

# Churchill County Yucca Mountain Project Community Survey Results

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Prepared for:  
Churchill County  
Board of County Commissioners

Prepared by:  
Churchill County  
Nuclear Waste Project Office and  
Churchill County High School  
Advanced Placement Chemistry Class

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## **1.0 INTRODUCTION**

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### **1.1 Background**

The characterization of Yucca Mountain as a potential site for the first high-level nuclear repository is opposed by the State of Nevada. Responses to surveys conducted by the State of Nevada (most recently 2006) suggest that roughly 70 percent of Nevada residents would vote against a repository if they actually had a chance to vote. The State survey results primarily reflect the opinions of Clark County residents as few surveys were taken outside the area.

The State survey was intended to represent the views of the State in general, but provides little or no insight about the opinions and beliefs held by Churchill County residents with respect to the repository program. In 2009 Churchill County began an effort to track public opinion. Since that time, Churchill County has compiled 7 years of survey data and responses from a random sample of registered voters.

As part of its impact assessment and oversight program, Churchill County initiated a community survey to gauge opinion about the Yucca Mountain Project and nuclear power. Survey questions were directly related to the Yucca Mountain project and more generally related to licensing a repository and benefits for the State.

Churchill County High School students randomly selected 344 registered voters in order to ascertain the views and knowledge of the repository program. This year the Churchill County survey focused on issues that have been the subject of national survey efforts related to Yucca Mountain. Churchill County reviewed several national survey efforts and selected questions relevant to Yucca Mountain. Churchill County High School Students completed survey questions by phone and face to face interviews.

The 2015 Survey questions can be found in Appendix A. Question #2 again focused on the Yucca Mountain licensing process. According to survey results, the outcome of licensing could have a material impact on public perception and hence the support or opposition to a repository. Survey questions #4 and #6 were used to gauge the level of support or opposition to repository.

When available the Churchill County survey responses from the previous year's efforts were compared with responses from national survey results. Using similar survey questions allows for comparability with other survey results concerning the Yucca Mountain project. Such comparisons can be found in Section 3.0 of this report.

### **1.2 Summary of Findings**

This section summarizes the responses from 344 registered voters. Approximately 75 percent of the survey respondents were familiar with the Yucca Mountain Project and the federal government's efforts to store spent nuclear fuel in Nevada (Table 2-1). The number of survey respondents familiar with Yucca Mountain increased slightly from last year. It demonstrates the effects of limited project activity occurring in the last few years and potentially the lack of awareness among new residents about the repository program.

Churchill County survey respondents were asked whether they are in favor or opposed to a nuclear waste repository at Yucca Mountain, Nevada. Approximately 44 percent of survey respondents are in favor of a repository at Yucca Mountain (Table 2-2). The decline in support for the repository program is somewhat surprising given the recent uptrend in support over the last several years. However, the response in question #1 is not outside the range of responses which have occurred over the last 7 years of the survey. In general Churchill County survey respondents remain equally split on support or opposition to a repository at Yucca Mountain.

An even higher percentage (60 percent) of survey respondents want to see the Yucca Mountain licensing review continue (Table 2-3), approximately 60 percent which is 16 percentage points higher than those supporting Yucca Mountain in this year's survey. The percent supporting licensing is slightly less than last year, but in the range of survey responses registered over the last 6 years.

In question 3, survey respondents were asked to provide their preference for sources of base load electrical power. Survey respondents were also told that alternative energy such as wind and solar are not considered base load sources. Coal, natural gas, nuclear, oil and hydroelectric options were provided. Nuclear power was second only to natural gas as the preferred base load electrical source (Table 2-4).

Most interesting among this year's survey results are the responses in Table 2-5 and Table 2-7. Over 73 percent of all respondents would support the Yucca Mountain Project if it were found to be safe. This is a 30 percentage point increase over the percentage of respondent who initially said they would be in favor of Yucca Mountain. The results in Table 2-7 further confirm support for the repository. Almost 70 percent of respondents said they would support the Yucca Mountain project if expansion of nuclear power would require a repository.

The results in Table 2-5 combined with the number of respondents supporting continuation of licensing, suggests that a large number of survey respondents are undecided about the repository and will likely support Yucca Mountain upon a successful conclusion of licensing and issuance of a construction authorization.

Recently the U.S. Environmental Protection Agency announced new greenhouse gas emission standards. Survey respondents were asked whether it was true or false that new the new emission standards and future electricity demand cannot be met without increasing nuclear power. Approximately half of the survey respondents indicated that was true (Table 2-6).

World demand for energy is set to increase significantly in the next decades, spurred by economic and demographic growth, especially in developing countries. Unless current trends are reversed, this demand for energy will be met mainly by burning fossil fuel, at the cost of escalating emissions of carbon dioxide and the associated risk of global warming. To curb these emissions, action is needed more than ever to switch to low-carbon energy technologies (Nuclear Energy Agency, 2012).

Nuclear energy accounts for over 63 percent of the greenhouse gas free electricity production followed by hydroelectric. Solar, wind and geothermal only account for about 15 percent of the greenhouse gas free production.

### **A summary of key findings:**

- The trend in the number of survey respondents familiar with the Yucca Mountain project improved somewhat, but remains lower than previous efforts. This trend is probably due to the lack of news coverage occurring over the last several years combined with turnover in residency.
- The number of survey respondents in favor of the repository, approximately 43 percent, is within the range of expected outcomes based upon past survey efforts.
- The majority of respondents (60.0%) support continuation of Yucca Mountain licensing proceedings. Among survey respondents familiar with the program, two-thirds support continuation of Yucca Mountain licensing proceedings.
- The percentage of respondent supporting the continuation of licensing is higher than those opposed to the repository which suggests that some survey respondents are waiting for the outcome of the licensing process.
- Just over 73 percent of survey respondents will support the repository if it were found safe to construct and operate. These results suggest that opposition to the repository is not strong with nearly 30 percent of respondents changing their mind and supporting the repository, if the site were determined safe.



## 2.0 SURVEY RESULTS

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### 2.1 Community Survey Results

This section contains community survey results for Churchill County. A complete community survey can be found in Appendix A. Survey respondents were first asked whether or not they were familiar with the Yucca Mountain Project. About 75.0 percent of survey respondents indicated that they were familiar with the project. The declining trend in the number of survey respondents who are familiar with Yucca Mountain is not unexpected, as little project activity has occurred in recent years. Additionally, Churchill County experiences a regular turnover of residents due to military activities associated with the Fallon Naval Air Station.

**Question**     *Are you familiar with the Yucca Mountain Project and the federal government's efforts to store spent nuclear fuel in Nevada?*

Table 2-1		Survey Respondent	
Response	Frequency	Percent	
Yes	275	74.8	
No	69	25.1	

**Question 1.**     *Are you in favor or opposed to a nuclear waste repository at Yucca Mountain, Nevada?*

Table 2-2		Total Survey Respondents	
Response	Frequency	Percent	
In Favor	139	43.3	
Opposed	182	56.7	

**Question 2.**     *After spending more than \$15 billion studying Yucca Mountain, the Obama Administration wants to terminate the repository project before completing the on-going independent scientific review. Knowing this, should the licensing review of Yucca Mountain continue or terminate?*

<b>Table 2-3</b>	<b>Survey Respondents</b>	
<b>Response</b>	<b>Frequency</b>	<b>Percent</b>
Continue the review	192	60.0
Terminate the project	129	40.0

**Question 3.** *Alternative energy such as solar and wind produce about 4 percent of the nation’s electricity and they are not a baseload, or continuous, power sources. Knowing this, which of the following sources do you prefer to generate baseload electricity?*

<b>Table 2-4</b>	<b>Survey Respondents</b>	
<b>Response</b>	<b>Frequency</b>	<b>Percent</b>
Coal	44	12.8
Natural Gas	148	43.0
Nuclear Energy	76	22.1
Oil	21	6.1
Other	38	11.1
No opinion	17	4.9

**Question 4.** *If the Yucca Mountain Project was found to be safe and could be licensed and built in a manner that protects public health, would you be in favor or opposed to the Yucca Mountain repository?*

<b>Table 2-5</b>	<b>Survey Respondents</b>	
<b>Response</b>	<b>Frequency</b>	<b>Percent</b>
In Favor of Yucca Mountain	235	73.2
Opposed to Yucca Mountain	96	26.8

**Question 5. Recently the U.S. Environmental Protection Agency announced new greenhouse gas emission standards. True or false, the new emission standards and future electricity demand cannot be met without increasing nuclear power?**

<b>Table 2-6</b>	<b>Survey Respondents</b>	
<b>Response</b>	<b>Frequency</b>	<b>Percent</b>
True	150	50.0
False	151	50.0

**Question 6. If expansion of nuclear power requires a permanent underground repository, would you support the Yucca Mountain project assuming the site can be constructed and operated safely?**

<b>Table 2-7</b>	<b>Survey Respondents</b>	
<b>Response</b>	<b>Frequency</b>	<b>Percent</b>
Yes	227	69.0
No	102	31.0

**Question 7. Age of Respondent (survey respondents)**

<b>Table 2-8</b>	<b>Survey Respondents</b>	
<b>Response</b>		
Average Age of Respondent	58.7yrs.	
Median Age of Respondent	59 yrs.	
60 years or older	161	48.2%
25 to 60 years old	169	50.6%
Less than 25 years	4	1.2%

**Question 8. Length of Residency in Churchill County**

<b>Table 2-9</b>		<b>Survey Respondents</b>	
<b>Response</b>			
Average Length of Residency	29.7yrs.	Percent	
Median Length of Residency	25 yrs.		
1-10 years of Residency	52	15.6	
10-20 years of Residency	77	23.1	
More than 20 years of Residency	204	61.3	

**Question 9. Sex of Respondent**

<b>Table 2-10</b>		<b>Survey Respondents</b>	
<b>Response</b>	<b>Frequency</b>	<b>Percent</b>	
Male	145	42.2	
Female	199	57.8	

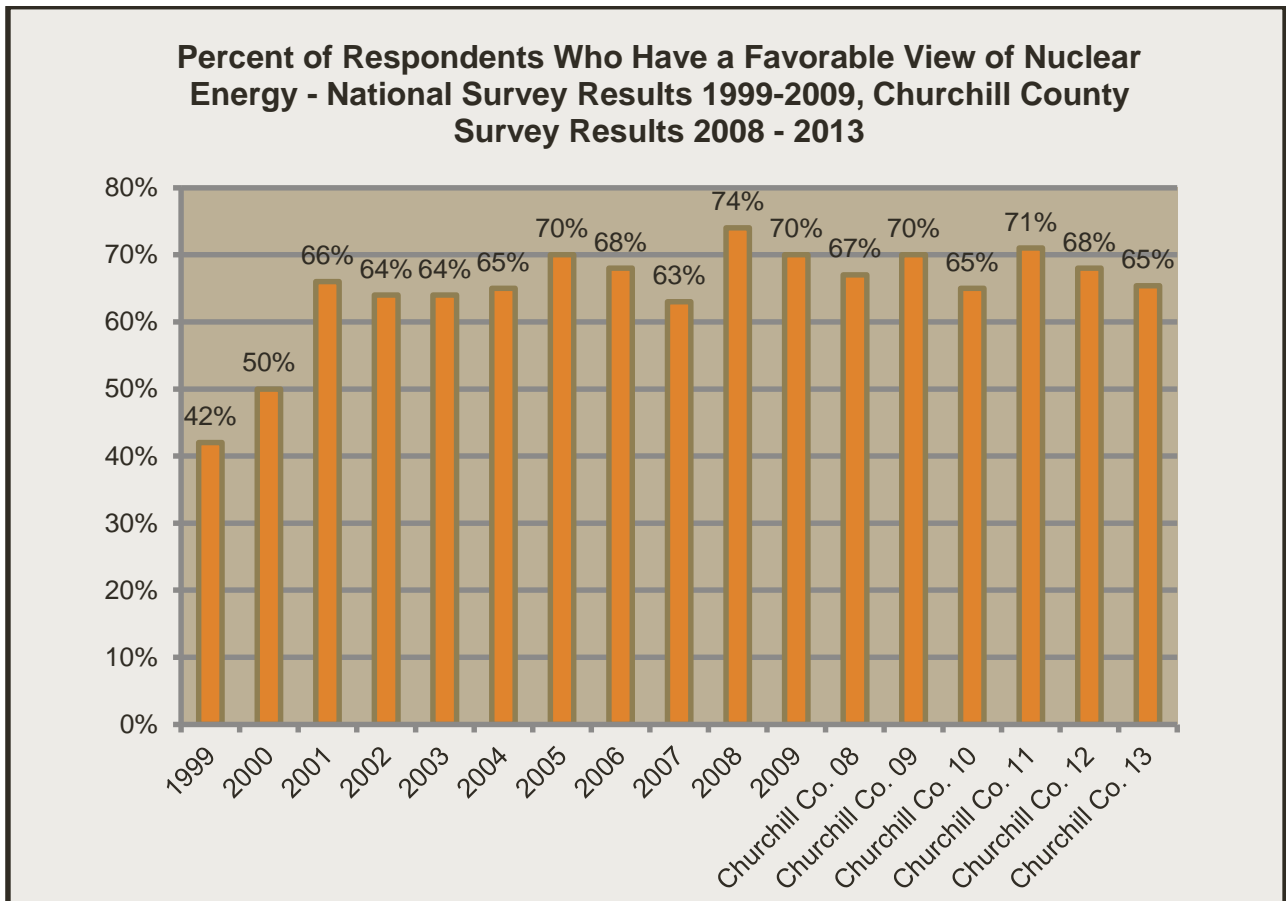
### 3.0 COMPARISON OF SURVEY RESPONSES

Section 3.0 compares the results of the Churchill County survey responses to national survey responses and survey responses from past community survey results. The Nuclear Energy Institute conducted a number of survey efforts related to Yucca Mountain and nuclear energy use over the last several years. Among national and Churchill County survey respondents, support for nuclear power remains strong. Events in Fukushima Japan appeared to have little or no influence on Churchill County survey respondents and their support for nuclear power.

#### Comparison of National Results

**Question: Do you strongly favor, somewhat favor, somewhat oppose, or strongly oppose the use of nuclear energy as one of the ways to provide electricity in the United States?**

Figure 3-1



As compared to national survey results, Churchill County survey respondents have a slightly more favorable view of nuclear energy as a source of electricity in the United States. Overall,

there is an increasing favorable view of nuclear energy among national and Churchill County survey respondents.

### Comparison of Churchill County Results

Each year since 2008, the Churchill County Oversight program surveyed approximately 350 to 450 randomly selected registered voters with the help of Churchill County High School Advanced Placement Chemistry students. These results support the following findings:

#### Approximately Half of Respondents are “in favor” of the Yucca Mountain Project.

Response	2008	2009	2010	2011	2012	2013	2014
In Favor	45%	51%	55%	52%	57%	51%	43%
Opposed	55%	49%	45%	48%	43%	49%	57%

#### A Majority of Respondents Support the Continuation of Yucca Mountain Licensing Process.

Response	2011	2012	2013	2014	2015
Continue Licensing	60%	62.5%	66.4%	61.2%	60.0%
Terminate Licensing	40%	37.5%	33.6%	38.8%	40.0%

#### If Yucca Mountain were Proven Safe to Operate, the Majority of Respondents would be in favor the Project.

Response	2013	2014
In Favor of Yucca Mountain	71%	73.2%
Opposed to Yucca Mountain	29%	26.8%

#### There is Overwhelming Support among Survey Respondents for Benefit Payments linked to a Repository.

Response	2008	2013
Supports a Benefit Package	94.6%	87.5%

In 2013 certain members of Congress suggested that Nevada should receive a \$5.6 billion dollar payment if Yucca Mountain is licensed to receive spent nuclear fuel. Seventy-three percent (73%) of respondents said they would support the project if Nevada received this payment.

Survey results suggest that opposition to repository is not strong and only 25 to 30 percent of registered voters strongly opposed Yucca Mountain.

***Question: Radioactive waste is transported in rugged vault-like containers under strict regulations using cautious procedures, and in collaboration with state agencies. In the past 35 years, there have been more than 3,000 shipments for this radioactive waste across a total of nearly 2 million miles, and no radiation leaks.***

***After hearing this statement how confident are you that the radioactive waste from America's nuclear power plants will be transported safely to the proposed Yucca Mountain disposal site?***

## Appendix A: Survey

Churchill County is conducting this survey as part of its oversight responsibilities of the Yucca Mountain project. Churchill County High School students have volunteered to conduct this survey. All responses will remain confidential.

Survey # \_\_\_\_\_

I would like to begin by asking the following questions:

Are you familiar with the Yucca Mountain Project and the federal government's effort to store nuclear waste in Nye County, Nevada?

Yes \_\_\_\_\_

No \_\_\_\_\_

### Question 1:

Are you in favor or opposed to the development of a nuclear waste repository at Yucca Mountain, Nevada?

1. In Favor \_\_\_\_\_

2. Opposed \_\_\_\_\_

### Question 2:

After spending more than \$15 billion studying Yucca Mountain, the Obama Administration attempted to terminate the repository project before completing the independent scientific licensing review as mandated by federal law.

1. Should the licensing review continue?

\_\_\_\_\_

2. Or should the project be terminated and start over at another location?

\_\_\_\_\_



**Question 3:**

Alternative energy such as solar and wind produce about 4 percent of the nation's electricity and they are not a baseload, or continuous, power sources. Knowing this, which of the following sources do you prefer to generate baseload electricity?

- 1. Coal \_\_\_\_\_
- 2. Natural Gas \_\_\_\_\_
- 3. Nuclear Energy \_\_\_\_\_
- 4. Oil \_\_\_\_\_
- 5. Other \_\_\_\_\_
- 6. No Opinion \_\_\_\_\_

**Question 4:**

If the Yucca Mountain Project was found to be safe and could be licensed and built in a manner that protects public health, would you be in favor or opposed to the repository?

- 1. In Favor \_\_\_\_\_
- 2. Opposed \_\_\_\_\_

**Question 5:**

Recently the U.S. Environmental Protection Agency announced new greenhouse gas emission standards for electrical power generation. True or false, the new emission standards and future electricity demand cannot be met without increasing nuclear power.

- 1. True \_\_\_\_\_
- 2. False \_\_\_\_\_

**Question 6.**

If expansion of nuclear power requires a permanent underground repository, would you support the Yucca Mountain project assuming the site can be constructed and operated safely?

- 1. Yes \_\_\_\_\_
- 2. No \_\_\_\_\_

**Demographic Questions-Survey Respondents**

1. Age of Respondent (Survey respondent)\_\_\_\_\_Years

2. Length of residency in Churchill County\_\_\_\_\_ years.

3. Male\_\_\_\_\_ Female\_\_\_\_\_