i>	<i>VIF</i>	<i>MTC</i>	<i>VIF</i>
Age		0.82	1.22	0.80	1.25
Race:	American Indian or Alaska Native	0.93	1.08	0.93	1.08
	Asian	0.90	1.11	0.89	1.12
	Black	0.82	1.22	0.81	1.23
	Other	0.97	1.04	0.96	1.04
Family Income:	Less than \$24,999	0.92	1.09	0.92	1.09
	\$25,000 - \$49,999	0.60	1.68	0.59	1.69
	\$50,000 - \$74,999	0.64	1.56	0.64	1.56
	\$150,000 - \$249,999	0.75	1.34	0.74	1.35
	\$250,000 or more	0.59	1.69	0.59	1.70
Education Level:	Less than 12th grade	0.57	1.76	0.57	1.77
	High school diploma	0.57	1.75	0.57	1.75
	Some college	0.63	1.58	0.63	1.58
	2-year college degree	0.75	1.34	0.74	1.35
	Graduate or Professional degree	0.81	1.24	0.81	1.24
Political Affiliation:	Democrat political affiliation	0.69	1.45	0.53	1.90
	Independent political affiliation	0.73	1.38	0.63	1.59
	No political affiliation	0.86	1.16	0.82	1.22
	Other political affiliation	0.97	1.04	0.97	1.04
	Very liberal political ideology			0.74	1.35
	Liberal political ideology			0.73	1.38
Political Ideology:	Conservative political ideology			0.72	1.39
	Very conservative political ideology			0.69	1.45

Based on the results of the multicollinearity diagnostics, the regression models should not be impacted by the rate of multicollinearity.

A multiple linear regression model was used to determine if political affiliation predicted how respondents prepared to vote on a policy that impacts water (see Table 6, Model 1). The model was statistically significant ($F = 6.96, p < 0.001$) and predicted 11.4% of variance. Within the model, respondents who identified as American Indian or Alaska Native predicted an increased engagement in preparing to vote on a policy that impacts water as compared to respondents who identified as White. A family income of \$25,000 - \$49,999 and a family income of \$150,000 - \$249,999 predicted an increased engagement in preparing to vote on a policy that impacts water as compared to a family income of \$75,000 - \$149,999. A high school diploma predicted a decreased engagement in preparing to vote on a policy that impacts water as compared to a 4-year college degree. A graduate or professional degree predicted an increased engagement in preparing to vote on a policy that impacts water as compared to a 4-year college degree. The Democratic political affiliation predicted an increased engagement in preparing to vote on a policy that impacts water as compared to Republicans. The Other political affiliation predicted a decreased engagement in preparing to vote on a policy that impacts water as compared to Republicans.

Political ideology was included as a predictor in the second model (see Table 6, Model 2). The second model was statistically significant ($F = 6.41, p < 0.001$) and predicted 12.6% of variance. There was a significant change in R^2 from Model 1 to Model 2, indicating the second model was more effective at predicting how respondents prepared to vote on a policy that impacts water. In the second model, respondents who identified as American Indian or Alaska Native predicted an increased engagement in preparing to vote on a policy that impacts water as compared to respondents who identified as White. A family income of \$25,000 - \$49,999 and a family income of \$150,000 - \$249,999 predicted an increased engagement in preparing to vote on a policy that impacts water as compared to a family income of \$75,000 - \$149,999. A high school diploma predicted a

decreased engagement in preparing to vote on a policy that impacts water as compared to a 4-year college degree. A graduate or professional degree predicted an increased engagement in preparing to vote on a policy that impacts water as compared to a 4-year college degree. Other political affiliation predicted a decreased engagement in preparing to vote on a policy that impacts water as compared to Republicans; the Democratic political affiliation was no longer a significant predictor. Instead, very liberal political ideology predicted an increased engagement in preparing to vote on a policy that impacts water as compared to moderates ($p < 0.05$).

Discussion and Conclusion

Arguably one of the most essential strategies for targeting the preservation of water is through public policy surrounding water conservation (Holland et al. 2019). Thus, providing water resource protection information and engagement opportunities that effectively engage the public in water issues and policy is imperative. This study examined if political affiliation and political ideology predicted how respondents prepared to vote on a policy that impacts water so that communication messages can be tailored to specific audiences.

The final regression model that examined if demographic characteristics, political affiliation, and political ideology predicted how respondents prepared to vote on a policy impacting water explained greater variance than the first model. Among additional demographic characteristics, the findings indicated that very liberal political beliefs and *Other* political affiliation predicted how respondents prepared to vote on a policy that impacts water. It is possible that liberalism is consistently positive and significant in relation to environmental concern (e.g., Constantini and Hanf 1972; Dillman and Christenson 1972; Buttel and Flinn 1978; Van Liere and Dunlap 1980; Cruz 2017) because very liberal individuals prepare to vote on policies that impact natural resources. While the findings indicated *Other* political affiliation predicted how respondents prepared to vote on a policy that impacts water, the small number of respondents indicating *Other* ($n = 8$) should be considered a limitation in interpreting this specific finding.

Table 6. Predicting how respondents prepared to vote on a policy that protects water using political affiliation and political ideology ($N = 1,049$).

		Model 1	Model 2
R^2:		0.114***	0.126***
ΔR^2:			0.012**
Age:		0.001	0.002
Race^a:	American Indian or Alaska Native	0.530***	0.527***
	Asian	-0.149	-0.123
	Black	0.031	0.049
	Other	0.296	0.269
Family Income^b:	Less than \$24,999	-0.089	-0.096
	\$25,000 - \$49,999	0.168*	0.155*
	\$50,000 - \$74,999	0.049	0.038
	\$150,000 - \$249,999	0.239*	0.239*
	\$250,000 or more	0.145	0.142
Education Level^c:	Less than 12th grade	-0.194	-0.205
	High school diploma	-0.331***	-0.317***
	Some college	-0.160*	-0.151
	2-year college degree	-0.035	-0.022
	Graduate or Professional degree	0.258***	0.236**
Political Affiliation^d:	Democrat political affiliation	0.127*	0.042
	Independent political affiliation	-0.020	-0.033
	No political affiliation	-0.040	-0.051
	Other political affiliation	-0.759**	-0.743**
Political Ideology^e:	Very liberal political ideology		0.259**
	Liberal political ideology		0.106
	Conservative political ideology		-0.066
	Very conservative political ideology		0.003

Note: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; ^aWhite was left out of the model as a comparison variable; ^b\$75,000 - \$149,999 was left out of the model as a comparison variable; ^c4-year college degree was left out of the model as a comparison variable; ^dRepublican was left out of the model as the comparison variable; ^eModerate was left out of the model as the comparison variable.

There were several limitations of the study that should be acknowledged prior to interpretation, including the measurement of political affiliation and political ideology. Respondents' political affiliation and political ideology were self-reported and therefore may vary by personal interpretation. In addition, the data for the study were collected during a politically contentious time period in the U.S. (Santucci and King 2020), which may have shifted respondents' political affiliation and political ideology in the short-term to align with their opinion of the events. The 2020 Presidential Election caused a partisan divide in the U.S. public, with the Republican incumbent having the largest partisan gap in approval rating known from polling data (Pew Research Center 2021). Moreover, the study used self-reported preparedness to vote rather than actual preparedness to vote, which may alter the study's results. Future studies should determine if political affiliation and political ideology predict actual voting behavior on issues surrounding water policy.

Despite these limitations, the findings have implications for environmental communication. First, the mean self-reported preparedness to vote on policy that impacts water indicated that respondents neither agreed nor disagreed on the level to which they would take specific actions to become prepared to vote on a policy that impacts water ($M = 3.80$, $SD = 0.84$). Thus, communicators need to better engage the public with environmental issues so the public is prepared when voting on policy impacting water resources (Johnson and Pflugh 2008; Wagner 2008; Davenport et al. 2010; Mann et al. 2013). Future research should conduct focus groups to determine the best way to prepare respondents to vote on policies that impact water. For example, to what extent were resources available that clearly and concisely explained water policies. Conducting separate focus groups with liberals, moderates, and conservatives may help determine how each group understands water resource protection engagement (Gibbs 1997), and may allow researchers to determine the best way to engage individuals whose beliefs do not always align with aspects of environmental protection.

Marketing materials such as emails or billboards that focus on water resource protection issues and policies may help enhance public understanding

and awareness of the importance of preparing to vote on a policy that impacts water (Huang and Lamm 2015). Additional emphasis should be placed on shared values rather than only citing data or scientists to avoid ignored messages due to potential mistrust in science (Callison and Holland 2017). Perhaps community centers should conduct programs that discuss potential water policies without political jargon to help community members filter through complex information. Two-way communication channels may help engage individuals with new information rather than information that only confirms their existing viewpoints. Similar programs can be conducted on college campuses where students also have the opportunity to register to vote.

A notable number of respondents neither agreed nor disagreed they would discuss their opinion with others (27.5%) and ask others what their opinions are (24.1%) when taking actions to become prepared to vote on a policy that impacts water, indicating respondents may not be aware of social norms surrounding voting behavior. Social norms, which vary between cultures, influence individuals to behave in a manner that is consistent with societal expectations (Minato et al. 2010). Increasing respondents' engagement with social norms surrounding water policies may encourage increased preparation when the public votes on water policies. For example, community leaders should encourage discussion surrounding water policy at local events. Local volunteers who are trained to discuss multiple facets of water policy may help initiate conversations, which may make social norms in a community more apparent to others.

The final regression model that included both political affiliation and political ideology only predicted 12.6% of variance (see Table 6, Model 2); thus, political affiliation and ideology may not be the most effective way to segment audiences for targeted communication messages about preparing to vote on water policy. Future studies should identify additional predictors to determine how respondents prepare to vote on a policy that impacts water. For example, a cluster analysis that groups respondents into subgroups based on their water resource protection engagement may help identify important audience characteristics

for developing communication messages (e.g., Warner et al. 2016). In addition, respondents may not directly vote on water policy depending on the state where they reside. Thus, communication messages about preparing to vote on water policy may benefit residents in specific states more than others. Future studies should group respondents based on geographic area to determine if locations that are water scarce (e.g., California), water locked (e.g., Florida), or otherwise impacted by water quality (e.g., the Red River in North Dakota) are more prepared to vote on a policy that impacts water when compared to all other geographic areas due to their experiences with water.

The small amount of variance accounted for in the final regression model may be attributed to the survey items used for this study as they were not contentious. For example, respondents were asked to indicate if they would seek factual information from multiple sources when preparing to vote on a policy that impacts water. What a Republican considers a factual source may be different than what a Democrat considers a factual source (Pew Research Center 2018). Moreover, survey items asked respondents how they prepared to vote rather than how they voted on policy that protects water resources, which do not always correlate with one another. Respondents may arrive at what they consider a sound solution but not have the capability to critically evaluate the sources they use to inform their political stance. Future studies should determine if respondents voting behavior on a policy that impacts water is influenced by the political party bringing forth the legislation or if the policy itself is the main factor for respondents' support.

Tailoring messages and experiences for specific audiences about water resource protection may assist in securing high-quality water resources for future generations. However, audiences grouped based on demographics, political affiliation, and political ideology are unlikely to engage in water resource policy much differently, indicating messaging strategies that investigate public characteristics beyond demographics, such as shared values, need to be explored. Nevertheless, this study provides a starting point for environmental communicators seeking to engage the public in policy surrounding water conservation.

Acknowledgements

This work was supported by the USDA National Institute of Food and Agriculture, Hatch project 1021735. Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the view of the National Institute of Food and Agriculture or the United States Department of Agriculture. The authors have no conflicts of interest to declare.

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