

Conservation Funding Votes Analysis

Guillermo Parra

June 4, 2024

Analysis Results

Word Frequency in 'Purpose' Column

The table below shows the top 10 most common words in the 'purpose' column and their relative frequencies.

Word	Frequency	Relative Frequency
open_space	2276	0.354
recreation	1234	0.192
parks	973	0.151
farmland	629	0.098
watershed_protection	389	0.061
trails	387	0.060
wildlife_habitat	263	0.041
greenways	88	0.014
forests	54	0.008
forest	25	0.004

Finance Mechanism Counts and Relative Frequencies

The table below shows the counts and relative frequencies of different finance mechanisms.

Finance Mechanism	Count	Relative Frequency
Property tax	1177	0.423
Bond	1121	0.403
Sales tax	230	0.083
Other	119	0.043
Income tax	94	0.034
Real estate transfer tax	42	0.015

Top Words and Relative Frequencies for Each Type of Tax-Funded Project

Property Tax

Word	Frequency	Relative Frequency
open_space	1078	0.422
recreation	532	0.208
farmland	350	0.137
parks	211	0.083
watershed_protection	135	0.053
trails	101	0.039
wildlife_habitat	79	0.031
greenways	16	0.006
forests	14	0.005
forest	4	0.002

Sales Tax

Word	Frequency	Relative Frequency
open_space	176	0.270
parks	145	0.222
recreation	99	0.152
trails	81	0.124
watershed_protection	49	0.075
wildlife_habitat	41	0.063
farmland	26	0.040
greenways	13	0.020
forests	5	0.008
wildlife	3	0.005

Income Tax

Word	Frequency	Relative Frequency
open_space	93	0.441
farmland	56	0.265
recreation	29	0.137
watershed_protection	9	0.043
parks	8	0.038
forests	5	0.024
trails	4	0.019
wildlife_habitat	3	0.014
habitat	2	0.009
forest	1	0.005

Real Estate Transfer Tax

Word	Frequency	Relative Frequency
open_space	39	0.453
watershed_protection	11	0.128
wildlife_habitat	10	0.116
recreation	7	0.081
farmland	6	0.070
trails	5	0.058
parks	4	0.046
greenways	2	0.023
and_forests	1	0.012
forest	1	0.012

Top Words and Relative Frequencies for Tax-Funded Projects (Combined)

The table below shows the top 10 most common words in the 'purpose' column for tax-funded projects (combined) along with their frequencies and relative frequencies.

Word	Frequency	Relative Frequency
open_space	1386	0.395
recreation	667	0.190
farmland	438	0.125
parks	368	0.105
watershed_protection	204	0.058
trails	191	0.055
wildlife_habitat	133	0.038
greenways	32	0.009
forests	24	0.007
forest	7	0.002

Top Words and Relative Frequencies for Bond-Funded Projects

The table below shows the top 10 most common words in the 'purpose' column for bond-funded projects along with their frequencies and relative frequencies.

Word	Frequency	Relative Frequency
open_space	791	0.306
parks	543	0.210
recreation	518	0.200
farmland	183	0.071
trails	173	0.067
watershed_protection	150	0.058
wildlife_habitat	91	0.035
greenways	53	0.020
forests	27	0.010
forest	17	0.007

Acreage Statistics

The table below shows the summary statistics for reported acreage.

Statistic	Value
Min	5.00
1st Qu.	58.25
Median	90.00
Mean	1243.44
3rd Qu.	236.00
Max	30000.00

Percentage of Projects with Reported Acreage by Finance Mechanism

The table below shows the percentage of projects with reported acreage that are bond-funded vs. tax-funded.

Finance Mechanism	Count	Percentage
Bond	29	90.6
Tax	1	3.12
Other	2	6.25

Average Acreage by Finance Mechanism

The table below shows the average acreage for bond-funded and tax-funded projects.

Finance Mechanism	Average Acreage
Bond	1355.0
Tax	250.0
Other	124.0

Correlation Between Acreage Size and Type of Funding

The table below shows the correlation between acreage size and the type of funding (Bond).

Statistic	Value
Correlation	0.0658
P-value	0.7205
95% Confidence Interval	[-0.290, 0.405]

Project Distribution by Jurisdiction Type and Funding Mechanism

The table below shows the distribution of projects by jurisdiction type and how they are funded (tax vs. bond).

Jurisdiction Type	Total Projects	Tax Funded (%)	Bond Funded (%)
County	570	54.2	41.6
Municipal	2019	58.8	38.2
Special District	106	35.8	50.9
State	88	10.2	67.0

Funding Amount Statistics by Finance Mechanism

The table below shows the funding amount statistics for bond-funded and tax-funded projects.

Mechanism	Average	Median	Min	Max	First Quartile	Third Quartile
Bond	32,821,278	5,000,000	80,000	2,300,000,000	2,000,000	10,000,000
Other	191,412,228	10,000,000	60,000	2,150,000,000	5,000,000	20,000,000
Tax	34,842,334	3,881,120	15,000	9,000,000,000	1,000,000	8,000,000

Top Phrases in Description Column for Bond-Funded Projects

The table below shows the top phrases in the description column for bond-funded projects.

Mechanism	Phrase	Count
Bond	bond for the preservation of open	23
Bond	for the preservation of open space	23
Bond	for the purchase of open space	20
Bond	bond for the purchase of open	17
Bond	bond for the acquisition of open	14
Bond	bond issue for open space acquisition	14
Bond	for the acquisition of open space	14
Bond	bond for open space and farmland	12
Bond	acquisition and preservation of open space	10
Bond	bond for open space parks and	10

Top Phrases in Description Column for Tax-Funded Projects

The table below shows the top phrases in the description column for tax-funded projects.

Mechanism	Phrase	Count
Tax	property tax increase for open space	207
Tax	per 100 property tax increase for	184
Tax	community preservation act 3 property tax	145
Tax	preservation act 3 property tax surcharge	145
Tax	100 property tax increase for open	133
Tax	1 cent per 100 property tax	103
Tax	cent per 100 property tax increase	99
Tax	cents per 100 property tax increase	81
Tax	community preservation act 1 property tax	74
Tax	preservation act 1 property tax surcharge	74

Summary Statistics for Non-Zero Funding Differences

The table below shows the summary statistics for the difference between *total_funds_at_stake* and *conservation_funds_at_stake* when the difference is non-zero.

Statistic	Value
Min	-443,425,000
1st Qu.	2,928,000
Median	8,465,000
Mean	180,543,358
3rd Qu.	35,300,000
Max	18,000,000,000

Proportion of Non-Zero Differences by Jurisdiction Type

The table below shows the proportion of times the difference between *total_funds_at_stake* and *conservation_funds_at_stake* is non-zero by jurisdiction type.

Jurisdiction Type	Total Projects	Percentage
County	255	25.1
Municipal	670	66.0
Special District	45	4.43
State	45	4.43

Pass Rate for Projects with Non-Zero Differences

The table below shows the pass rate for projects with non-zero differences between *total_funds_at_stake* and *conservation_funds_at_stake*.

Did Vote Pass	Percentage
No	26.0
Yes	74.0

Pass Rate for Projects with Zero Differences

The table below shows the pass rate for projects with zero differences between *total_funds_at_stake* and *conservation_funds_at_stake*.

Did Vote Pass	Percentage
No	21.5
Yes	78.5

Proportion of Zero Differences by Jurisdiction Type

The table below shows the proportion of times the difference between *total_funds_at_stake* and *conservation_funds_at_stake* is zero by jurisdiction type.

Jurisdiction Type	Total Projects	Percentage
County	279	16.8
Municipal	1291	77.6
Special District	53	3.19
State	40	2.41

Histogram of Funding Differences

The histogram below shows the distribution of the differences between *conservation_funds_at_stake* and *total_funds_at_stake* for projects where the difference is non-zero.

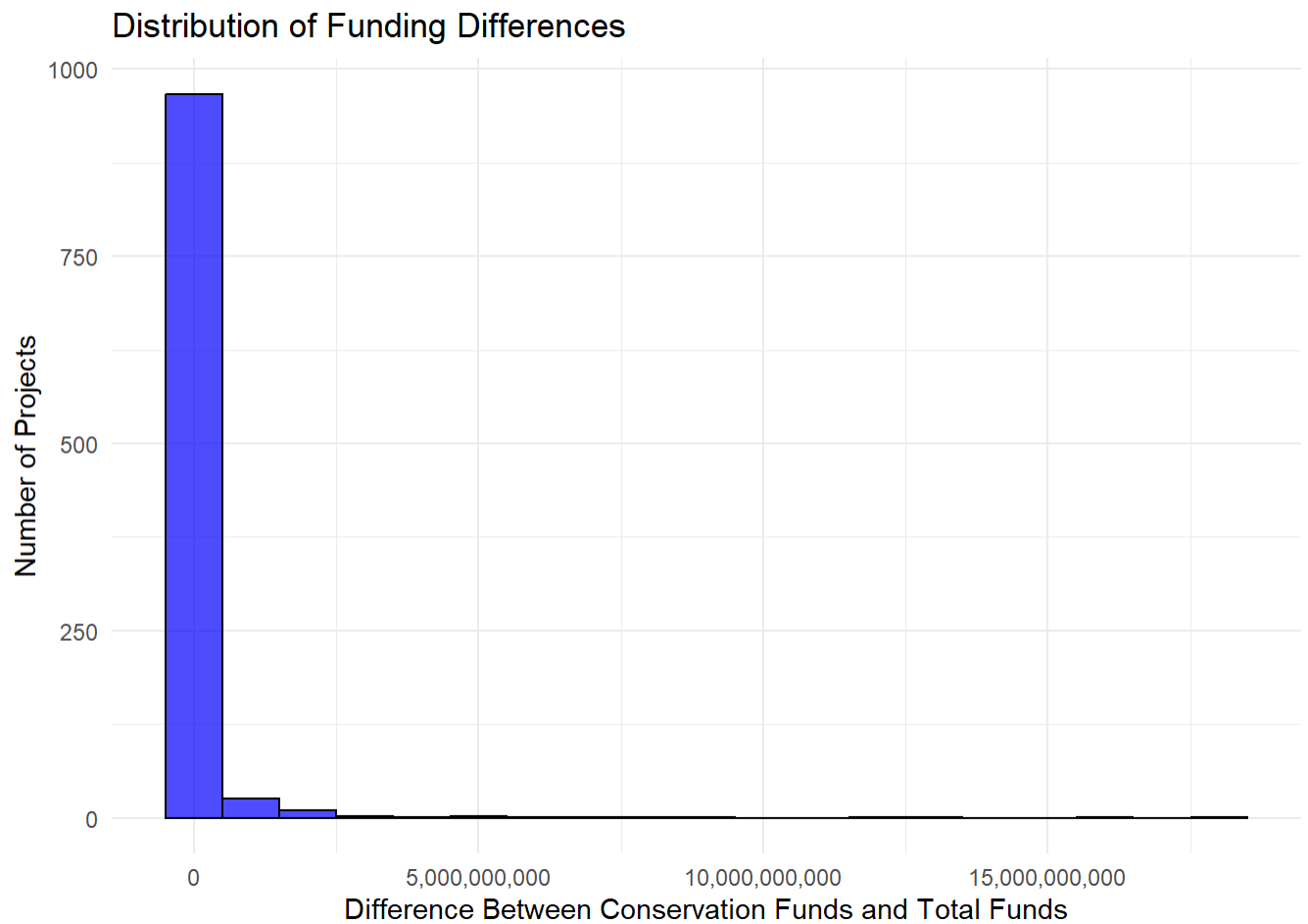


Figure 1: Distribution of Funding Differences

Histogram of Non-Conservation Fund Ratios

The histogram below shows the distribution of the ratios of non-conservation funds relative to total funds for projects, excluding negative ratios.

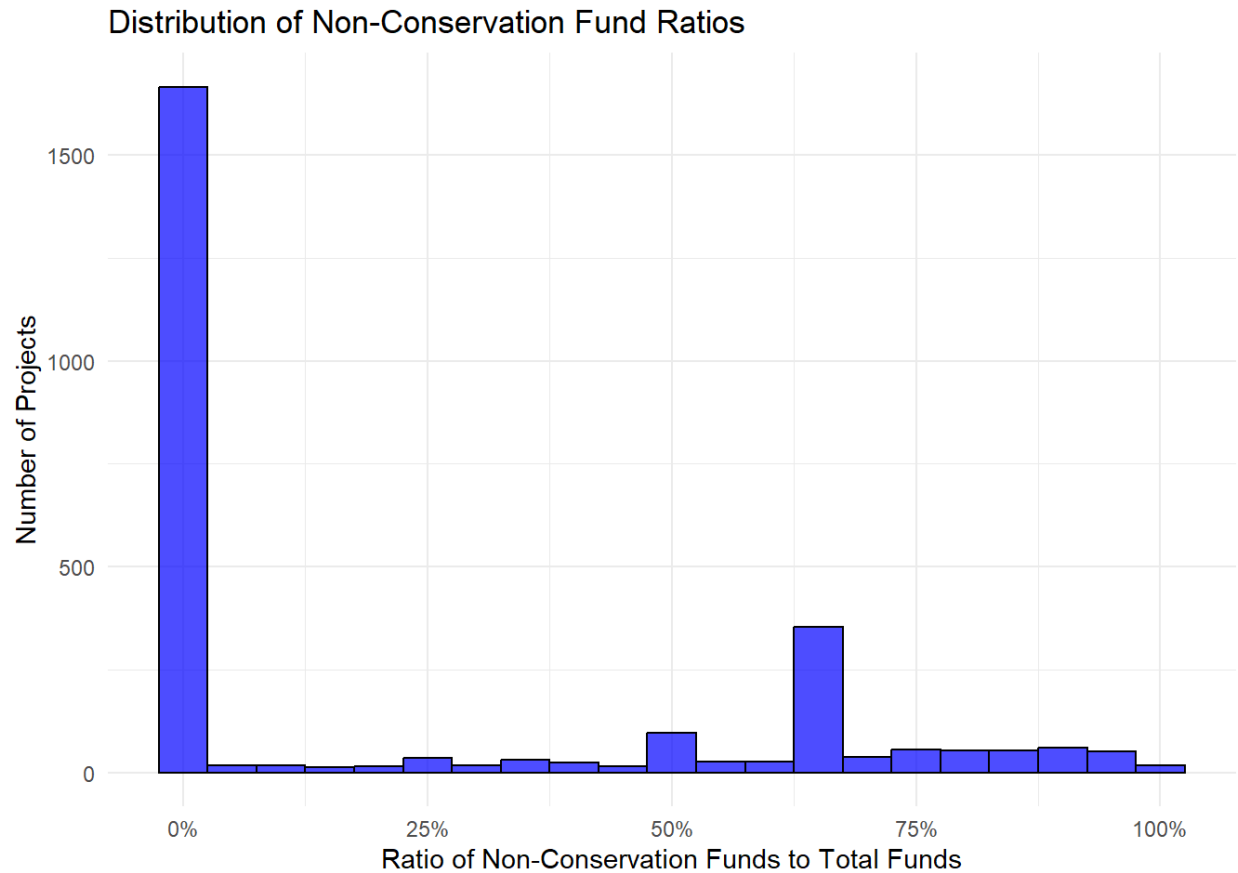


Figure 2: Distribution of Non-Conservation Fund Ratios

Top Phrases in Description Column for Other-Funded Projects

The table below shows the top phrases in the 'description' column for projects funded by mechanisms categorized as "Other."

Phrase	Count
for open space	26
open space and	14
parcel tax for	11
tax for open	10
and open space	9
tax increase for	6
of open space	5
open space acquisition	5
parks open space	5
tax for parks	5

Top Phrases in Other Comment Column for Other-Funded Projects

The table below shows the top phrases in the 'other comment' column for projects funded by mechanisms categorized as Other.

Phrase	Count
parcel tax	28
benefit assessment	13
utility tax	9
charter amendment	7
advisory measure	6
budget allocation	5
lodging tax	5
and gas	4
oil and	4
use tax	4

Top Words in Other Comment Column for Other-Funded Projects

The table below shows the top words in the 'other comment' column for projects funded by mechanisms categorized as "Other."

Phrase	Count
tax	62
parcel	28
assessment	13
benefit	13
and	9
utility	9
amendment	7
charter	7
fund	7
lottery	7