

SIERRA CLUB TWITTER ENGAGEMENT

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EXECUTIVE SUMMARY

The Sierra Club is a grassroots environmentalist organization dedicated to community protection through action and awareness. They originated in California by environmentalist John Muir in 1892.

Business Problem:

While the Sierra Club does have a large number of followers on Twitter (384,700 followers), they receive a disproportionately low level of interaction and engagement on their posts. Our objective is to create a plan that increase their engagement on Twitter.

Data overview:

For our owned dataset, we analyzed 300 of the Sierra Club's original tweets on Twitter posted between Oct. 1st-Dec 31st. For our earned dataset, we analyzed 43.78K tweets. These were conversations about the Sierra Club that we broke down by theme and gender. We also analyzed conversations about their competitors in this timeframe. For our earned data, we analyzed Twitter, blogs, and Reddit. Twitter made up 98% of the data with 1.2M mentions. Lastly, we used AI software to conduct a theme analysis surrounding the Build Back Better Act. We found our custom classifiers by pulling out common subjects from the mass of Tweets. We then created a virtual bucket for each subject/category and threw appropriate posts into each of the buckets which helped to train AI software that sorted the whole dataset.

Time frame: October 1st
2021 - December 31st
(Owned Data);
October 1st 2021 - January
31st 2022 (Earned & Theme
using AI Data)
Tool used: Brandwatch

Our custom classifiers add up to be 86.29% of the whole dataset, giving us a good analysis of most of the conversations. There were some limitations in this project - such as a lack of data from an array of social media platforms like Facebook and Instagram. Overall, we were able to conduct a thorough analysis using Twitter data.



RECOMMENDATIONS

Based on Owned Data Analysis

1. Add original & relevant videos/ pictures to tweets about current events

The Sierra Club tweets most often in the text theme category of Current events (n=111 see page 8). Most text themes receive similar levels of engagement (10.48-8.87). Tweets about current events receive an average of 9.03 retweets. This is low considering the frequency that current events are tweeted about.

To increase engagement levels for posts talking about current events, the Sierra Club should include original nature videos or pictures. Tweet containing videos of nature receive 21.2 retweets on average (see page 9). Tweets containing pictures of nature receive 11.17 retweets on average. By including original and relevant nature videos/ pictures in their posts about current events, the Sierra Club may increase engagement on these tweets.

2. When linking to the internal site for readings, also link to a discussion forum.

The Sierra Club links to their internal site for readings - blogs, newsletters, and articles - the most (124 times out of the 300 tweets observed see page 10). However, the Sierra Club only gets an average of 10.21 retweets for these posts. This is less engagement than they receive when nothing is linked at all (10.41).

To increase engagement when linking to the internal site for readings, the Sierra Club should also link to a discussion forum. The discussion forums were used to spark online debates on current issues. While only used 20 times in the 300 tweets observed, these tweets got an average of 12.65 retweets. Linking to a discussion forum when linking to the internal site for readings, may increase engagement.

3. Use hashtags intentionally and judiciously.

The Sierra Club includes hashtags with every 2 out of 3 tweets, generally using multiple hashtags in one tweet and repeating the same hashtags for several tweets in a row. This current strategy does not benefit them; tweets with hashtags receive almost equally as much engagement (10.66-7.87) as tweets without hashtags (10.07 see page 9). Given that hashtags originated on Twitter for the purpose of creating specific communities and consequently increasing interaction within that area, it seems Sierra Club is overusing hashtags that are not linking to niche communities.

To increase engagement with hashtagged tweets, the Sierra Club should use a smaller variety of more specific hashtags that are directly relevant to the tweet and a niche target audience.

- This would look like moving away from general tags like #sustainability to actionable, categorical tags like #ClimateChangeDonation.

Because Call to Action tweets bring the most engagement out of text themes (10.48 see page 8), coupling them with these specific, actionable hashtags may also improve engagement significantly for both categories.



RECOMMENDATIONS

Based on Earned Data Analysis

1. To generate more conversations about the Sierra Club, the Sierra Club should tweet more about climate change.

Looking at page 18 , 24.15% of tweets about the Sierra Club are about climate change. This topic contained the highest percentage of the conversations about the Sierra Club.

Tweets about climate change should be centered on: general information about climate change, new climate change policies, people who are actively fighting climate change, people who are not supporting a greener economy, and the Sierra Club's personal involvement in fighting climate change. Based on owned data, we suggest these tweets also contain original and relevant pictures/ videos.

2. To foster female conversations about the Sierra Club, the Sierra Club should tweet more about animal's rights

Female conversations about the Sierra Club frequently pertain to livestock grazing and wild horses. By increasing the frequency of tweets about domesticated and wild animals' rights, the Sierra Club may attract more female engagement (see page 12). We suggest coupling these tweets with the #nopesticides hashtag. This hashtag was popular in conversations referring to the application of pesticides on ranges/ pastures making wild horses sick (see page 25).

Increasing the amount of female conversations about the Sierra Club would be beneficial because female conversations about the Sierra Club are less negative than male conversations about the Sierra Club (12% negative for female compared to 17% negative for male see pages 25-26).

3. Retweet influential users who tweet about the social implications of economic actions

Female conversations that mention the Sierra Club tend to focus on the social implications of economic issues, specifically the Build Back Better Plan (see page 25). For example, men are more likely to discuss how the Build Back Better Plan will affect employment rates while women are more likely to discuss how the Build Back Better Plan will affect child and elderly care.

To attract more female engagement, the Sierra Club should consider retweeting influential users, such as @zipillinois, who have a smaller following (under 5,000) and who regularly post about social implications of economic issues.

Currently, @zipillinois tweets a lot about the affects pipelines are having on water and how this affects local families, specifically children and families living under the poverty line.

4. Increase frequency of callout posts

Sierra Club should participate in more callout posts in which they specifically mention brands or individuals that are failing to meet expectations for improvement or action regarding environmental impact. These callouts keep the Sierra Club relevant and keep followers engaged. Callout posts, such as those in reference to car brands who are greenwashing, and especially those calling out politicians by name, are some of the most engaged with content that the Sierra Club is associated with (see page 20).



RECOMMENDATIONS

Based on AI Theme Analysis

1. When tweeting about the Build Back Better Act, the Sierra Club should mention healthcare benefits.

Looking at the Build Back Better subconversations (page 48-49), Healthcare is the largest subconversation category at 307.1 thousand tweets. By tweeting about the Healthcare benefits of the BBBA, the Sierra Club may increase engagement.

Healthcare benefits of the BBBA that are relevant to subconversations include prescription drug accessibility and cost, health benefits associated with pollution reduction, and the affordability of health insurance for the working class.

2. Tweet frequent live updates when important legislation relevant to current events is being processed in any way

The most engagement coincides with days when there is news regarding important environmental legislation (page 35). Audiences enjoy engaging quickly with conversations about current political events. Twitter is the perfect platform for this. Tweeting live news updates could help increase engagement.

Based on owned data analysis, tweets about important legislation being processed may perform best if coupled with an original and relevant picture. For example, when the House Democrats passed the Build Back Better Bill, a picture of the signees with an accompanying tweet may have sparked the most engagement.

3. Facilitate discussion in West Virginia surrounding the Build Back Better Plan's specifics and how they would benefit West Virginia residents

In this dataset, a significant percentage of conversations occur in West Virginia about Joe Manchin. Democratic Senator Joe Manchin is an extremely popular topic of conversation for both genders (pages 38-41). He did not vote to pass the BBBA because he thought it would be too complex to explain to residents and to implement. Since the Sierra Club wants the Build Back Better Plan to succeed, we recommend encouraging discussions in West Virginia about the Build Back Better Plan's specifics and how they would directly benefit residents in West Virginia (focus on working class residents). Now is a good time to do this because the people in West Virginia are primed to absorb this information after so much local media attention has been focused on Joe Manchin and the Build Back Better Plan.





OWNED DATASET

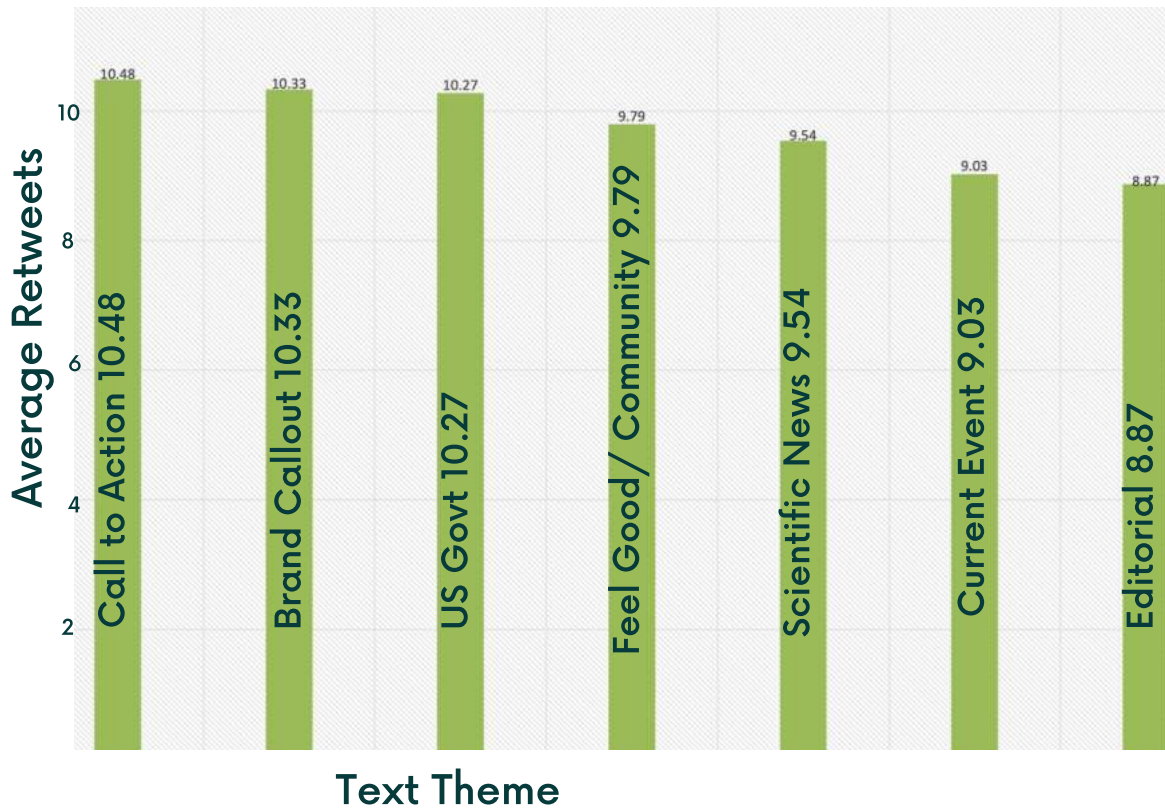
Owned Dataset Description:

This dataset analyzes what the Sierra Club posts on their own Twitter. The Sierra Club's Twitter page has approximately 384,700 followers, and it receives low engagement.

We analyzed 300 original tweets from the Sierra Club posted between October 1st and December 31st. We looked at each tweet's text theme, hashtag, type, image content, mention type, and URL type to determine best practices for future tweets.

Text Theme

Average Retweets per Text Theme



Category	Total Number of Posts (n)
Call to Action	29
Brand callout	9
US Government	84
Feel-good/Community	29
Scientific news	13
Current Event	111
Editorial	23
Other	2
Total	300

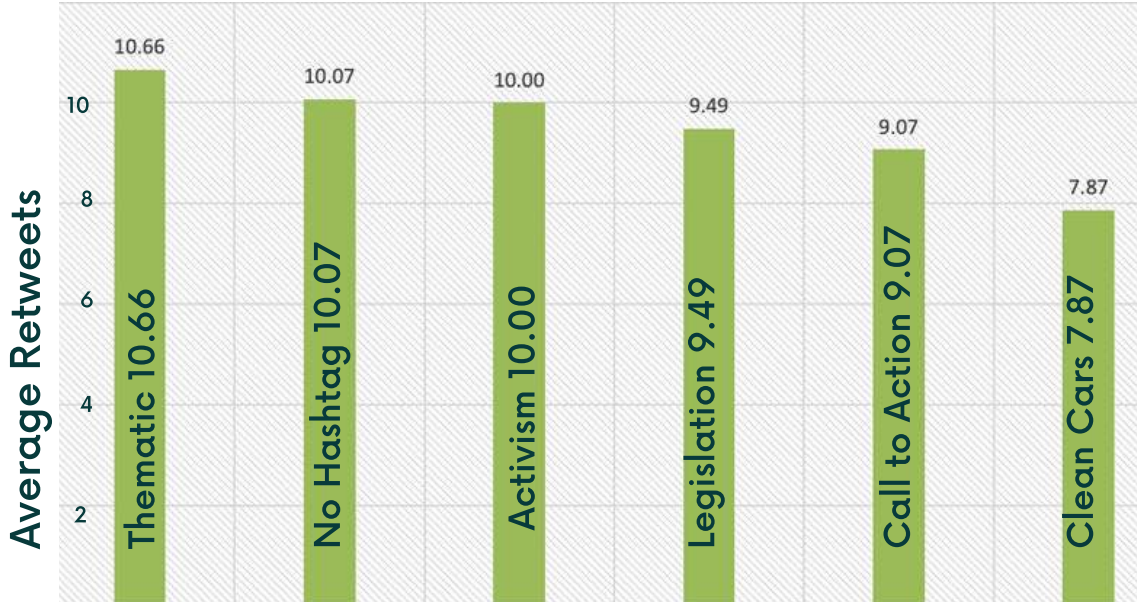
Over 1/3 of Sierra Club's tweets analyzed were Current Events. Nearly all text themes are retweeted at relatively similar rates, but Current Event tweets should receive more engagement since they are frequently posted.

Call to action posts are engaged with the most. These tweets demand followers to take actions such as - contacting politicians, attending events, sharing links, or donating.



Hashtag Type

Average Retweets per Hashtag Type



Hashtag Type

Of the 188 posts that do have hashtags, about half of them (n=90) are related to legislation specifically #BuildBackBetter. However, legislation hashtags are only receiving an average 9.49 retweets. Thematic hashtags receive the highest amount of retweets (10.66), likely because they span a large range of general hashtag themes such as #sustainability or #transit.

Category	Total Number of Posts (n)
Thematic	29
No hashtag	112
Activism	8
Legislation	90
Call to Action	29
Clean cars	30
Other	2
Total	300

Image Content

Average Retweets per Image Type

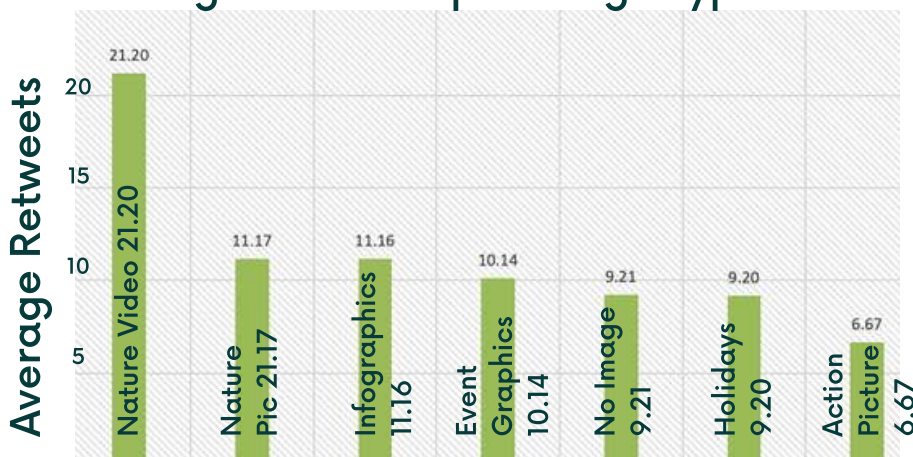


Image Content

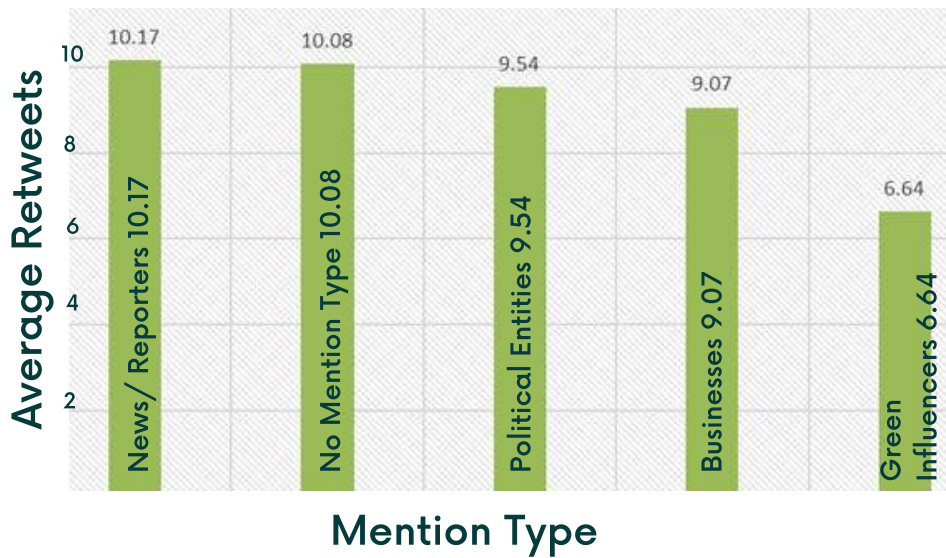
Only 20% of the Sierra Club's Tweets included an image. The political image category was left off the graph since it did not capture 15% of the data. Nature videos and pictures attracted the most engagement.

Category	Number of posts
Political	1
Nature video	5
Nature picture	6
Infographics	25
Event graphics	7
No image	242
Holidays	5
Action picture	6
Other	3
Total	300



Mention Type

Average Retweets per Mention Type

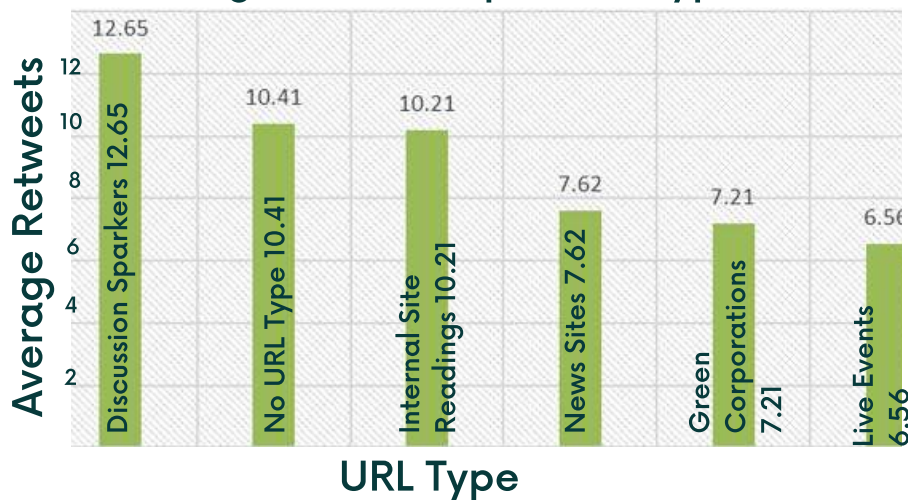


Category	Number of Posts
News/ Reporters	22
No Mention Type	157
Political Entities	74
Businesses	26
Green Influencers	20
Other	1
Total	300

The Sierra Club utilizes mentions in 48% of their posts. Of the tweets containing mentions, those that mentioned reporters/news sites got the most retweets (10.17 on average). This figure is very comparable to tweets not containing mentions, which received 10.08 retweets on average.

URL Type

Average Retweets per URL Type



Category	Number of Posts
Discussion Sparkers	20
No URL Type	68
Internal Site Readings	124
News Sites	58
Green Corporations	14
Live Events	9
Donations	3
Other	4
Total	300

The Sierra Club uses URL mentions in 88% of their tweets. Not shown in the graph is a Donations category because this category did not contain 15% of the dataset. However, two categories - Green Corporations and Live Events - did not reach 15% but are still included. This was done because of the high amount of posts not containing URLs. These categories were significantly close to the threshold amount.





**EARNED
ORGANIZATION
DATASET**

DATA DESCRIPTION

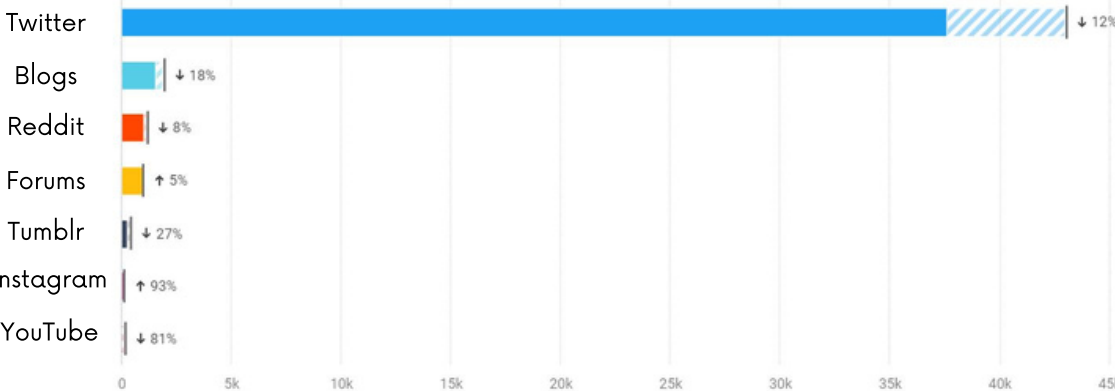
Time period: October 1st, 2021 - January 31st, 2022

Total mentions: 43.78 k

Unique authors: 19.98k

Trending Topics: Mountain Valley pipeline, #BuildBackBetter Act, Wall Street

Total Mention Volume by Platform



As shown in the graph above, most of the conversations about the Sierra Club take place on Twitter (37.5k)

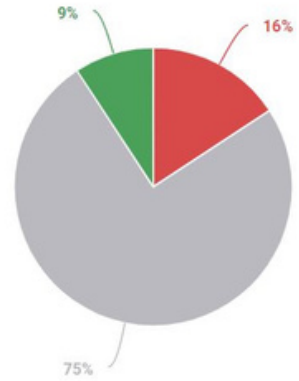
Gender Breakdown



Sentiment Breakdown

Negative: 16%; 6,000 posts
Positive: 9%; 3,500 posts
Neutral: 75%; 31,000 posts

3/4 of the conversations about the Sierra Club are neutral in tone.



There are almost twice as many negative conversations about the Sierra Club as positive conversations.

Comparing Topics by Author's Gender



As shown in the graph above, most of the conversations about the Sierra Club with only female authors are about animals and people. On the other hand, males tend to be the only people discussing opposition to nuclear energy and natural gas.

Demographics:

- Top Interest: Politics (16%), Environment (12%), Family & Parenting (11%), Books (8%)
- Top Professions: Artists (19%), Executive (18%), Teacher & Lecturer (14%), Journalist (12%)
- Top Countries: USA (81%), Canada (7%), UK (3%), Australia (1%)



Top URLs:

- [Build Back Better Act Factsheet](#) - this PDF was created by the Sierra Club. It's about the specific attributes of the Build Back Better Plan. The Sierra Club commonly posts this (Volume = 376).
- [Tri-State Livestock News Article](#) - this article is about the Sierra Club calling for an end to livestock grazing on wild horse range (Volume = 341)
- [Petition](#) - to the Sierra Club from Generation Atomic asking the Sierra Club to rethink its position towards nuclear energy (Volume = 305)

Top Shared:

- [Sierra Club's website](#) (Volume = 6771)
- [Sierra Club's donation page](#) (Volume = 712)
- [Petition](#) - to the Sierra Club from Generation Atomic asking the Sierra Club to rethink its position towards nuclear energy (Volume = 305)

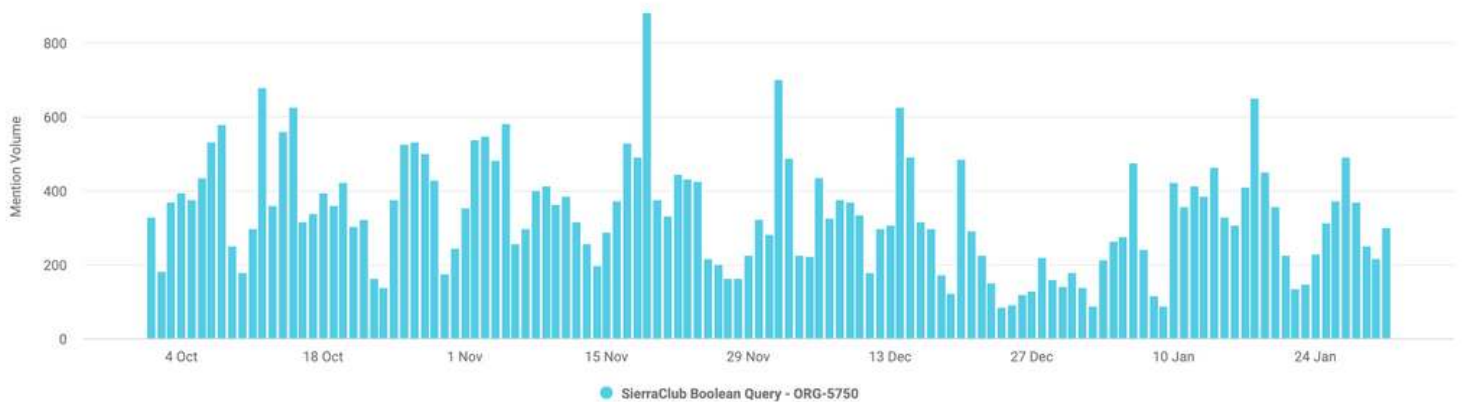
Top Hashtags:

- #Buildbackbetter: Tweets (171), Retweets (2,253), Impressions (26,290,179)
- #Buildbackbetteract: Tweets (63), Retweets (1,644), Impressions (15,396,280)
- #Cop26: Tweets (129), Retweets (535), Impressions (11,396,959) - COP26 was the 2021 UN climate change conference

Top Retweeted:

- @potus: Tweets (288); Retweets (1,043); Impressions (11,985,614)
- @ramoncruzdiaz: Tweets (188); Retweets (669); Impressions (15,762,984) - The Sierra Club's current president
- @nrdc: Tweets (194); Retweets (604); Impressions (5,943,185) - this is the Natural Resources Defense Council's Twitter account

SPIKE ANALYSIS



Spike #1: October 12th, 2021

Total mentions: 725

Trending topics: Clean energy, Respectfully request, Army corps

Increased tweets caused by more than 100 Indigenous leaders and supporters who delivered 1 million petitions to the Biden Administration to stop the expansion of Line 3 Tar Sands Pipeline pending a full environmental review.

Spike #2: November 19th, 2021

Mentions: 930

Volume was 168% higher than usual. This was caused by The House of Representatives passing the Build Back Better Act and many Tweets calling out specific politicians.

Spike #3: December 2nd, 2021

Mentions: 781

Trending topics: Mountain Valley Pipeline, Build Back Better again

increased tweets caused by the State Air Pollution Control Board voting on the proposed construction of the Lambert Compressor Station. This station would be located near Chatham, in Pittsylvania County

Spike #4: January 18th, 2022

Mentions: 689

Trending topics: Freedom to Vote Act, MLK, Brown women

Increased tweets caused by the Freedom to Vote Act being approved by the House. This Act faces an uphill battle in the Senate.



Top Positive Post



ClimateWest (WildEarth Guardians' Climate and Energy Program) @ClimateWest 31 Jan
RT @JeremyJNichols1 Awesome to partner with @CenterForBioDiv, @SierraClub, @HCCACB in securing this agreement, defending clean air in #Colorado from dirty #coal!
Retweets: 0 Replies: 0 Impressions: 9255

Top Negative Post



hestia-x - **tumblr.com** (Tumblr) 31 Jan
"...representing Hawaii **Sierra Club**. "It's unfortunate that the military persists in thinking that it knows what is best to protect O'ahu's irreplaceable water supply, when recent events vividly illustrate that the military cannot be trusted to protect public health." /end] unfortunately, there is no call to action yet, though i will update as soon as..."



OVERALL CONVERSATIONS

The conversations in the dataset are mainly about: climate action, the Build Back Better Act, Fossil Fuels, and Climate Crisis. Tweets includes themes such as nonprofits, communities, and policies. Trending topics include the Mountain Valley Pipeline, Wall Street, and #BuildBackBetterAct.

POSITIVE CONVERSATIONS

The positive conversations are mainly thanking the Sierra Club and different policy-makers for their hard work in combating climate change. There are also several posts congratulating Congressional Democrats and other policy-makers and organizations when steps are taken to help with the climate crisis.

NEGATIVE CONVERSATIONS

The negative conversations are mainly surrounding the fracked Mountain Valley Pipeline, as well as the killing of 20% of the Yellowstone population, and the increasing concern and fear regarding the climate crisis.

KEY INFLUENTIAL USERS



- @ZorkaMilin: Senior advisor for Global Witness. Believes in fighting fossil fuels, greenwashing, and corruption. Followers = 4,590; Reach = 16,800



- Climate West: Central hub for West Coast climate services. Important for planning and decision making.





**EARNED
TOPIC
DATASET**

BUILD BACK BETTER

5,154 Total mentions out of 43,786 Tweets (11.771%)

The conversation surrounding this theme is about passing the Build Back Better Act in the Senate. There are also conversations surrounding environmental justice and the benefits from this act that will impact communities across the country such as clean energy and an increase in jobs. Out of these conversations, 10% of them are positive, 4% are negative, and 86% are neutral.

POSITIVE CONVERSATIONS

The positive conversations are thanking the Sierra Club for their historic investments in climate in regards to the Build Back Better Act. There is also a strong sense of encouragement in which people are talking about taking this act to the finish line and getting it officially passed.

NEGATIVE CONVERSATIONS

The negative conversations are mainly calling out the Senate for not acting quickly, and the fact that we have no time to waste in this climate crisis.

Top Positive Post



Top Negative Post



BUILD BACK BETTER

TOP UNIQUE MENTIONS

@repcori: 4 tweets; 266 retweets - US Representative for Missouri's first congressional district, this includes St. Louis.

@reprashida: 4 tweets; 266 retweets - first Muslim women to serve in Michigan's legislature. District includes Detroit.

TOP UNIQUE HASHTAGS

#noclimatenodeal: 10 tweets; 274 retweets - pro Build Back Better Act slogan

#buildbackfossilfree: 8 tweets; 195 - slogan coming from people questioning the BBBA. Says that Biden should focus on building fossil free instead of just better.

TOP UNIQUE SOURCES

- [The Hill](#) - Green group pressuring Dem Sen. Sinema on climate agenda [Volume: 195]
- [Earth Justice](#) - Petition to Senate to sign Build Back Better [Volume: 72]
- [MSN](#) - Rockefeller message for Sen. Joe Manchin [Volume: 51]

UNIQUE INFLUENTIAL USERS



@USRepKCastor- 24.7K followers, Reach: 52.4K, 1 post
This user is a Tampa congresswoman and the Chair for the Climate Crisis House committee.



@rcp_1964- 21.6K followers, Reach: 24.5K, 1 post
This user is a U.S. citizen who is an advocate for liberal policy

GENDER BREAKDOWN:



51%



49%



CLIMATE CHANGE

10,573 Mentions out of 43,786 Tweets (24.146%)

13% of tweets regarding this topic are negative, 6% are positive, and 81% are neutral. Most of the posts surrounding this theme are related to fossil fuels, environmental justice, the Build Back Better Act, and the Biden Administration's responsibilities concerning climate justice.

POSITIVE CONVERSATIONS

The positive conversations are about combating climate change and taking actions to prevent it. Rather than focusing on the determinants that climate change causes, these tweets focus on how we can combat this pressing issue and make a real difference.

NEGATIVE CONVERSATIONS

The negative conversations regarding climate change are often referring to it as a hoax which is a common misconception due to the spread of misinformation.

Top Positive Post



Clay Jenkins
@JudgeClayJ

We have a responsibility to protect our planet so we can pass it on to our kids and grandkids. I'm proud to be endorsed by the Sierra Club and will keep working to protect our environment and combat climate change.



7:32 PM · Jan 19, 2022 · Twitter Web App

32 Retweets 2 Quote Tweets 388 Likes

Top Negative Post



THEREMNANT(Liz)
@1Apocalypse777

Conservatives don't be fooled by Elon Musks recent battle with Pocahontas. He's no friend to conservatives. He's a longtime advocate of climate change hoax donating millions to the Sierra club while jet setting on private jets along with the elites. americanthinker.com/articles/2021/...

3:25 PM · Dec 28, 2021

106 Reply Share this Tweet

Read 12 replies



CLIMATE CHANGE

TOP UNIQUE MENTIONS

@ramoncruzdiaz: 30 tweets; 191 retweets - current President of the Sierra Club

@epa: 19 tweets; 163 retweets - this is the US' Environmental Protection Agency

TOP UNIQUE HASHTAGS

#climatecrisis: 44 tweets; 286 retweets

#climate: 73 tweets; 232 retweets

TOP UNIQUE SOURCES

- [Report](#) - by the Sierra Club and focuses on Forest Services [volume: 122]
- [Sierra Club's website](#) - information about positive affects of old growth forests [volume: 108]
- [Bloomberg Article](#) - focuses on Build Back Better Plan's positive attributes in terms of climate change reduction [volume: 106]

UNIQUE INFLUENTIAL USERS



@FightFossils- 18.6K followers, Reach: 53.3K, 1 post
People vs. Climate is an organization that fights at the forefront of the climate movement.



@MarkRuffalo- 7.9M followers, Reach: 95.2K, 1 post
This user is a famous actor who uses his platform to advocate for climate justice.



@SenWarren- 7M followers, Reach: 91.3K, 1 post
This user is a famous liberal Senator who gained attention after running for president in 2020.

GENDER BREAKDOWN:



CLEAN CARS

2825 total mentions out of 43,786 tweets (7.036%)

The conversation primarily involves updates on clean car news and consequent discussions about the current political and social climate. One of the more engaged-with conversations regarding clean cars involves brand callouts. Sierra Club will frequently mention brands like Toyota and hold them accountable for lobbying and greenwashing. Calling out these brands instigates lots of negative discussion from followers. Out of these conversations, only 3% of them are positive, 12% are negative, and 85% are neutral.

POSITIVE CONVERSATIONS

The positive conversations surrounding clean cars typically consist of congratulatory announcement posts for events, speakers, or legislation that have been pushing the clean car agenda forward. Tweeters tend to specifically mention representatives or organizations by name in discussing the positive changes they have enacted.

NEGATIVE CONVERSATIONS

The negative conversations about clean cars tend to focus on complaints about inaction from legislators or big brands, but they are generally in support of Sierra Club. A smaller amount of negative tweets do critique Sierra Club inaction and blindness to environmental concerns.

Top Positive Post



Top Negative Post



CLEAN CARS

TOP UNIQUE MENTIONS

@katherinejulia: 127 Tweets; 123 Retweets

@toyota: 103 Tweets; 99 Retweets - most of these conversations center on Toyota's high carbon emissions.

@nrdc: 114 Tweets; 106 Retweets - this is the National Resource Defense Council. An environmental advocacy nonprofit.

TOP UNIQUE HASHTAGS

#cleanercars: 303 Tweets; 293 Retweets

#electrictruckisnow: 163 Tweets; 162 Retweets - these conversations center on Ford and Chevy's new electric truck models.

#ev: 35 Tweets; 27 Retweets - shorthand for electric vehicle

TOP UNIQUE SOURCES

- [Petition](#) from the Sierra Club to the public for cleaner car commitments [volume: 95]
- [The Hill article](#) about Toyota's affect on pollution. Argues that Toyota has not lived up to its promises. [volume: 57]

UNIQUE INFLUENTIAL USERS



@samstein- 509.6K followers, Reach: 46.3K, 1 post

This user is a Politico/MSNBC reporter who updates with news



@foe_us - 226.5K followers, Reach: 22.5K, 1 post

The Friends of the Earth group advocates for environmental policy



@bader_diedrich - 159.6K followers, Reach: 19K, 1 post

This user is a famous American actor who calls out groups and brands

GENDER BREAKDOWN:



45%



55%



GOVERNMENT

4609 total mentions out of 43,786 tweets (10.526%)

The conversation about the government theme can be grouped into three main topics: Senate to pass Build Back Better Act, communities across the country, and clean water. 82% of these conversations are neutral in sentiment. 11% are negative, 7% positive.

POSITIVE CONVERSATIONS

The positive conversations under this theme are mostly thanking politicians and/or the Sierra Club for advocating for the Build Back Better Act and climate action. Examples include @JackieOstfeld thanking the Sierra Club for their written content about the Build Back Better Act and @Cleanairmoms thanking the Sierra Club for educating their followers about climate action.

NEGATIVE CONVERSATIONS

The negative conversations under this theme are mostly calling out states, corporations, and politicians who rely on fossil fuels. Other common negative conversations are about: climate injustice, greenhouse gasses, and lack of investment in clean energy.

Top Positive Post



Dwight Evans
@DwightEvansPA



The @SierraClub has officially endorsed our campaign! I'm thankful for their support + remain committed to securing clean water and open spaces for every American. I'll keep fighting for the THRIVE Act in Congress to advance environmental and racial justice. @SierraClubPA



3:03 PM · Dec 14, 2021



Top Negative Post



Ross Macfarlane
@ross_macfarlane



""@Toyota really sided with Donald Trump' when [he] began to aggressively roll back environmental regulations." And the company is still fighting #ClimateAction in Congress. @katherinejulia @SierraClub #GoNowhere #StuckInReverse

Sierra Club @SierraClub

"After more than two decades of leaning on the once game-changing hybrid engine technology, [Toyota] is now clinging to its fading environmental achievements."

'They are not a leader in sustainability' - @katherinejulia

#GoNowhere
shingetsunewsagency.com/2021/11/14/toy...

10:23 AM · Nov 16, 2021



GOVERNMENT

TOP UNIQUE MENTIONS

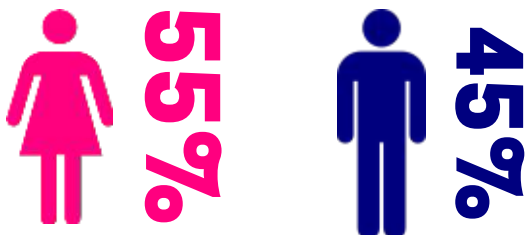
@potus: 1,330 Tweets; 1042 Retweets

@whitehouse: 7 Tweets; 134 Retweets

TOP UNIQUE SOURCES

- [Sierra Club's donation page](#). Calls for donations to help support the Build Back Better Act
- [New York Times article](#) featuring the Build Back Better Act's progress in the House
- [Press release](#) by the Sierra Club about the Build Back Better Act

GENDER BREAKDOWN:



TOP UNIQUE HASHTAGS

#sealthedeal: 40 Tweets; 250 Retweets - UN campaign slogan calling for fair, balanced, and effective international climate agreement

#noclimatenodeal: 15 Tweets; 204 Retweets - pro Build Back Better Act slogan

UNIQUE INFLUENTIAL USERS



@MoveOn: 380,042 followers, 2 Tweets, Average Reach = 40,413 users. Progressive public policy advocacy group which primarily helps members elect candidates who share and reflect their values.



@RepJayapal: 601,109 followers, 2 Tweets, Average Reach = 34,671 users. Representing Washington's 7th congressional district. Began political career building the largest immigrant rights organization in Washington state, and she has continued to speak out against environmental injustices and climate change. Advocates for build back better act.





**EARNED
ORGANIZATION
GENDER
ANALYSIS**

FEMALE



Number of posts: 18.7 k

Breakdown by sentiment: 8% positive, 12% negative, and 80% neutral

Demographics:

- Top Interests: Family & Parenting (32%), Politics (16%), Environment (8%)
- Top Professions: Teacher & Lecturer (27%), Artist (14%), Executive (10%)
- Top countries: USA (88%), Canada (7%), and UK (1%)

Top Unique Hashtags:

- #climate 4 Tweets, 33 Retweets, 150,268 Impressions;
- #nopesticides 1 Tweet, 87 Retweets, 189,232 Impressions - refers to pesticide application on farms/ranges affecting wild horse health.

Top unique Mentions: @sierraclub 34 Tweets, 136 Retweets, 7,663,045 Impressions; @potus 2 Tweets, 38 Retweets, 100,712 Impressions; @ramoncruzdiaz 1 Tweet, 22 Retweets, 63,089 Impressions

Top unique URLs:

- The Sierra Club's Build Back Better [fact sheet](#) [volume:]
- [Polling information](#) by the Sierra Club. Shows that voters in Arizona want a robust 3.5 trillion dollar reconciliation bill [volume:]
- Sierra Club's [RSVP form](#) for an anti-white supremacy meeting [volume:]

Conversations are about...

The conversation among females can be grouped into five main topics: climate action, build back better act, climate crisis, climate change, and fossil fuels. Topics pertaining to climate impact, the fossil fuel industry, and environmental injustices are currently trending.

The conversation is mostly neutral (80%), with 12% being negative and 8% being positive. Most of these conversations are happening within the USA (88%).

Positive & Negative Conversations are about...

The positive conversations are mostly thanking politicians and the Sierra Club for advocating for climate change. An example of this is the Sierra Club tweeting a thanks to Representative Pramila Jayapal for her support of the Build Back Better Act.

Negative conversations are mostly about politicians and businesses who support and/or fund fossil fuels. Negative conversations also tend to point out environmental harm caused by greenhouse gas emissions and environmental injustices.

Key Influential Users...

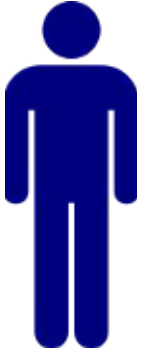
@zipillinois - Twitter influencer who tweets about climate change, climate action, environmental injustices, and social issues. Commonly retweets the Sierra Club. 3,226 Followers. Reach = 2,083 users. Big following in Illinois - important bc pipelines.



@ZaffranRiver - Twitter Influencer who self identifies as a "Earth Defender." Commonly tweets about climate change, ecosystem services, and climate action.



MALE



Number of posts: 22.4

Breakdown by sentiment: 17% negative, 7% positive, 76% neutral

Demographics:

- Top interests: Family and Parenting (28%), Politics (13%), Books (7%), Environment (7%)
- Top Professions: Executive (18%), Artist (16%), Teacher/Lecturer(15%), Scientist & Researcher (14%)
- Top countries: USA (87%), Canada (8%), UK (2%), Australia (1%)

Top Unique Hashtags: #climatecrisis 1 Tweets, 13 Retweets; #nonuclears 3 Tweets, 52 Retweets - conversations with this hashtag tend to oppose nuclear energy due to health risks and the lack of long term storage. Tweets commonly site nuclear disasters.

Top Unique Mentions: @senatorsinema 0 Tweets, 16 Retweets; @potus 0 Tweets, 15 Retweets - Democratic senator in Arizona who opposed the Build Back Better plan in 2021. Thinks corporation taxes should not be increased.

Top Unique URLs:

- Sierra Club's [information](#) about how old growth forests can mitigate climate change
- [Article](#) by The Hill. Tells how a green group in Arizona is pressuring Senator Sinema to lay out climate agenda.
- [Noahpinion](#) is a blog that commonly writes about climate change and climate policies. This post is on top environmental groups "loosing the plot" of climate change.

Conversations are about...

The conversation can be broken down into five main topics: Climate Action, Climate Crisis, Climate Change, Clean Energy, and the Build Back Better Act. Topics such as the fight against climate change, fracked gas exports, and Gulf Coast communities are trending.

The conversation is mostly neutral in tone (76%), with 17% of the conversation being negative and 7% of the conversation being positive. Most of the conversation is happening in the USA (87%).

Positive & Negative Conversations are about...

Positive conversations are mostly thanking the Sierra Club, corporations, and politicians for supporting cleaner air and water. An example is @doriannpalmer tweeting a thank you to the Sierra Club for "consistently changing the world." Other positive conversations highlight specific scenarios that help the planet. For example, @selc_org tweeted about a "big win" against the Mountain Valley Pipeline in Virginia.

Negative conversations are mostly directed towards politicians and businesses who do not support a greener economy. An example is @prairieerik tweeting about a local politician stepping in to stop wind energy taking over the Coal Creek Station in North Dakota. There are also some negative conversations about the Sierra Club. For example, @atomicrod tweets that the Sierra Club is no longer a protector of nature. She claims the Sierra Club is more concerned with signing land over to corporate wind and solar developers.

Key Influential Users...

@DarrenSoto - Florida Congressmen who identifies as an environmentalist. He got reelected running on a campaign that said he was the "greenest member of the Florida Delegation." Already has ties to the Sierra Club. 6,719 followers on Twitter.



Allan Margolin - Director of Margolin Communications. Creator and curator of @ClimateHotNews, one of Twitter's top 150 feeds on climate and energy. 34.6k followers.





EARNED COMPETITION DATASET

(Earth Justice, Sky Islands, Center for
Biological Diversity)

COMPETITORS



EarthJustice is a nonprofit public interest environmental law organization based out of San Francisco, CA

Twitter followers: 213.3K

Sky Island Alliance is a nonprofit based in Tuscon, AZ whose mission is to protect and restore the diversity of life and lands in the Sky Island regions of the U.S and Mexico

Twitter followers: 1,544

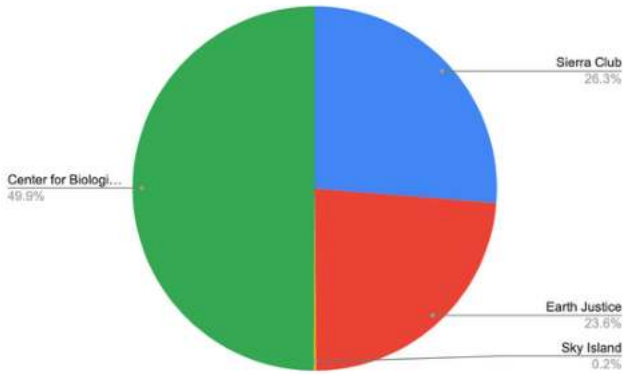


Center for Biological Diversity is a nonprofit based in Tuscon, AZ that focuses on preserving the lands, waters and climates that species need to survive.

Twitter followers: 132.2K



SHARE OF VOICE



Organization	Volume
Sierra Club	36,459; 26.3%
Earth Justice	32,799; 23.6%
Sky Islands Alliance	249; 0.2%
Center for Biological Diversity	69,319; 49.9%

Graph compares the amount of posts about the Sierra Club versus the amount of posts about the Sierra Club's comparable organizations.

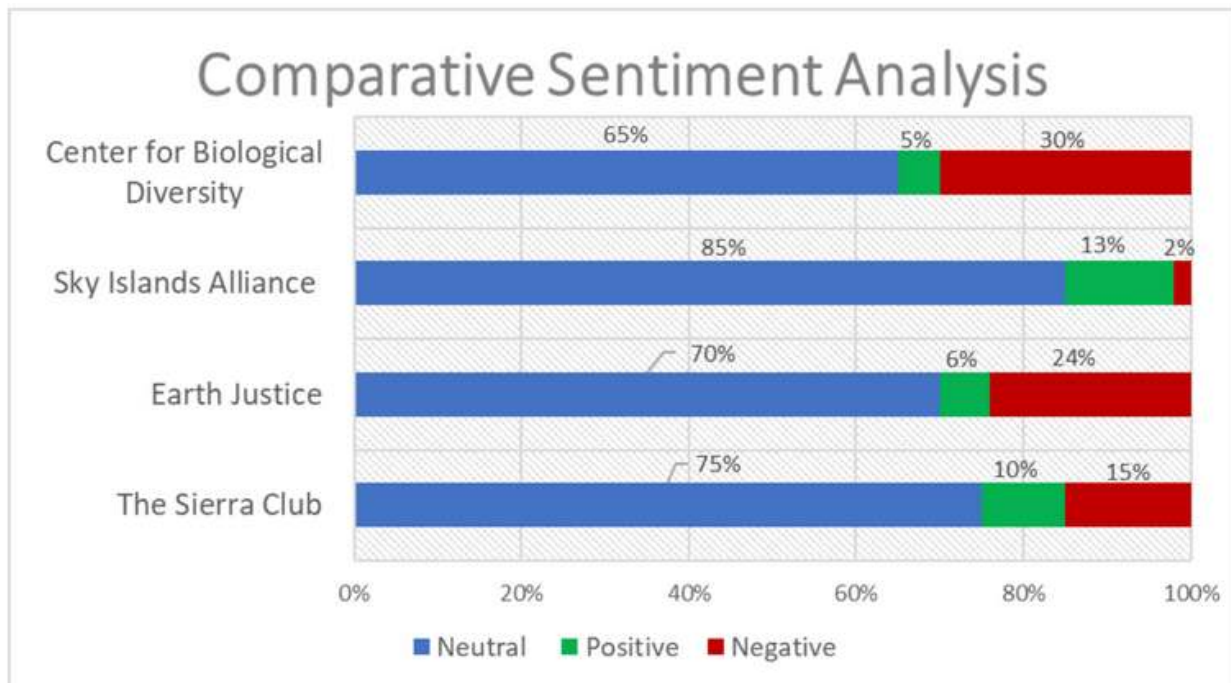
As shown, tweets about the Sierra Club make up a little more than a quarter of all the tweets analyzed.

The Sky Islands Alliance had the least tweets about it.

COMPARATIVE SENTIMENT ANALYSIS

Graph shows percentage of neutral, positive and negative conversations about the Sierra Club and their comparable organizations.

As shown, the Center for Bio Div has the most negative conversations about it while the Sky Islands Alliance has the least negative conversations about it.



SPIKE ANALYSIS

October 7th, 2021: Center for Biological Diversity - 2,244,910 impressions

Prof Michael E. Mann @MichaelEMann

Honored to be an original signatory of letter from more than 330 scientists to @POTUS @JoeBiden urging him to halt new fossil fuel projects & declare a climate emergency. Thanks @CenterForBioDiv, @foodandwater & fellow scientists 4 supporting this effort! foodandwaterwatch.org/wp-content/upl...

An Open Letter from U.S. Scientists Implores President Biden to End the Fossil Fuel Era

October 7, 2021

President Joseph R. Biden Jr.
1600 Pennsylvania Ave. N.W.
Washington, DC 20501

Dear President Biden,

As U.S. scientists, we write with the utmost alarm about the state of our climate system. An overwhelming evidence shows, the reality of our situation is now so dire that only a rapid phase-out of fossil fuel extraction and combustion can forestall the worst consequences of the climate crisis.

In this time of peril, we call on you to fulfill your campaign pledge to listen to science, take bold action to lead the nation back from the brink of runaway climate chaos, and lead the world to a rapid transition away from fossil fuels. We urge you to:

- **Completely stop federally authorized fossil fuel expansion** by halting new federal fossil fuel leasing, fracking, and drilling on public lands and waters; directing federal agencies to stop issuing permits for fossil fuel infrastructure projects from pipelines to petrochemical plants; and ending fossil fuel exports and subsidies;
- **Declare a climate emergency** to reinstate the decades-long ban on crude oil exports, direct a portion of military spending to a rapid construction program of renewable energy projects, and provide loan guarantees to advance a rapid, just transition of clean renewable energy;
- **Abandon industry delay tactics** including carbon capture and storage, blue hydrogen, and carbon offsets, that impede the rapid transition to renewable energy and allow the fossil fuel era to continue. These industry schemes are dangerous distractions.

2:58 PM · Oct 7, 2021 · Twitter Web App

354 Retweets 36 Quote Tweets 1,047 Likes

November 5th, 2021: Sierra Club - 529,665 impressions

Sierra Club @SierraClub

We cannot afford delay or obstruction on #BuildBackBetter when the stakes are so high. We have no time to waste. The choices House members make TODAY will shape the health of our communities and our planet for decades to come.

News

sierraclub.org
Sierra Club Urges House Members to Vote for Build Back Better Act TODAY
WASHINGTON, D.C. -- After months of negotiations, the House of Representatives will vote today on President Biden's transformational Build ...

12:30 PM · Nov 5, 2021 · Twitter Web App

23 Retweets 2 Quote Tweets 27 Likes

November 19th, 2021: Sierra Club

Sierra Club @SierraClub

The Sierra Club applauds House Democrats for passing @POTUS's transformational #BuildBackBetter Act — historic legislation that takes action on climate, jobs, and justice, and moves us toward our goal of cutting U.S. climate pollution in half by 2030.

News

sierraclub.org
Sierra Club Celebrates House Passage of Build Back Better Act
WASHINGTON, D.C. — The Sierra Club applauds House Democrats for passing President Biden's transformational Build Back Better Act — historic legislatio...

10:07 AM · Nov 19, 2021 · Twitter Web App

42 Retweets 5 Quote Tweets 66 Likes

January 23rd, 2022: Center for Biological Diversity

Center for Biological Diversity @CenterForBioDiv

The dead leaf butterfly (Kallima inachus) is a master of beauty and disguise. The species is found from India to tropical Asia and Japan.



156.7K views 0:03 / 0:20

10:03 AM · Jan 23, 2022 · CoSchedule

1,863 Retweets 199 Quote Tweets 8,566 Likes

GEOGRAPHY

Convos abt the Sierra Club

36,459 mentions; 26.3%

Convos abt Earth Justice

32,799 mentions; 23.6%

For the United States...

Convos abt Sky Island
249 mentions; 0.2%

Convos abt Center for Bio Div
69,319 mentions; 49.9%



APPENDIX FOR COMPETITION DATASET

Whole dataset search terms:

@SierraClub OR "Sierra Club" OR #SierraClub
OR @earthjustice OR "Earth justice" OR #Earthjustice
OR @Sky_Islands OR "Sky Islands Alliance" OR #SkyIslandsAlliance
OR "Center for Biological Diversity" OR @Centerforbiodiv OR
#Centerforbiodiv

Theme search terms:

Build Back Better - "Build Back Better" OR #BuildBackBetter OR
#BuildBackBetterAct OR "Build Back Better Act"

Clean cars - "Clean Cars" OR "Electric Vehicles" OR #CleanCars OR
#CleanerCars OR #EV OR #ElectricVehicle OR "vehicle" OR "cars"
OR "car" OR "vehicles" OR "trucks" OR "electric" OR "fuel-efficient"

Climate change - "climate change" OR "climate crisis" OR
#climatechange OR "climate" OR #ActonClimate

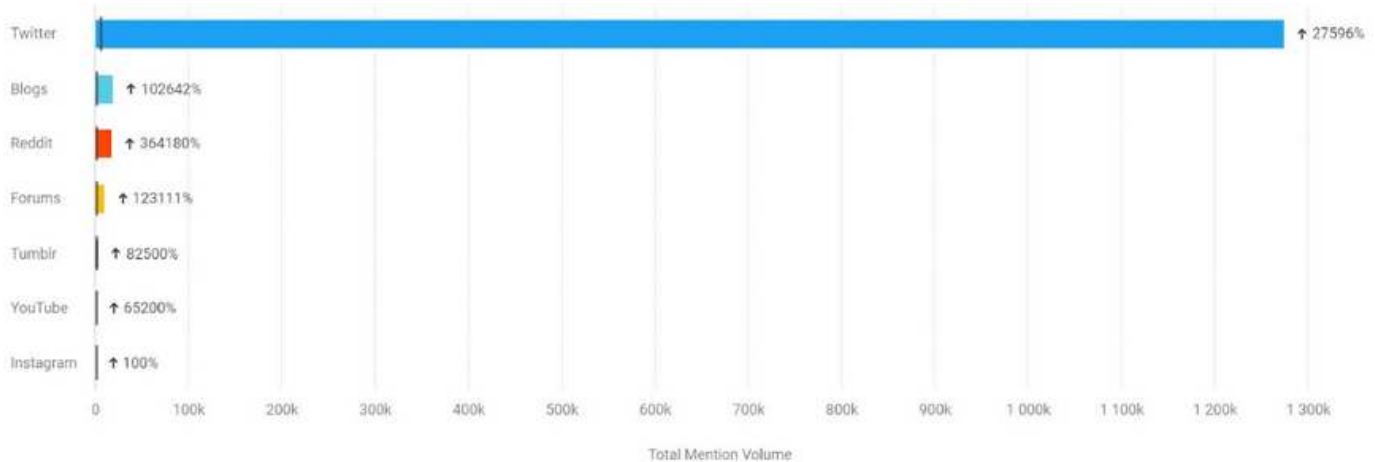
Government - #SealtheDeal OR "senate" OR @POTUS OR "Congress"
OR "Supreme Court"





THEME ANALYSIS USING AI

TOPIC DATASET



We analyzed over a million tweets that referred to the Build Back Better Act, a very popular topic amongst the Sierra Club and its followers. We determined engagement with this Twitter data using Retweets as our metric.

Twitter: 1,274,567 mentions (98%)

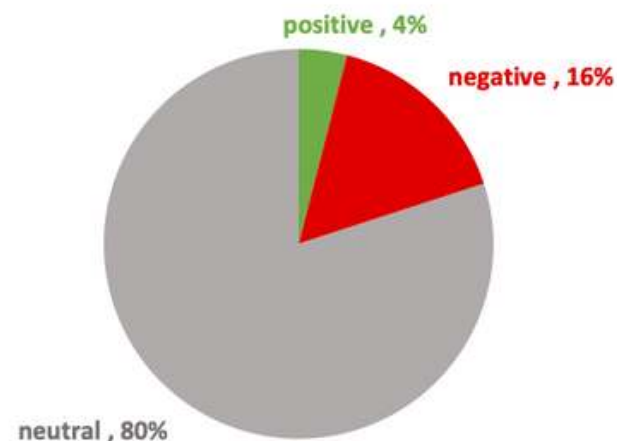
Blogs: 19,521 mentions (1%)

Reddit: 18,214 mentions (<1%)

**Because of disproportionately high Twitter presence, platform analysis will be done using Twitter only

DATA DESCRIPTION

- **Time period:** Oct 1, 2021 - Jan 31, 2022
- 1.33M Total mentions, 343.93K Unique authors
- **Platform:** 98% Twitter, 1% Reddit, ~1% Tumblr
- **Gender:** 47% Female (82,398 authors), 53% Male (92,004 authors)
- **Top Interests:** Politics (46,651; 18%), Family and Parenting (38,308; 15%), Books (22,467; 9%)
Animals and Pets (17,736; 7%)
- **Top Professions:** Artist (11,405; 19%), Executive (9,786; 17%), Teacher and Lecturer (8,978; 15%),
Scientist and Researcher (5,419; 9%)
- **Geography:** U.S. (79%), U.K. (6%), Canada (3%), India (1%)
- **Sentiment:** Out of 1,332,703 Tweets, 4% positive, 16% negative, 80% neutral



DATA DESCRIPTION

Top Topics:

- Child care, climate change, climate crisis, Health care, Build Back Better Act

Top Mentioned Tweeters:

- @potus (6,906 Tweets; 636,574 Retweets)
- @sen_joemanchin (8,415 Tweets; 22,950 Retweets)- Senator from West Virginia. Apart of the Democratic Party. Opposed the Build Back Better Act.
- @joebiden (Tweets 923; 13,599 Retweets)

Top Hashtags:

- #buildbackbetter (61,496 Tweets; 355,362 Retweets)
- #actonclimate (12,415 Tweets; 73,817 Retweets)
- #buildbackbetteract (18,091 Tweets; 43,132 Retweets)
- #climate (2,975 Tweets; 54,221 Retweets)

Top URLs:

- [Huff Post](#) - article about Joe Manchin privately telling colleagues that parents use child tax credit money on drugs
- [Moody's Analytics](#) - Macroeconomic Consequences of the Infrastructure Investment and Jobs Act & Build Back Better Framework PDF
- [Rolling Stone Magazine](#) - The Koch Empire Goes All Out to Sink Joe Biden's Agenda & Presidency

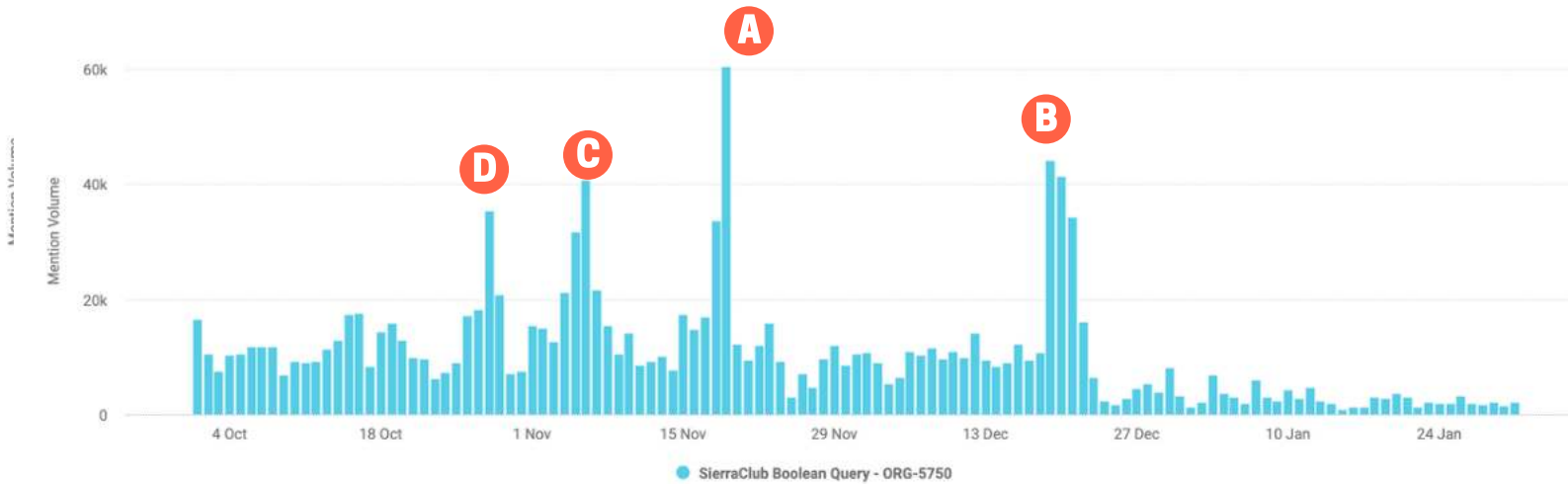
**VOLUME:
8,531 MENTIONS**

**VOLUME:
3,885 MENTIONS**

**VOLUME:
3,766 MENTIONS**



SPIKE ANALYSIS



A. Nov 19, 2021 - Mention volume: 60,940
House Democrats pass the Build Back Better bill

B. Dec 19, 2021 - Mention volume: 44,555
Build Back Better passing is demanded by many organizations like the United Mine Workers after coal incident

C. Nov 6, 2021 - Mention volume: 41,165
House Democrats pass the Bi-partisan Infrastructure Deal which allows Build Back Better to be passed

D. October 28, 2021 - Mention volume: 35,746
Joe Biden tweets about supporting Build Back Better



NARRATIVE BY SENTIMENT

- **Positive conversations** make up only **4%** of the data and generally speak specifically about climate change and the impact of clean jobs and resources. These conversations focus on highlighting historic investments that have been made towards fighting climate change, and express hopefulness for a brighter, cleaner future.
- **Negative conversations** make up **16%** of the data and speak a lot about the topic of healthcare, and tend to complain about how BBB seems like a waste of time. These conversations talk about how the Build Back Better Bill is expensive, and that money could be allocated to more "tangible things".

KEY INFLUENTIAL USERS



Don Winslow @donwinslow -
795.8K followers, 38K Reach, 1 post
Author and Democratic activist that participates heavily in environmental literature discourse



Marie Newman @RepMarieNewman
52.5K followers, 85K reach, 1 post
Democrat Congresswoman for Illinois who advocates for a stronger infrastructure and economy





GENDER ANALYSIS FOR THEMES USING AI

GENDER ANALYSIS: MALE

Number of posts: 44.58k mentions
Positive 5% Negative: 17% Neutral: 78%

The conversation among men is mostly about: The Build Back Better Act, child care, health care, climate change, and climate crisis. Compared to women, there seems to be more conversations about the political and economic side of issues. Trending topics among men include: Joe Manchin, West Virginia, and 48th in employment. Joe Manchin is a senator from West Virginia. He is a democrat who did not support the Build Back Better Plan. 48th in employment likely refers to the fact that West Virginia is currently rated 48/50 in employment, meaning they have a notably high unemployment rate. It is also notable here that a lot of the male conversations seem to come specifically from West Virginia.

POSITIVE CONVERSATIONS

The positive conversations among men are mostly highlighting positive aspects of the Build Back Better Plan. These include: increased job opportunities for people with no college degree, cleaner air, cleaner water, accessible health insurance, etc. These conversations are also thanking people, such as @repjaypal, and other nonprofits, such as the Sunrise Movement, for their environmental work.



NEGATIVE CONVERSATIONS

The negative conversations among men are mostly comparing the United State's investment costs in fossil fuels compared with the investment costs in fossil fuels. These men are upset about the slow transition to a greener economy, and they blame the government for not making the transition a priority. It is important to note that a considerable amount of negative Tweets seem to be rooted in misinformation.



MALE ANALYSIS

TOP UNIQUE MENTIONS

@speakerpelosi (Speaker of the House of Representatives since 2019. She is a Democrat aiming for business and health reform): 22 Tweets, 124 Retweets, and 1,144,297 Impression

@sunrisemvmt (nonprofit that advocates for political action on climate change): 3 Tweets, 229 Retweets, and 1,087,952 Impressions

TOP UNIQUE HASHTAGS

#climateemergency 34 Tweets, 802 Retweets, and 3,668,118 Impressions

#bbb 164 Tweets, 605 Retweets, and 4,855,434 Impressions - shorthand for Build Back Better Act

TOP UNIQUE SOURCES

- [The Guardian](#) - article about the "world wasted chance" in not passing the Build Back Better Act
- [Build Back Better Program on the White House's site](#)
- [Washington Post](#) - article about dollar cap insulin plan in the Build Back Better Act

KEY INFLUENTIAL USERS



@Politidope Matt Rogers - Although he is big in the athletic world due to his sports podcast, his Twitter is a page of politics. He commonly Tweets and Retweets about Democratic beliefs, always citing from notably good sources.
60.5k followers



@LDSAgency - Church of Christ group from Seattle, WA but they do work across the country. They commonly announce pro-environmental political/ nonprofit events.
37.9K follows



GENDER ANALYSIS:

FEMALE

Number of posts: 98.5k mentions
Positive 6% Negative: 15% Neutral: 79%

The conversations among females are mostly about: The Build Back Better Act, health care, child care, climate change, and the Build Back Better Agenda. In general, these conversations tend to highlight the social aspects of issues. For example, there seems to be an emphasis on prescription drugs affecting teens, tax cuts affecting working class families, and low income education and child care.

The trending topics among women include: Joe Manchin, coal miners, and West Virginia. The conversations among coal miners are also sparking from West Virginia. Most of their population moved to the state to work in the coal industry, and they are worried about what transitioning to greener energy will look like for their employment rates. Recently, there has also been a lot of discussion in West Virginia about the long-term health benefits of coal mining as well as the salary of local coal miners.

POSITIVE CONVERSATIONS

The positive conversions among women are mostly highlighting people and nonprofits who support the Build Back Better act, or more generally support a greener economy. These conversions tend to highlight positive aspects of the Build Back Better Plan, such as the increase of jobs and more affordable housing and health care.



NEGATIVE CONVERSATIONS

The negative conversations among women seem to highlight the urgency in acting now against climate change. These conversations also tend to mention people and corporations who do not support the Build Back Better Act.



FEMALE ANALYSIS

TOP UNIQUE MENTIONS

@vp 41 Tweets; 1,135 Retweets; and 5,204,466 Impressions - Kamala Harris's Twitter account.

@senatorsinema 135 Tweets; 294 Retweets; and 2,827,843 Impressions - Democratic Senator from Arizona. Did not vote to pass the Build Back Better Act.

TOP UNIQUE SOURCES

- [MS Magazine](#) - article about black maternal health and Build Back Better (need volume for these)
- [US climate policy by the Rhodium Group](#) - an independent research provider that combines economic data and policy insight to analyze global trends

TOP UNIQUE HASHTAGS

#sealthedeal 111 Tweets; 158 Retweets; 1,639,026 Impressions - UN campaign calling for a fair, balanced and effective international climate agreement

#noclimatenodeal 115 Tweets; 121 Retweets; 1,059,591 Impressions - slogan advocating for the Build Back Better Act

KEY INFLUENTIAL USERS



@dherisher - Democratic and femanist social media influencer. She has a pretty vast following across the US. She Tweets and Retweets a lot about political issues, but she focuses on the social implications. 92.8k followers



@kapeciarsists - social media influencer who Tweets and Retweets about the social implications of politics. She also stands out because she has a young audience, and she commonly speaks about how young people can use their voice to encourage change. 40.2k followers





THEME ANALYSIS FOR CATEGORIES USING AI

CUSTOM CLASSIFIERS

Custom classifiers are used to sort and describe sub-conversations in the dataset, like categories. We found our custom classifiers by pulling out common subjects from the mass of Tweets. We then created a virtual bucket for each subject/ category and threw appropriate posts into each of the buckets. Each post added into each bucket helped to train AI software that sorted the whole dataset. This was a trial and error process.

We defined and redefined our categories to include:
Infrastructure (12.18%),
Pass the Build Back Better Act (19.4%)
Healthcare (23.1%)
Employment (31.61%).

Our custom classifiers add up to be 86.29% of the whole dataset, giving us a good analysis of most of the conversations in the dataset.



INFRASTRUCTURE

Number of posts: 161.93K
Positive: 6% Negative: 17% Neutral: 77%

The conversations surrounding this topic are mainly about investing in infrastructure as a part of the Build Back Better act. The Infrastructure Investment and Jobs Act is also a large topic of conversation. This act is a large part of the Build Back Better Framework, and it calls for investment in energy-efficient infrastructure to help provide Americans with more jobs and clean water. Investing in infrastructure is discussed as an effort to combat climate change.

POSITIVE CONVERSATIONS

The positive conversations are discussing how investing in infrastructure and the Build Back Better act are historic investments towards a brighter future of our world. They also talk about how Build Back Better will be the best investment in the American people, and how if we all come together and fight against this climate crisis, we will be on a path to a brighter future for all.



NEGATIVE CONVERSATIONS

The negative conversations are mainly Republican vs. Democrat debates. The Democrats are criticizing the Republicans for voting against bold climate action included in the Build Back Better Act, and saying that this should not be a controversial issue because American children deserve unpolluted air, clean water, and a healthy planet. The Republicans are criticizing the bill for not acknowledging infrastructure enough, and for being too expensive and bad for the economy.



INFRASTRUCTURE

TOP UNIQUE MENTIONS

@sen_joemanchin 1,656 tweets; 2,775 retweets - Democratic Senator from West Virginia. Opposed the Build Back Better Act

@sencapito 522 tweets, 512 retweets - Junior Senator from West Virginia. She is a Republican.

TOP UNIQUE SOURCES

- [The Atlantic](#) - article saying that the Infrastructure Bill "wont cut it" in terms of the scale and magnitude of the climate crisis. Volume: 1,205
- [Politico](#) - Article about Chamber launching ads targeting Manchin & hoping to kill Build Back Better Plan. Volume: 1,014
- [Washington Monthly](#) - Article talking about "Bidens Boom" both in popularity and results. States that no one is talking about it. Volume: 923

TOP UNIQUE HASHTAGS

#climatecrisis: 1,169 tweets; 4,119 retweets

#demvoice1 55 tweets; 4,190 retweets - Democratic hashtag used to spark community engagement

KEY INFLUENTIAL USERS



@OurRevolution: Leftist advocacy group. 149,603 followers, 1 tweet
Reach: 51,072



@codepink: Women-led grassroots group. 100,071 followers, 1 tweet
Reach: 35,329



@sahilkapur: NBC Political news reporter. 192,734 followers, 1 tweet
Reach: 34,024

GENDER BREAKDOWN:



PASS THE BUILD BACK BETTER ACT

Number of posts: 258.03k
Negative: 17% Positive: 6% Neutral: 77%

Conversations in this category are mostly about the Build Back Better Act and the climate. Tweets focusing on the climate center on: climate crisis, climate action, climate change, and climate energy. Trending topics in this category include: Joe Manchin, passing #buildbackbetter, and supporting the Build Back Better Act. Joe Manchin is a senator from West Virginia. He is a Democrat. He supports healthcare reform and is currently fighting the opioid pandemic. However, he did not pass the Build Back Better Act.

POSITIVE CONVERSATIONS

The positive conversations in this category are mostly thanking representatives who prioritize the Build Back Better Plan. These conversations also tend to list the highlights of the Build Back Better deal - energy independence, cleaner air and water, tax reductions, health care reform, etc.



NEGATIVE CONVERSATIONS

The negative conversations in this category are mostly highlighting the urgency to pass the Build Back Better Act. These conversations also tend to bash people, companies, and political affiliations - such as Republicans - who do not support the Build Back Better Act.



PASS THE BUILD BACK BETTER ACT

TOP UNIQUE MENTIONS

@senschumer 885 Tweets; 1,790 Retweets; 12,107,108 Impressions - Senate Majority Leader in favor of climate action

@gretathunberg 52 Tweets; 2,247 Retweets; 9,940,440 Impressions - Climate and environmental activist

@climatechoiceorg 1,467 Tweets; 322 Retweets; 1629,625 Impressions - climate change nonprofit focusing on what individuals can do.

TOP UNIQUE HASHTAGS

#energy 307 Tweets; 27,478 Retweets; 115,445,571 Impressions

#nature 126 Tweets; 16,192 Retweets; 62,996,788 Impressions

#greennewdeal 565 Tweets; 16,130 Retweets; 66,644,629 Impressions - calls on the federal gov to drastically reduce GHGs, create well-paying, green jobs, etc.

TOP UNIQUE SOURCES

- The Guardian - article saying that not passing BBA during COVID19 was a 'world wasted chance'
- Go Time for Climate - petition site for climate action
- CNN - pentagon releases a climate change warning

KEY INFLUENTIAL USERS



@AlbertoEMachado: Environmental influencer and social justice advocate who supports BBB 8,336 Followers on Twitter



@4HumanUnity: Environmentalist and social justice advocacy group providing news resources 19.6 K followers on Twitter

GENDER BREAKDOWN:



HEALTHCARE

Number of posts: 307.1k
Negative: 11% Positive: 2% Neutral: 87%

The conversation under the Healthcare category is mostly centered on: prescription drugs, Americans, climate change, working families, and climate action. Less common conversations include those about child care, elderly care, and affordable healthcare. Trending topics in this category include: Joe Manchin, 17 Nobel, and inflationary pressures. 17 Nobel refers to 17 of the Nobel Memorial Prize recipients publicly supporting President Biden's Build Back Better Plan.

POSITIVE CONVERSATIONS

Positive conversations under the healthcare category are mainly calling for the Build Back Better plan to be passed. These conversations center on the healthcare benefits that would be provided - affordable insurance, accessible insulin, elderly care, and child care.



NEGATIVE CONVERSATIONS

Negative conversations under the healthcare category are mostly showcasing worry that the Build Back Plan will not pass. Many of these tweets mention specific people who are against the bill. Other negative conversations are about the failings of current healthcare infrastructure.



HEALTHCARE

TOP UNIQUE MENTIONS

@sensshero 30 Tweets; 3,375 Retweets; 11,421,038 Impressions - Chairman of Senate Banking Committee.

@kamalaharris 43 Tweets; 3,107 Retweets; 8,872,908 Impressions

TOP UNIQUE HASHTAGS

#momnibus 346 Tweets; 3,610 Retweets; 33,799,997 Impressions - nonprofit currently focused on healthcare equity.

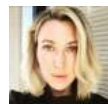
#veteransday 12 Tweets, 1,936 Retweets, 9,829,003 Impressions

#paytheirfairshare 1266 Tweets, 5,560 Retweets, 60,275,036 Impressions - hashtag questioning if the rich pay enough taxes.

TOP UNIQUE SOURCES

- [Axios](#) - article saying that BBBA will cause more inflation.
- [Build Back Better Framework on White House Website](#)
- [Popular Info](#) - pop-culture news site calling different politicians "bad apples"

KEY INFLUENTIAL USERS



@tystiklorius - founder and CEO of a community focused nonprofit that focuses on creating jobs and supporting children. Commonly tweets about social justice, environmental issues, and healthcare reform. 11k followers on Twitter.



@CitizenWonk - Twitter influencer who posts about environmental and social issues. Links a lot of reputable news sources. 28.2 K followers on Twitter.

GENDER BREAKDOWN:



51%



49%



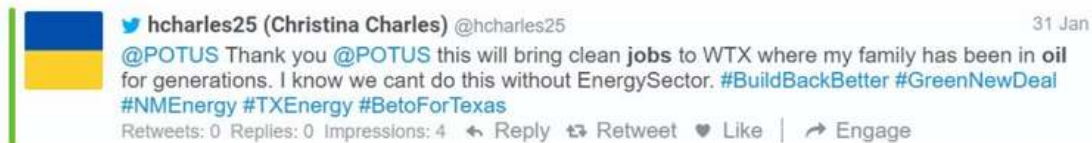
EMPLOYMENT

Number of posts: 420.1K
Positive: 13% Negative: 6% Neutral: 81%

Conversations under the employment category are mostly about: good-paying jobs, childcare, the Build Back Better Act, Joe Biden, and the Build Back Better Agenda. There are also a considerable amount of talks about unions. Trending topics include Joe Manchin, the coal miners union, and BBB protecting labor and employment. Joe Manchin supports the growth of jobs in West Virginia, and he seems to work a lot with the coal miners' union.

POSITIVE CONVERSATIONS

Positive conversations under the employment category mostly thank politicians and nonprofits for bringing jobs into an area. Many positive conversations also thank supporters of the Build Back Better Plan.



NEGATIVE CONVERSATIONS

Negative conversations under the employment category mostly discuss the downsides to the Build Back Better Plan not being passed. These conversations also tend to highlight the negative consequences of fossil fuels.



EMPLOYMENT

TOP UNIQUE MENTIONS

@housedemocrats 505 Tweets; 9,079 Retweets; 100,748,703 Impressions

@gopleader 81 Tweets; 5,256 Retweets; 23,041,967 Impressions - House Republican leader, Kevin McCarthy from CA.

TOP UNIQUE HASHTAGS

#voterizer 2,209 Tweets; 9,460 Retweets; 48,007,329 Impressions - Rizer is a Democrat running for the House

#demsbuildbackbetter 2,157 Tweets; 9,294 Retweets; 50,581,506 Impressions

#paytheirfairshare 1,266 Tweets, 5,560 Retweets, 60,275,036 Impressions

TOP UNIQUE SOURCES

- [RHG](#) - nonprofit news site talking about predicted and necessary climate policy for 2030
- [The Guardian](#) - article about Greta Thunberg's ideas for limited CO2 emissions
- [Reuters](#) - exclusive rating agencies say Biden's spending plans will not add to inflation

UNIQUE INFLUENTIAL USERS



@AlexEpstein - author, business owner, inspirational speaker, and influencer. Owns Center for Industrial Progress, a for-profit organization that researches and vouches for new energy processes. Commonly talks and writes about climate change, environmental issues, the pros and cons of fossil fuels, and transitioning into a greener economy **91.5k followers on Twitter**



@SEIU (Service Employees International Union) - Supports Biden and his Build Back Better Plan. Union represents over 2 million workers in the United States and Canada. **118K followers on Twitter**

GENDER BREAK DOWN



51%



49%



APPENDIX FOR THEME ANALYSIS USING AI

Whole dataset search terms:

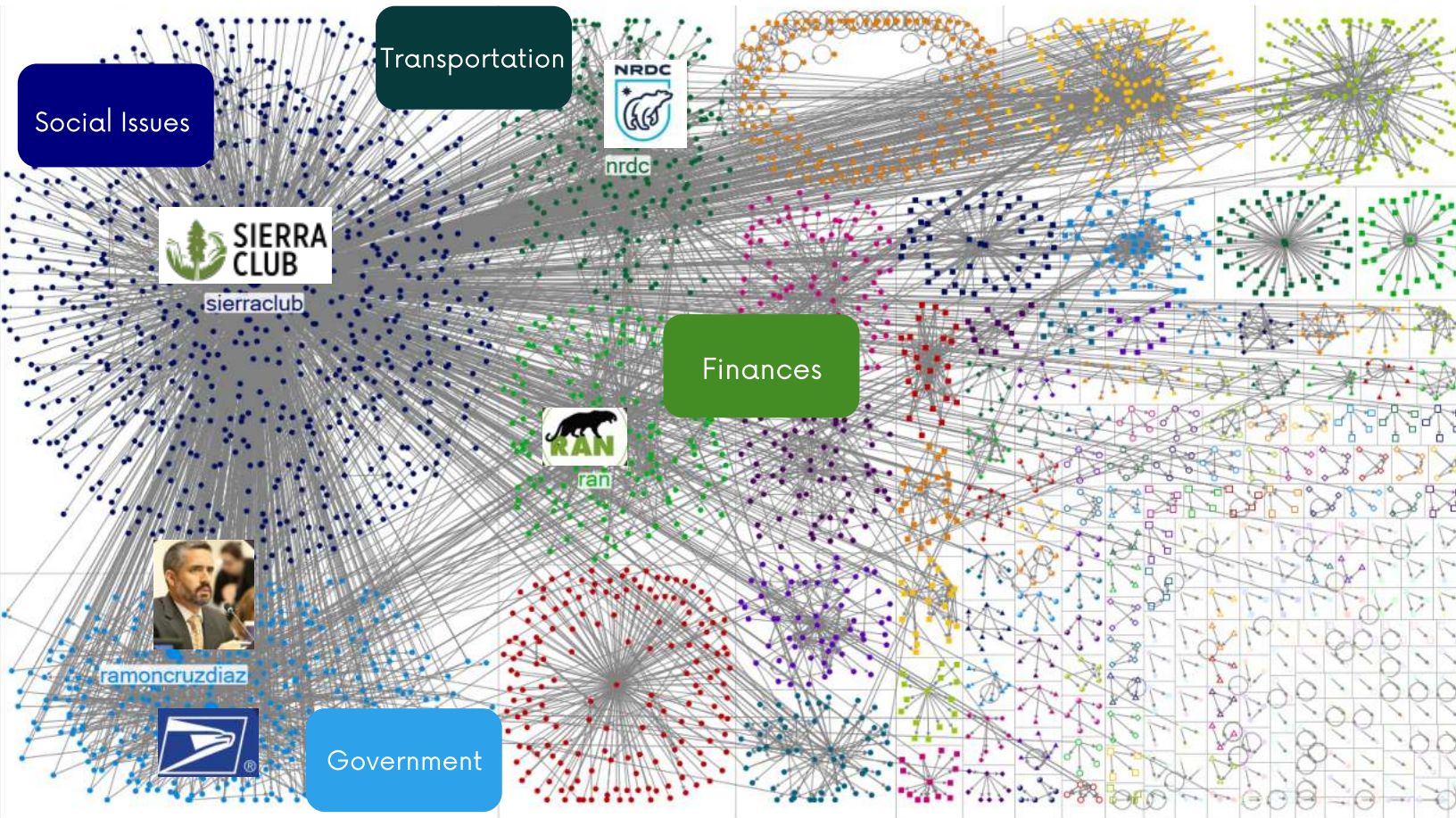
("Build Back Better" OR #BuildBackBetter OR #BuildBackBetterAct OR BuildBackBetterBill OR #BuildBackBetterBill OR BuildBackBetterProgram OR BuildBackBetterPlan OR BuildBackBetterAgenda OR BuildBackBetterFramework OR #BBB)

AND

(Environment OR Climate OR green OR greenwashing OR energy OR #climate OR #climatecrisis OR #climateemergency OR #energycrisis OR waste OR "fossil fuel" OR "fossil fuels" OR gas OR oil OR "environmentally friendly" OR nature OR #GreenNewDeal OR #Nature OR #Energy OR natural OR #natural OR #naturalresources OR #ActOnClimate OR "Act on climate" OR #solar OR #solarpower OR "solar power" OR "solar energy" OR renewables OR "renewable energy" OR #renewableenergy OR #greenenergy OR #SealTheDeal OR "clean water" OR #cleanenergy OR #cleanerenergy OR #cleanair OR #cleanerair OR "electric vehicles" OR #electricvehicles OR #ghgemissions OR "zero emissions" OR "greenhouse gas" OR "greenhouse gasses" OR #ghg OR electricity OR liveable OR health OR healthcare OR #health OR #healthcare OR ecosystem OR #ecosystem OR conservation OR "restoration" OR farm OR agriculture OR monoculture OR #monoculture OR #agriculture OR organic OR #organic OR #organicfarming OR #farmer OR "environmental injustice" OR #environmentalinjustice OR #alternativetransportation OR "alternative transportation" OR wages OR jobs)



SOCIAL NETWORK ANALYSIS FOR BUILD BACK BETTER TWITTER NETWORK



DATA DESCRIPTION

In this dataset, there are four main clusters that are closely connected in the network. These clusters are labeled as: social issues, government, transportation, and finances. The social issues cluster is the largest, followed by the government cluster which is very closely connected to the social issues cluster.

KEY METRICS (MEASURED IN VOLUME)

DENSITY: .00056
RECIPROCITY: .022379

Top words:

- Sierraclub - 1,374
- Club - 1,311
- Sierra - 1,298

Top URLs:

- The Sierra Club's [Twitter](#) [95]
- [Fight for Our Futures](#) - nonprofit dedicated to protecting and expanding the Internet's transformative power in our lives [55]
- [Adalah Justice Project](#) - a Palestinian advocacy organization based in the U.S. that aims to shift public discourse and policy in Palestine [54]

Top domain:

- Sierraclub.org - 464
- Twitter.com - 376
- Youtube.com - 73

Top hashtags:

- #Justicekbj - highlights America's 1st black women elected to highest court [88]
- #Fightforourfuture - Rally for climate, care, jobs, and justice [61]
- #Earthmonth - In April! [60]



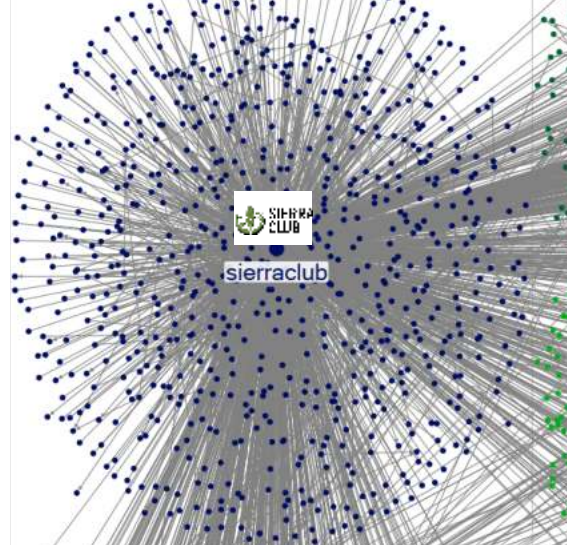
SOCIAL ISSUES (G1)

TOP WORDS

- Sierraclub - 648
- Greenwashing - 351
- Israel - 320

TOP URLS

- [Twitter](#) - Sierra Club's Twitter page [95]
- [Adalah Justice Project](#) - Palestinian advocacy organization [52]
- [Google forms](#) [49]



The conversations in this cluster are mainly focused around social issues and how environmental justice plays into these issues. There are lots of mentions surrounding justice for Palestine, both environmentally but also politically and economically. There is also discussion surrounding greenwashing in relation to social issues such as Apartheid, especially in developing nations.

TOP DOMAINS

- [Sierra Club's website](#) - 227
- [Sierra Club's Twitter](#) - 173
- [Palestinian advocacy organization's website](#) - 51

Density: .002

Reciprocity: .020

TOP HASHTAGS

- #Dontgreenwashapartheid - calling for an end to corporations greenwashing consumers [54]
- #Donoharm - environmental movement slogan, calling people to do no harm in nature. [48]
- #justicekbj - congratulating the first black women to be elected to the US's highest court [42]

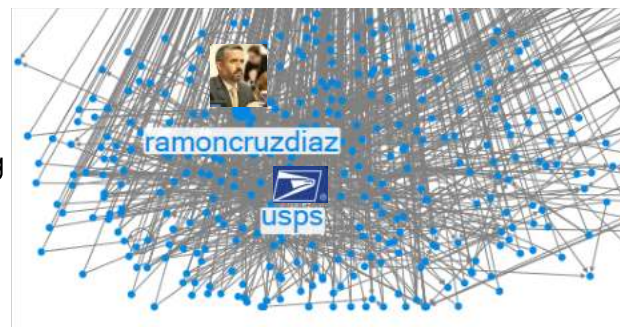
GOVERNMENT (G2)

TOP WORDS

- Sierraclub- 256
- Climate- 216
- Amp - stands for American Municipal power. They recently committed to going greener by investing in new tech [121]

TOP URLS

- [Twitter](#) - 26
- [Fight for Our Futures](#) - nonprofit dedicated to protecting and expanding the Internet's transformative power [25]
- [Sierra Club's](#) blog about ecocentrism [25]



The conversations in this cluster focus on governmental organizations. These conversations discuss how governmental organizations can play a role in climate justice. They also talk about justice for unions and saving the post office.

TOP DOMAINS

- Sierraclub.org - 113
- Twitter.com - 47
- Youtube.com - 35

Density: .006

Reciprocity: .003

TOP HASHTAGS

- #cleanertrucks - 41
- #unionstrong - 36
- #savethepostoffice - 36



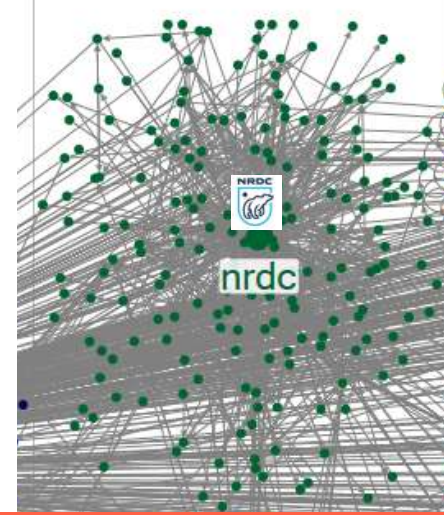
TRANSPORTATION (G3)

TOP WORDS

- Sierraclub - 103
- Environmental - 62
- Nrdc- National Resource and Defense Council 58

TOP URLS

- [Bikeshopgirlcom Twitter Page](#) - supports going green while also supporting female owned businesses [34]
- [LCV](#) - League of Conservation voters. Aiming now to 'stop big oil [9]
- [Delcapella Twitter Page](#) - 8



This cluster involves conversations surrounding more sustainable forms of transportation. The conversations mention users who advocate for green transportation such as Bike Shop Girl, Delcapella, and NRDC.

TOP DOMAINS

- Twitter.com - 51
- Lcv.org - 9
- Washingtonpost.com - 7

Density: .013

Reciprocity: .016

TOP HASHTAGS

- #climatecrisis - 15
- #climatechangemaker - hashtag pointed out people doing good things for the environment on big and small scales [13]
- #bigoilwindfall - profits tax that makes big oil companies pay more for oil imports. [7]

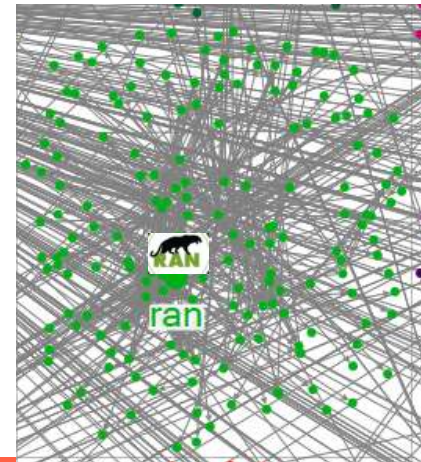
FINANCES (G4)

TOP WORDS

- Sierraclub - 51
- RAN - Rainforest Alliance Network. Aims to preserves forests, protect the climate, and uphold human rights by challenging corporate power and systemic injustice [31]
- Ienearth - female superhero [29]

TOP URLS

- [Banking on Climate Chaos](#) - climate campaign by the Rainforest Alliance Network. Aims to educate the public [11]
- [YouTube](#) - 5
- [Twitter](#) - POWHR coalition fighting for economic equality for all women [2]



This cluster's conversations discuss finances in relation to climate change. RAN is an organization that helps fight big banks and corporations on investing in unsustainable practices. Banking on Climate Chaos assesses bank financing for top companies in certain spotlight fossil fuel sectors

TOP DOMAINS

- [Bankingonclimatechaos.org](#) - 17
- [Twitter.com](#) - POWHR coalition fighting for economic equality for all women 9
- Sierraclub.org - 5

Density: .012

Reciprocity: .012

TOP HASHTAGS

- #bankingonclimatechaos - climate campaign by the Rainforest Alliance Network. Aims to educate the public [17]
- #fossilfuel - 11
- #stopmvp - Stop the Mountain Valley Pipeline [4]



**THANK
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