

# BP 3511

**Energy and Water Management**

Preliminary Analysis



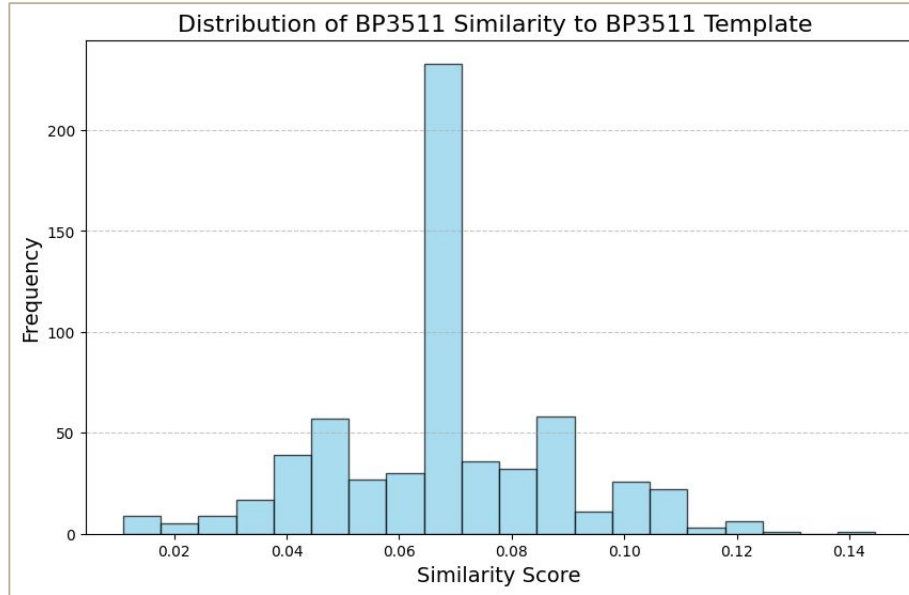
# Board Policy 3511 Text Analysis

	District Name	School Board Policy Commitments Score (out of 3)	similarity_score
613	Conejo Valley Unified	3.0	0.144646
300	Placer Hills Union Elementary	3.0	0.124914
619	Washington Unified	3.0	0.123570
515	Vacaville Unified	3.0	0.123027
50	Black Oak Mine Unified	3.0	0.122559
...	...	...	...
421	Paso Robles Joint Unified	3.0	0.015676
334	San Juan Unified	3.0	0.014627
165	Downey Unified	0.5	0.013389
293	Tustin Unified	0.5	0.012205
283	Huntington Beach Union High	0.5	0.010939

\*\* Used Cosine Similarity module to Compare School District Board Policy to Board Policy Template

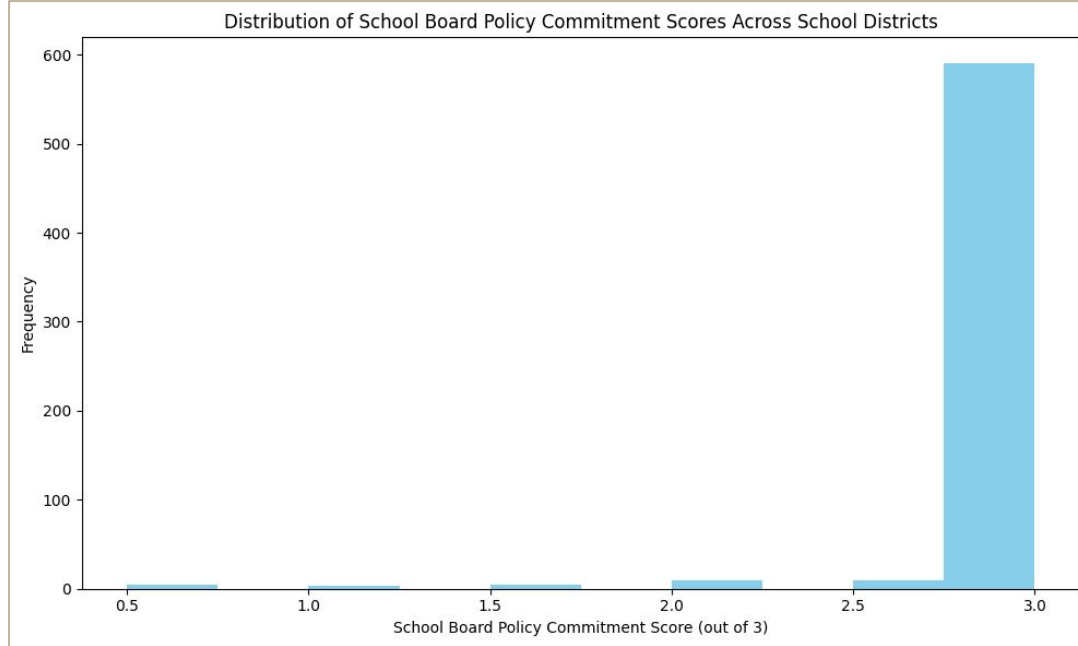


## Distribution of BP3511 Similarity to BP3511 Template

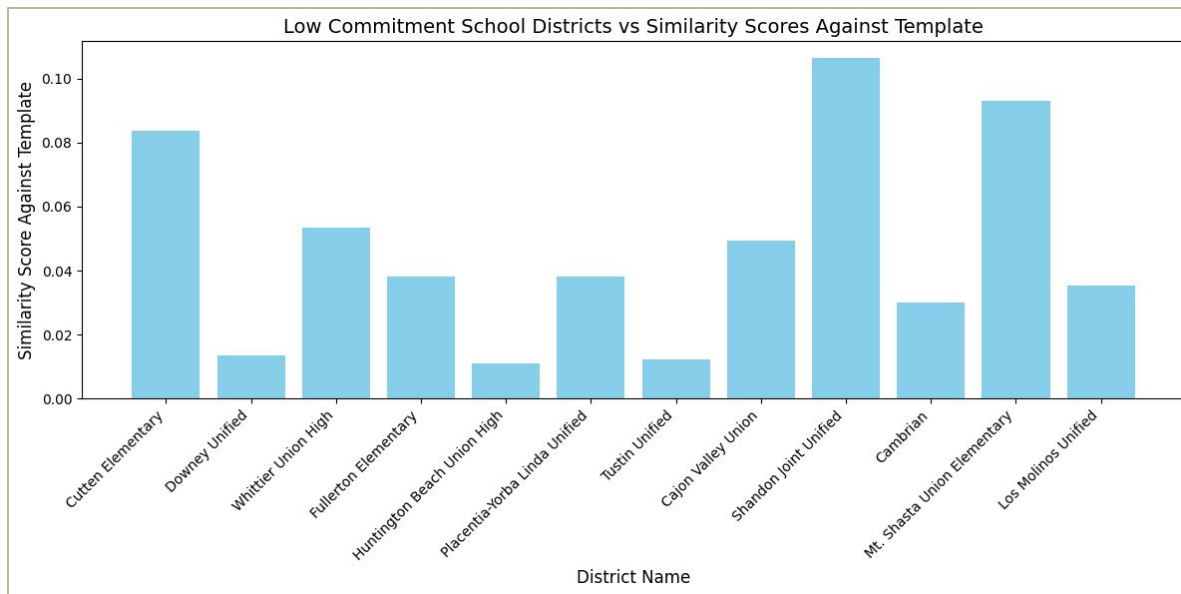


- Most board policies have a low-to-moderate similarity to the BP3511 template.

# School Board Policy Commitment Scores (out of 3)

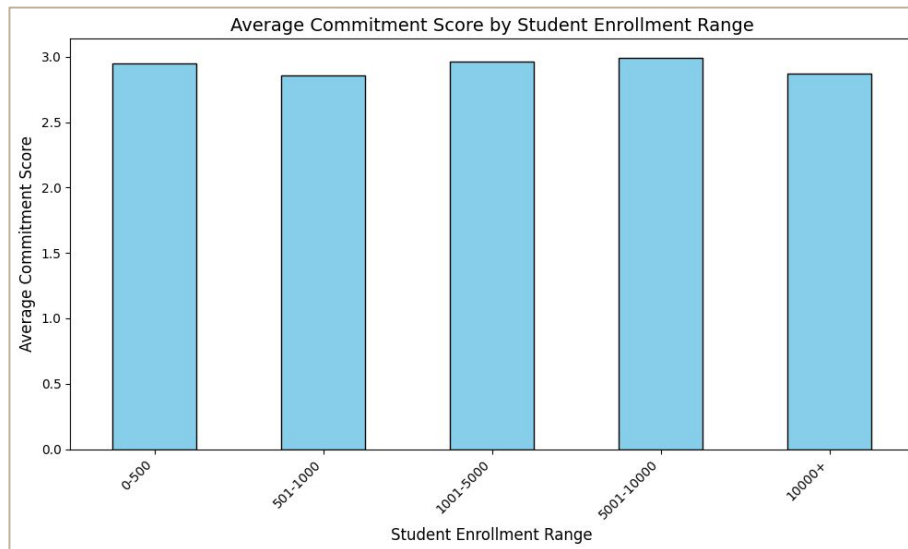


## Are Commitment Scores Tied to BP3511 Template Similarity?



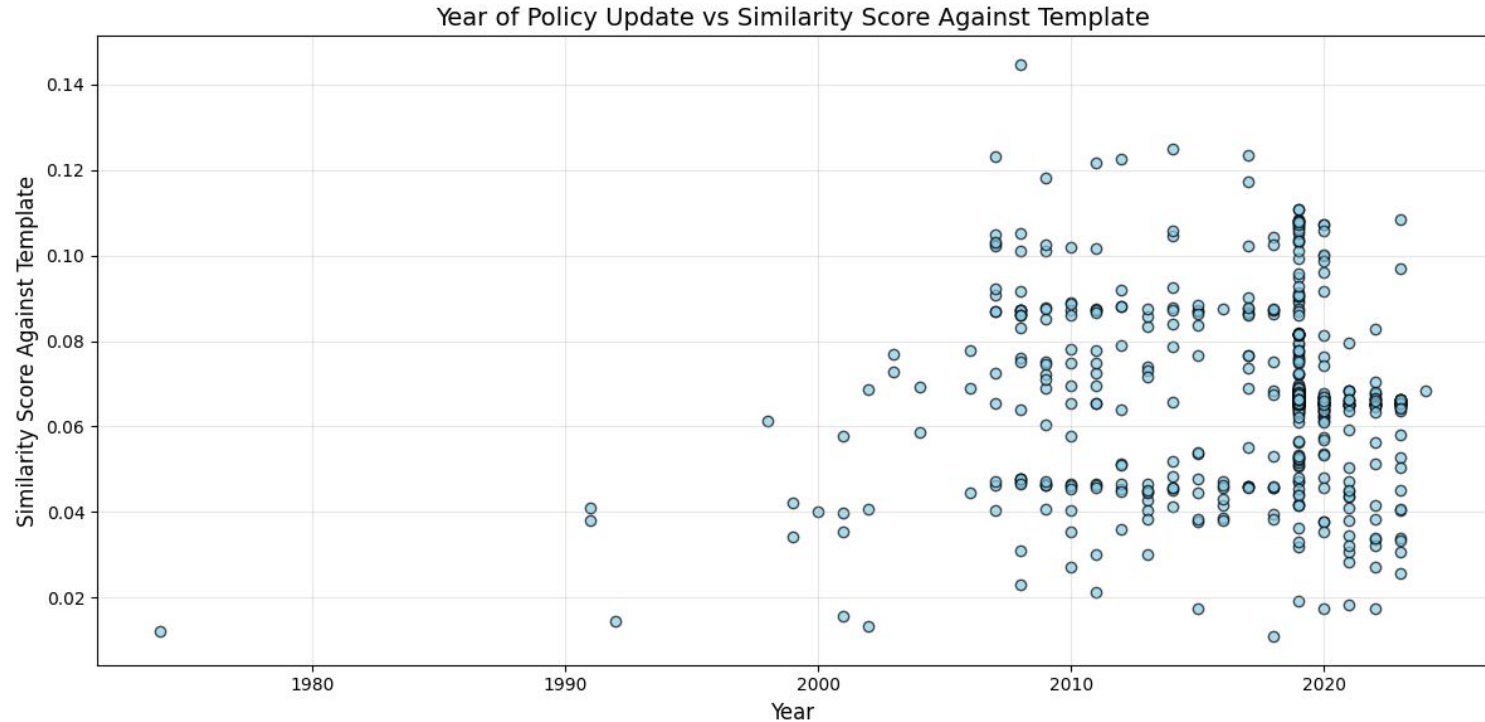
- Mixed similarity scores to template for school districts that had a low commitment score below 1.5

# Are Lower Commitment Scores Caused by District Size (or Student Enrollment)?



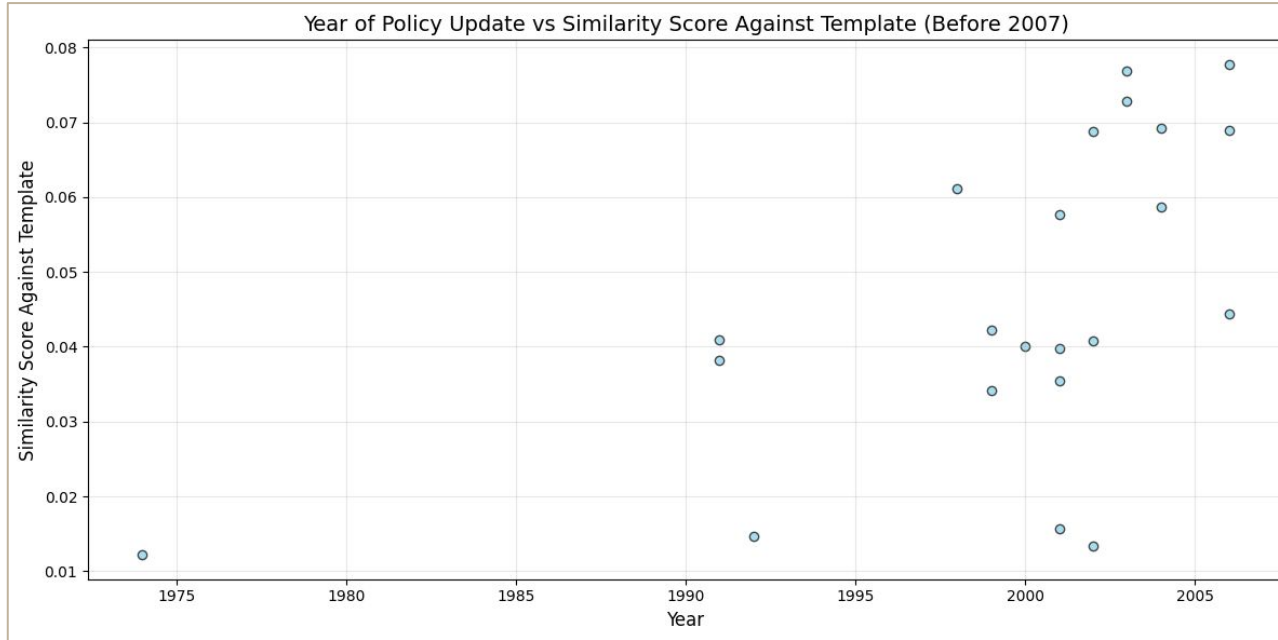
Average School Board Policy Commitments Score by Student Enrollment Range:	
Enrollment Range	
0-500	2.946903
501-1000	2.857143
1001-5000	2.965665
5001-10000	2.989247
10000+	2.870079

# Do newer policies align more with BP3511 Template?



\*\* BP3511 Template was created in 2007\*\*

Do newer/updated policies that follow BP3511 template have a higher commitment score?

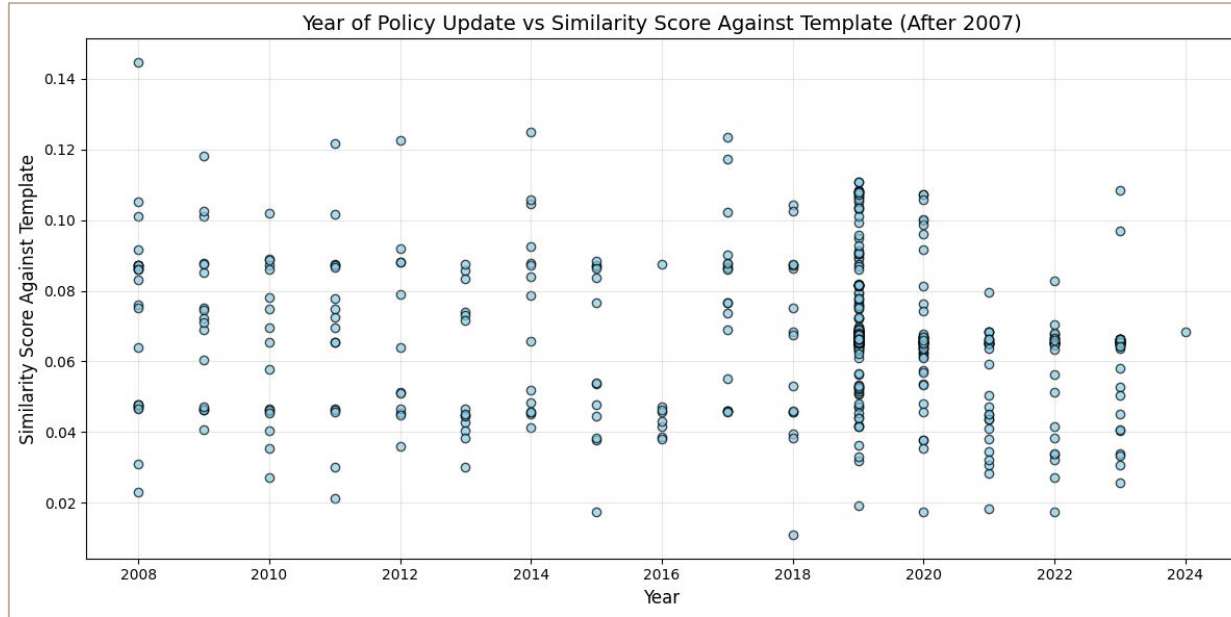


The average commitment score for policies updated before 2007 is: 2.57

\*\* BP3511 Template was created in 2007\*\*



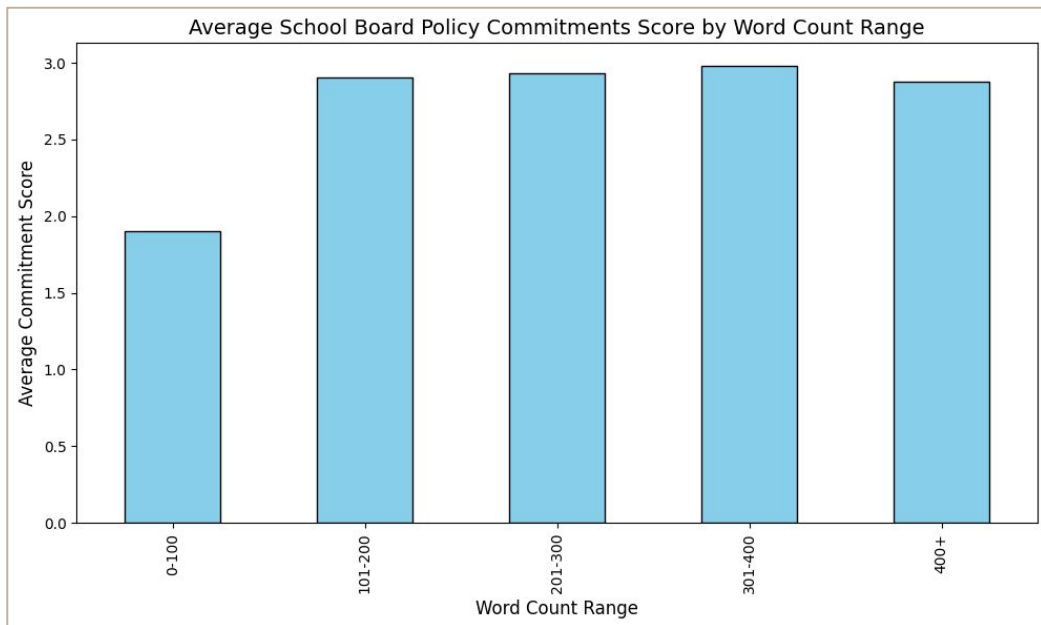
## Do newer/updated policies that follow BP3511 template have a higher commitment score?



The average commitment score for policies updated after 2007 is: 2.95

- Commitment score for schools increased following the creation of the BP3511 template created in 2007

# Does Word Count Affect Commitment Score?



## Average Commitment Score by Word Count Range:

### Word Count Range

0-100 1.900000

101-200 2.905172

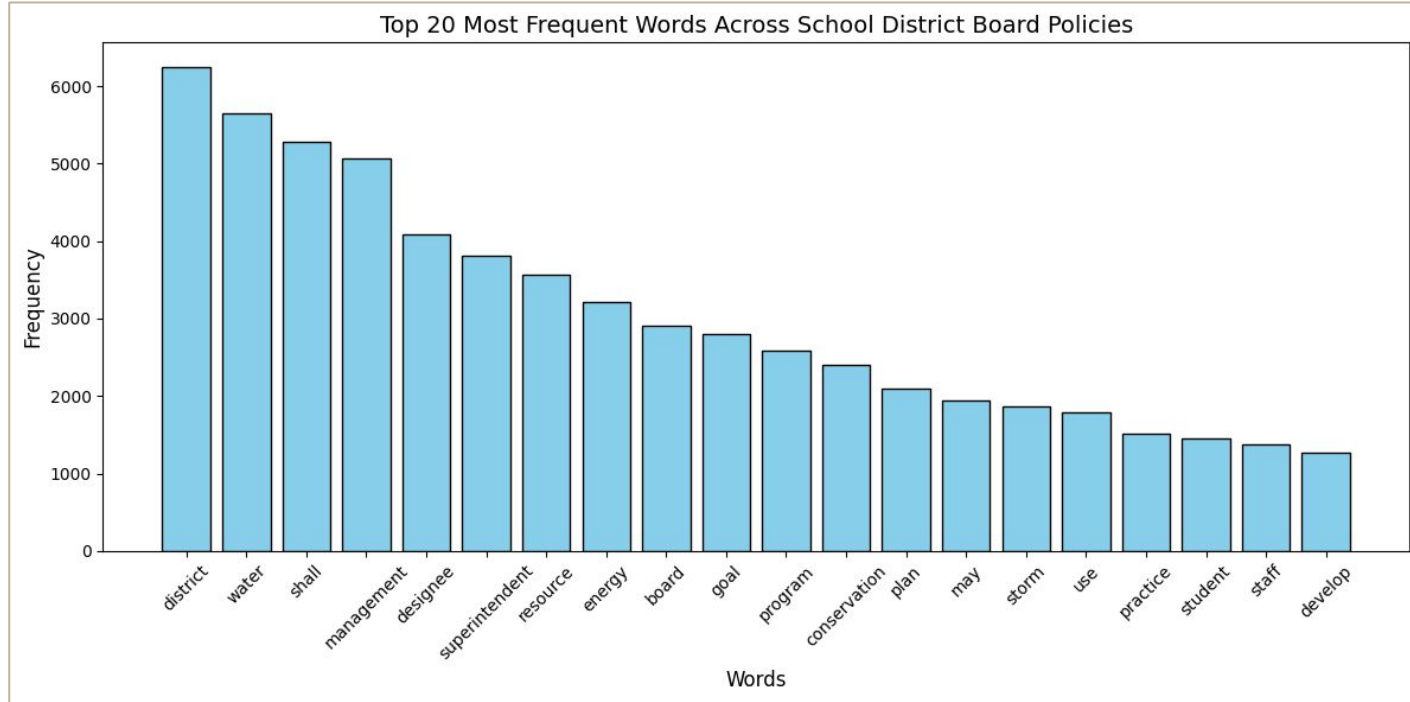
201-300 2.931034

301-400 2.979495

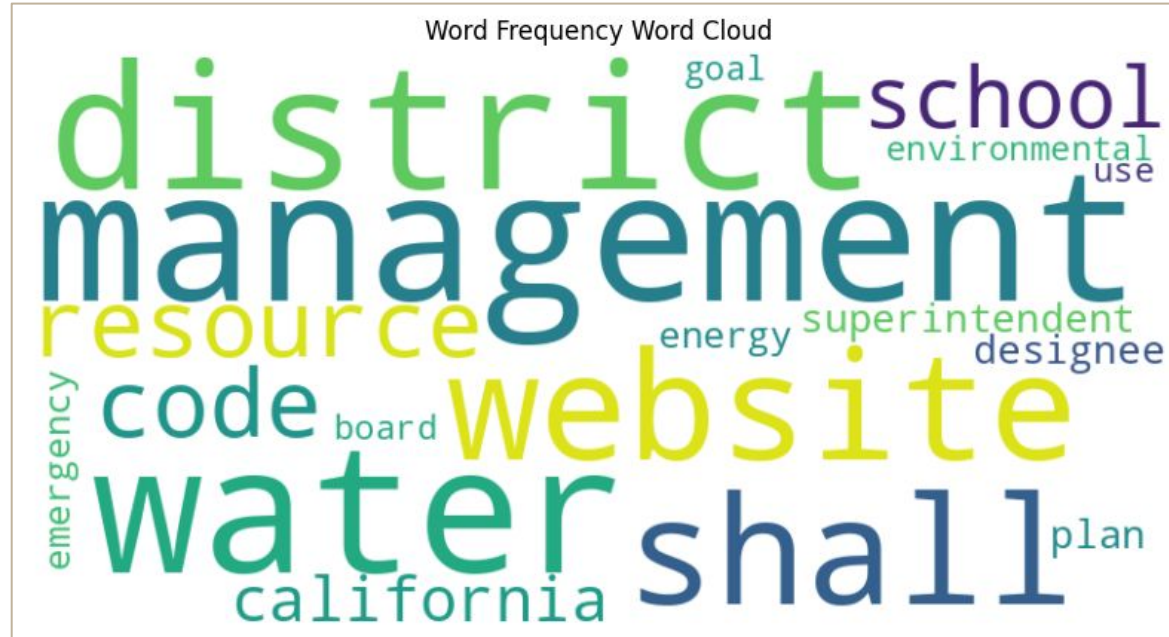
400+ 2.876623

- **No, word count does not affect commitment score**
  - Board policies that had less than 200 words had a 3 commitment score similar to board policies with 400+ words

# Keyword Analysis



# Keyword Analysis



**\*\* General Board Policy (BP) Language Considerations:** Try to replace “may” with “shall” as often as possible. This provides a more authoritative and committed tone to the policy or regulation.”

# Energy Efficiency Indicator

Number of policies containing the keyword(s) ['school energy conservation programs', 'energy-saving initiatives', 'energy efficiency']: 28

Total counts in the 'Energy Efficiency' column:

Energy Efficiency

1 16

0 12

Name: count, dtype: int64

Keyword occurrences:

'school energy conservation programs': 0

'energy-saving initiatives': 0

'energy efficiency': 47

Counts in the 'Energy Efficiency' column:

Energy Efficiency

0 295

1 278

- Energy efficiency was fulfilled by 278 school districts
  - No evidence of this indicator for 295 school districts
    - 1 = Yes
    - 0 = No

# On-site Renewables Indicator

Number of policies containing the keyword(s) ['on-site renewable energy', 'solar power', 'wind energy', 'renewable energy']: 4

Total counts in the 'On-Site Renewables' column:

On-Site Renewables

0 2

1 2

Name: count, dtype: int64

Keyword occurrences:

'on-site renewable energy': 0

'solar power': 2

'wind energy': 0

'renewable energy': 4

Counts in the 'On-Site Renewables' column:

On-Site Renewables

0 335

1 238

- On-site renewables was fulfilled by 238 school districts
  - No evidence of this indicator for 335 school districts
    - 1 = Yes
    - 0 = No

# Indoor Air Quality Indicator

```
Number of policies containing the keyword(s) ['indoor air quality', 'air filtration systems', 'air filtration', 'healthy air school initiative', 'air quality', 'IEQ', 'IEQ (Indoor Environmental Quality) Initiative']: 1
```

```
Total counts in the 'Indoor Air Quality' column:
```

```
Indoor Air Quality
```

```
1.0    1
```

```
Name: count, dtype: int64
```

```
Keyword occurrences:
```

```
'indoor air quality': 1
```

```
'air filtration systems': 0
```

```
'air filtration': 0
```

```
'healthy air school initiative': 0
```

```
'air quality': 1
```

```
'IEQ': 0
```

```
'IEQ (Indoor Environmental Quality) Initiative': 0
```

```
Counts in the 'Indoor Air Quality' column:
```

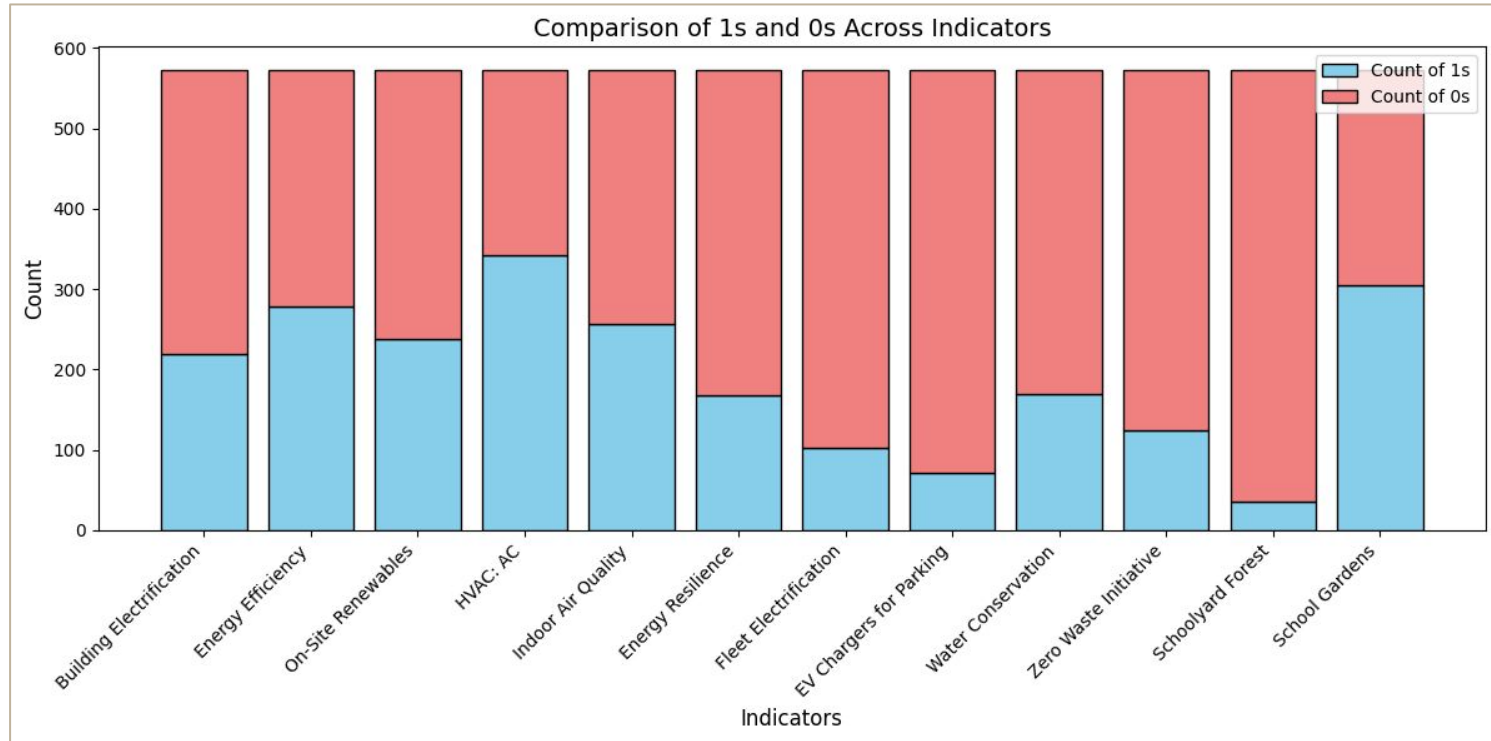
```
Indoor Air Quality
```

```
0.0    290
```

```
1.0    256
```




- On-site renewables was fulfilled by 256 school districts
  - No evidence of this indicator for 290 school districts
    - 1 = Yes
    - 0 = No

# Indicator Summary



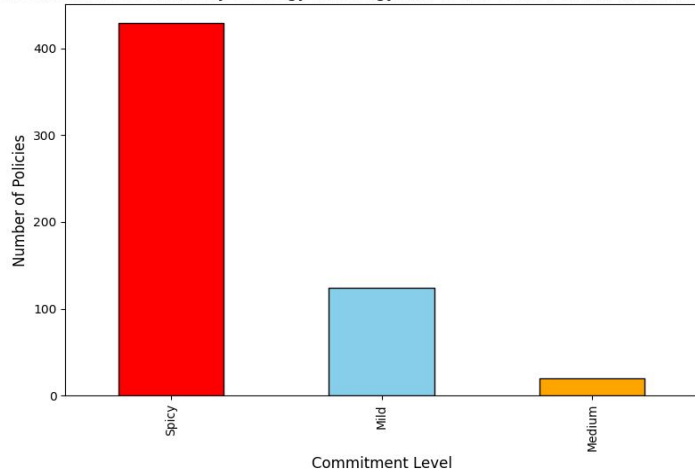


# Scoville Scale Language Menu of Possible Revisions

Scoville Scale Overview	
Level	Description
 MILD	<b>Mild</b> is representative of a conservative and symbolic approach with the least amount of action and accountability possible, and on the longest timeline for implementation.
 MEDIUM	<b>Medium</b> is representative of a moderate level of commitment to action and accountability, and on a shorter timeframe than mild for implementation.
 SPICY	<b>Spicy</b> is representative of a progressive approach with a strong commitment to action. In addition, there is accountability and a rapid timeline for implementation.

# Strategy 1: Energy and Water Conservation and Management

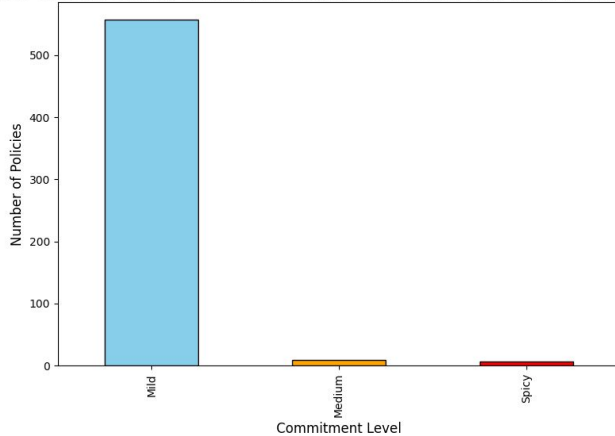
Classification of Policies by Strategy 1: Energy and Water Conservation and Management



Level	Scoville Scale Language Menu of Possible Revisions
<b>Mild</b> <i>Original Language</i>	The Superintendent or designee shall regularly inspect district facilities and operations and make recommendations for maintenance and capital expenditures which may help the district reach its conservation and management goals.
<b>Medium</b>	The Superintendent or designee shall regularly inspect district facilities and operations and <b>develop and implement plans</b> for maintenance and capital expenditures <b>to achieve</b> the district's conservation and management goals.
<b>Spicy</b>	<p>The Superintendent or designee shall inspect district facilities and operations <b>on a [timeline] basis</b> and <b>develop and implement plans</b> for maintenance and capital expenditures <b>to achieve the district's</b> conservation and management goals, <b>including but not limited to:</b></p> <ul style="list-style-type: none"><li>a. <b>Replacing machinery or HVAC systems with the most energy efficient options available</b></li><li>b. <b>Installing renewable energy upgrades or alternatives</b></li><li>c. <b>Determining and implementing the most water-conserving methods for facilities across the district</b></li><li>d. <b>Ensuring all new construction follows guidelines developed to achieve the district's energy and water conservation goals</b></li></ul>

# Strategy 2: Identifying and Investing in Water and Energy Programs and Opportunities

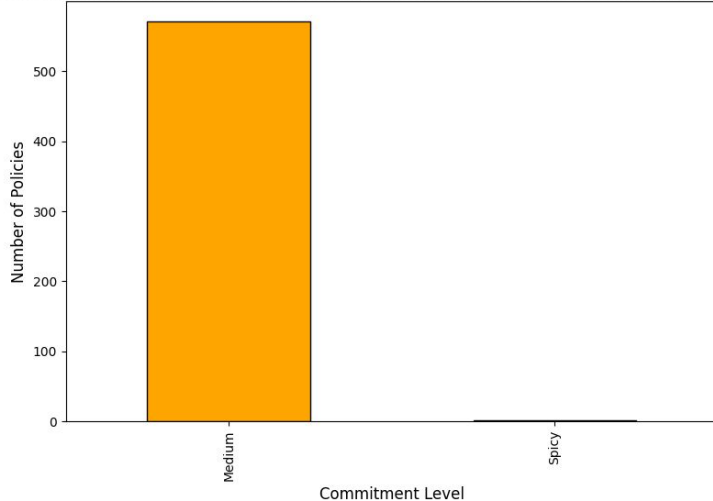
Classification of Policies by Strategy 2: Identifying and Investing in Water and Energy Programs and Opportunities



Level	Scoville Scale Language Menu of Possible Revisions
<b>Mild</b> <i>Original Language</i>	The Superintendent or designee shall make every effort to identify funding opportunities and cost-reducing incentive programs to help the district achieve its conservation and management goals. The Superintendent or designee shall periodically report to the Board on the district's progress in meeting its conservation and management goals.
<b>Medium</b>	The Superintendent or designee shall identify funding opportunities and <b>develop and implement</b> cost-reducing incentive programs to help the district achieve its conservation and management goals. The Superintendent or designee shall periodically report to the Board on the district's progress in meeting its conservation and management goals.
<b>Spicy</b>	The Superintendent or designee shall <b>allocate</b> funding and <b>develop and implement</b> cost-reducing incentive programs to <b>achieve the district's</b> conservation and management goals, including K-12 student involvement via experiential learning and curricular participation. The Superintendent or designee shall report to the Board <b>on a [timeline] basis</b> on the district's progress in meeting its conservation and management goals.

# Strategy 3: Stormwater Management General Permit Compliance

Classification of Policies by Strategy 3: Stormwater Management General Permit Compliance



Level	Scoville Scale Language Menu of Possible Revisions
<b>Mild</b> <i>Original Language</i>	The Board desires to ensure that, to the maximum extent practicable, the district reduces the discharge of pollutants into the water system in order to minimize the threat to water quality from stormwater runoff. When the district has been designated by the State Water Resources Control Board or a regional water quality control board, the Superintendent or designee shall ensure that the district complies with applicable General Permit requirements
<b>Medium</b>	The Board desires to ensure that the district <b>will not</b> discharge pollutants into the water system in order to minimize the threat to water quality from stormwater runoff. When the district has been designated by the State Water Resources Control Board or a regional water quality control board, the Superintendent or designee shall ensure that the district complies with applicable General Permit requirements.
<b>Spicy</b>	The Board <b>ensures</b> that the district <b>will not</b> discharge pollutants into the water system in order to <b>eliminate</b> the threat to water quality from stormwater runoff. <b>In this case, “discharge” is defined as accidental or purposeful release of contaminants or pollutants into the water system by the district, staff, faculty, students, facilities, or operations associated with the district.</b> The Superintendent or designee shall ensure that the district complies with applicable General Permit requirements, <b>as well as all regulations from the State Water Resources Control Board or a regional water quality control board.</b>

Level	Scoville Scale Language Menu of Possible Revisions	
Mild <i>Original Language</i>	<p>The district's plan shall describe best management practices, measurable goals, and timetables for implementation in the following areas:</p> <ol style="list-style-type: none"> <li>Public education and outreach on stormwater impacts</li> <li>Public participation, such as participation in adoption and implementation of the plan</li> <li>Illicit discharge detection and elimination, such as maps and programs to detect and eliminate illicit non-storm water discharges</li> <li>Construction site stormwater runoff control, such as reviewing construction plans, inspecting sites, and tracking construction site runoff, as well as erosion and sediment control</li> <li>Post-construction stormwater management, such as developing design standards for preventing runoff and verifying proper maintenance and operation of control procedures</li> <li>Pollution prevention and good housekeeping, such as evaluating waste disposal, material storage, and equipment-cleaning procedures and spill prevention, including at bus maintenance facilities"</li> </ol>	
Medium	<p>The district's plan shall <b>develop</b> best management practices, measurable goals, and timetables for implementation in the following areas:</p> <ol style="list-style-type: none"> <li>Public education and outreach on stormwater impacts, <b>stormwater reduction methods, and pollution reduction methods and importance</b></li> <li>Public participation, such as participation in adoption and implementation of the plan</li> <li>Illicit discharge detection and elimination, such as maps and programs to detect and eliminate illicit non-storm water discharges</li> <li>Construction site stormwater runoff control, such as reviewing construction plans, inspecting sites, and tracking <b>and eliminating</b> construction site runoff, as well as erosion and sediment control</li> <li>Post-construction stormwater management, such as developing <b>and implementing</b> design standards for preventing runoff and verifying proper maintenance and operation of control procedures</li> <li>Pollution prevention and good housekeeping, such as evaluating waste disposal, material storage, equipment-cleaning procedures, <b>pesticide use</b>, and spill prevention, including at bus maintenance facilities"</li> </ol>	▼
Spicy	<p>The district's plan shall <b>develop</b> best management practices, measurable goals, and timetables for implementation in the following areas:</p> <ol style="list-style-type: none"> <li>Public education and outreach, including K-12 experiential learning and curricular resources, on stormwater impacts, <b>stormwater reduction methods, and pollution reduction methods and importance, such as building rain gardens or not spraying pesticides when it is projected to rain.</b></li> <li>Public participation, including K-12 experiential learning and classroom participation and provide publicly-available data that tracks energy and water use, as well as other key measures, in a form that is accessible to students and the community.</li> <li>Illicit discharge detection and elimination, such as maps and programs to detect and eliminate illicit non-storm water discharges <b>as well as significant fines and other deterrents to prevent illicit non-stormwater discharges.</b></li> <li>Construction site stormwater runoff control, such as reviewing construction plans <b>for possible water runoff contamination hazards</b>, inspecting sites <b>for current or future water runoff contamination</b>, and tracking <b>and eliminating</b> construction site runoff, as well as erosion and sediment control</li> <li>Post-construction stormwater management, such as developing <b>and implementing</b> design standards for preventing runoff and verifying proper maintenance and operation of control procedures</li> <li>Pollution prevention and good housekeeping, such as evaluating waste disposal, material storage, equipment-cleaning procedures, <b>pesticide use</b>, and spill prevention, including at bus maintenance facilities</li> </ol>	

# Next Steps

- Investigate the reasons why some school districts have a commitment score below 1.5 and explore the relationship between high similarity to the BP3511 template and low commitment scores
- Expand on Scoville Scale Language Menu of Possible Revisions to enhance analysis
- Identify additional key search terms for each indicator to improve accuracy of analysis