Fisherman Feedback: Gag Grouper
Response Summary
June 2026

The Gulf Council asked fishermen, divers, and other federal fishery stakeholders what they have noticed about gag grouper and gag fishing in recent years. Active fishermen are a rich source of information and may notice trends or phenomena that scientists and managers may not observe, also known as local knowledge. Local knowledge expands the types of information gathered by fisheries scientists and managers to gain a better, more contemporary understanding of what is happening on the water.

Comments were collected using the Fisherman Feedback web-based tool that was advertised via press release, social media, and on the Council's website. As a result, 365 unique responses were received between February 12, 2026 – March 13, 2026.

Respondents self-selected their association with the fishery (Figure 1). Respondents were not limited to a singular category, and some identified with more than one sector, resulting in a total of 410 responses. A majority of respondents (79%) identified with the private recreational fishing sector, followed by for-hire (14%), and commercial (7%).

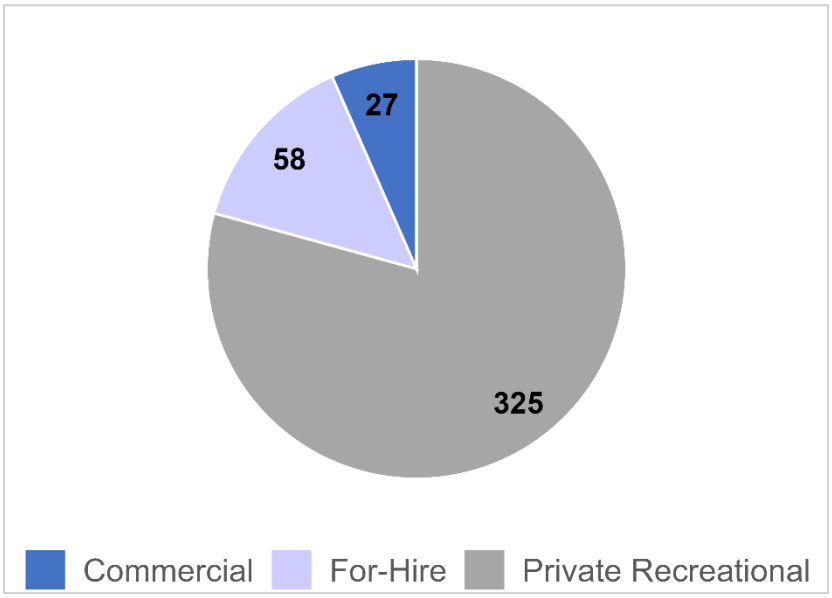

***Figure 1**: Results collected from the tool asking individuals to self-identify their fishing sector association. While 365 individuals answered the survey question, they were not limited to a singular response and some identified with more than one sector of the fishery, resulting in a total of 410 responses.*

Respondents were provided a gridded map of 21 areas in the Gulf of America (Gulf) where they were able to self-identify the general location(s) of their observation (Figure 2). Respondents were not limited to a single area, and many identified multiple areas. The majority of respondents fish off the west coast of Florida with the highest density concentrated off Tampa Bay through the Big Bend.

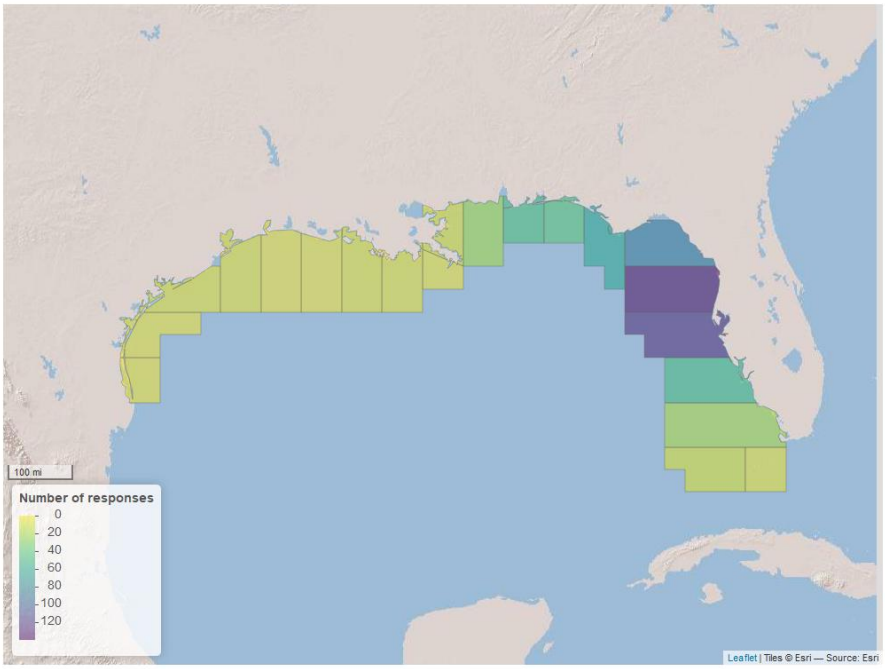

Figure 2: *Number of responses received in each of 21 areas in the Gulf. Respondents could select more than one area, so the total number illustrated in the map (n=603) exceeds the number of individual responses (n=365).*

The overall sentiment of each response was classified as positive, negative, or neutral/mixed through manual analysis. The analysis showed that most comments (43%) were negative in nature (Figure 3), followed by positive (31%), and neutral/mixed (25%). Comments were classified as either positive or negative based on overall sentiment of their response, while comments were classified as neutral when they were observational in nature, with sentiment either absent or hard to discern. Additionally, any comments that included an equal mix of positive and negative sentiments were also considered to have an overall neutral/mixed sentiment.

Many of the negative comments mentioned that the season was too short and occurred during a period of unfavorable weather conditions. Many anglers suggested that regulatory changes such as smaller bag limits, slot size-limits, depth-specific closures, and longer seasons would mitigate some of their concerns. While many of the negative comments suggested moving the season start date, there was conflicting opinions on when gag grouper should be open to harvest. Some respondents indicated the need to align the gag grouper season with that of red snapper.

Commenters emphasized that discarding gag grouper during the red snapper season was cause for concern. Specifically, they mentioned problems with discard mortality, the ineffectiveness of barotrauma mitigation tools, and depredation by sharks and goliath grouper. Other negative comments indicated differing preference for state or federal management, frustration between fishing sectors, and concerns with poaching.

Positive comments were heavily focused on the health of the population. Many of the positive comments mentioned high catch volumes in shallow and deep water, as well as plentiful fish ranging from juveniles to large fish. Some of the positive comments indicated current regulations are working and while the stock is recovering, it's not perfect yet. Many of the neutral/mixed comments indicated satisfaction with high catch volumes of gag grouper or a healthy stock but expressed frustration with the current season length and regulations. Several neutral/mixed comments mentioned that there were many small gags and few large ones. Additionally, other neutral/mixed comments mentioned the population is doing significantly better but is not as healthy as it was 5-10 years ago.

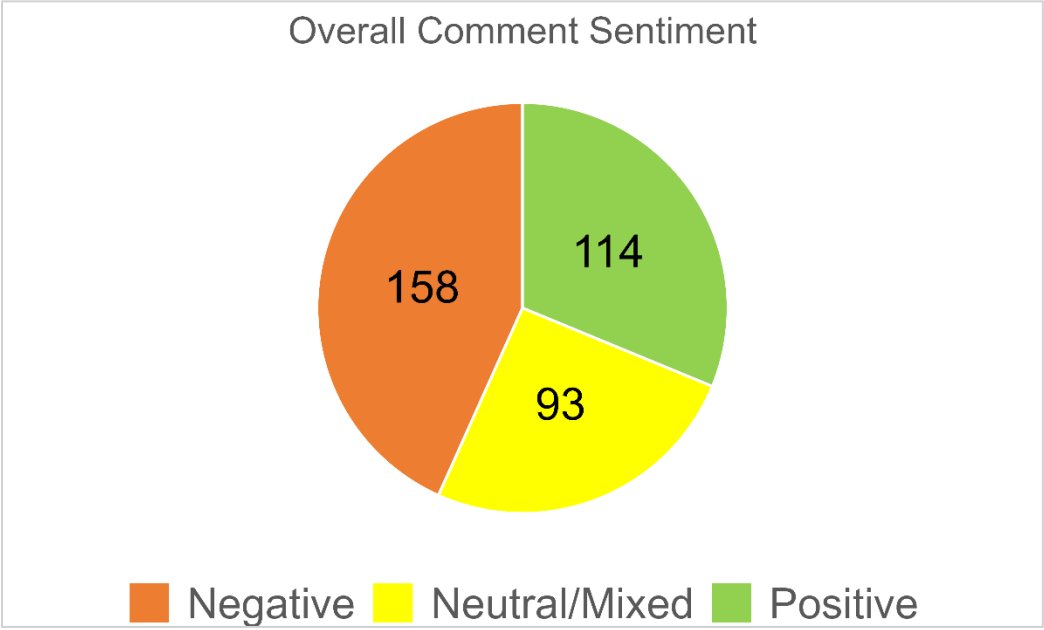

***Figure 3**: Number of responses indicating positive, negative, or neutral/mixed sentiment (n=365) classified by manual analysis.*

Overall sentiment was also categorized by fishing sector (Figure 4). Respondents self-selected their fishing sector and were not limited to a singular response. The recreational sectors (Private Recreational and For-Hire) exhibited nearly identical trends in sentiment and the commercial sector only differed slightly. While the majority of both recreational sectors exhibited negative sentiment, the commercial sector had almost equal proportions of negative and positive sentiments. Neutral/mixed sentiments comprised the lowest proportion of responses in all three sectors.

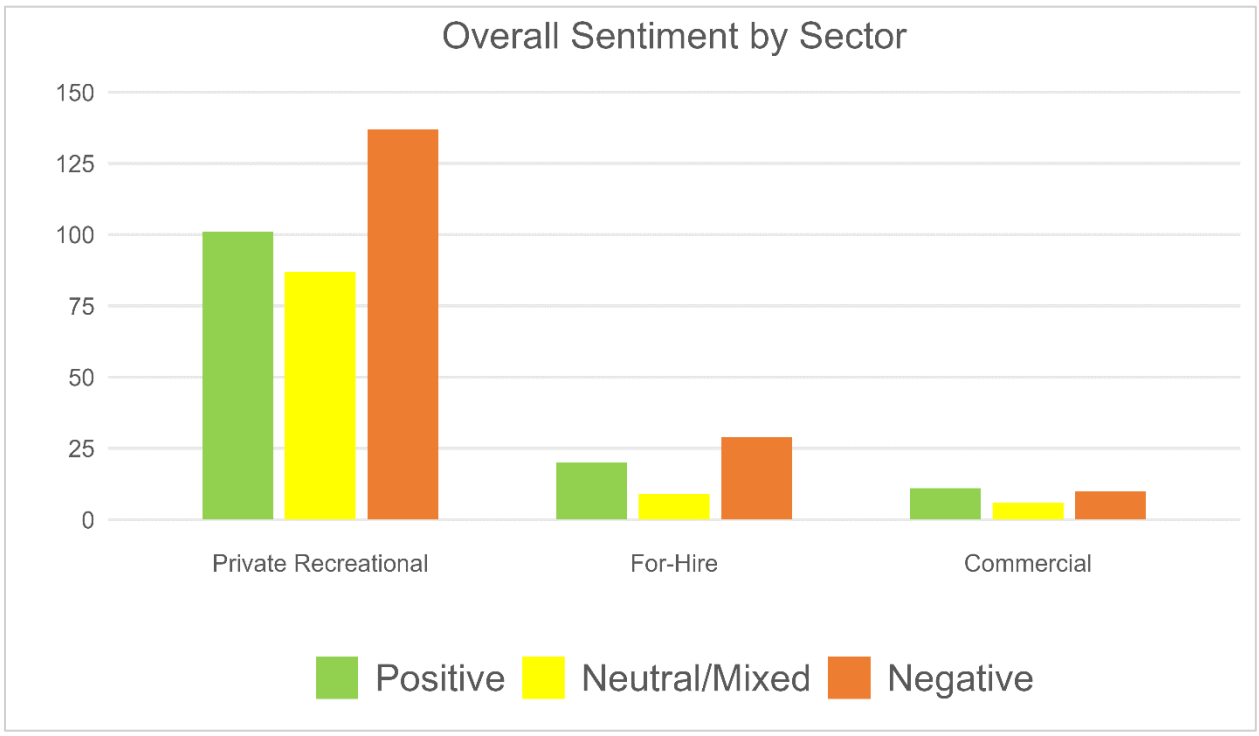

Figure 4*: Number of responses indicating positive, negative, or neutral/mixed sentiment sorted by commercial, private recreational, and federal for-hire fishing sector. Sentiment was classified by manual analysis and sector was self-selected by each respondent. Respondents were not limited to a singular sector declaration in their response (n=410). Comments that were not associated with the three primary fishing sectors were not analyzed.*

Overall comment sentiment was also sorted by location (Figure 5). Negative comments were ubiquitous throughout the Gulf, with no apparent geographic trend. The most positive comments were collected off the Florida coast from the Big Bend through the Tampa Bay region, which coincide with the highest number of responses.

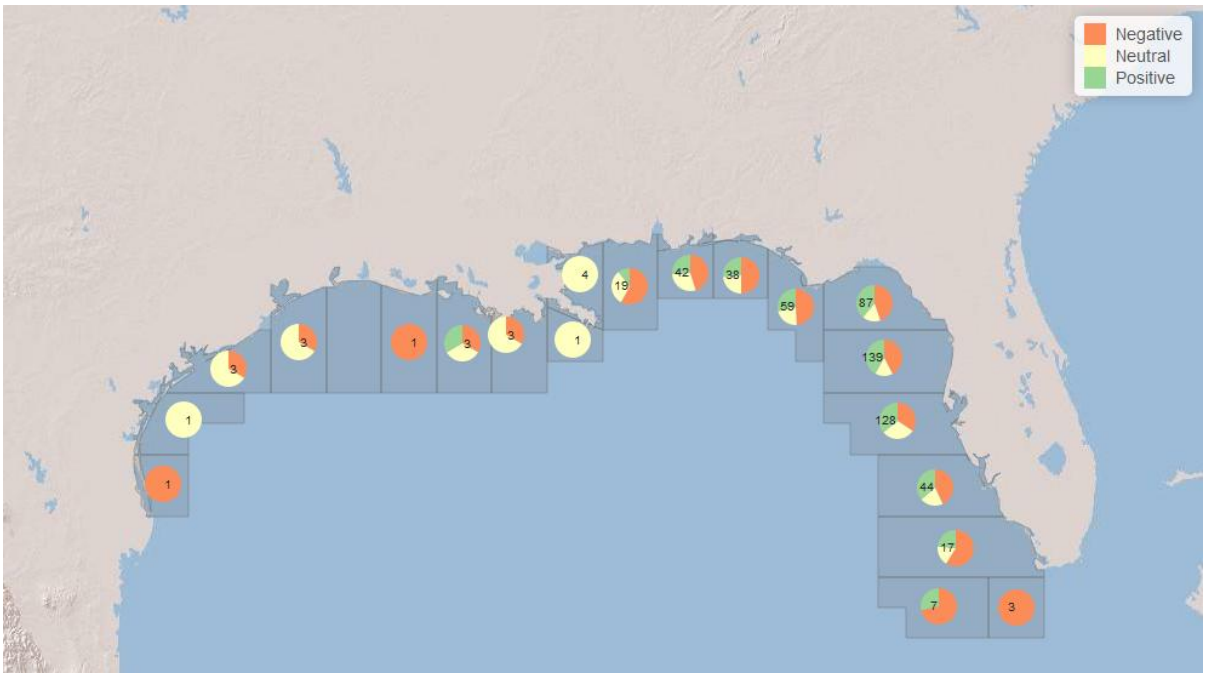

Figure 5*: Sentiment analysis for each area. Each comment (n=365) was characterized as positive, negative, or neutral/mixed based on independent review of each comment by two reviewers. Each comment was then linked to one or more areas based on the self-reported locations. Respondents could select more than one area, so the total number illustrated in the map (n=603) exceeds the number of individual responses.*

Comments from the 365 respondents were analyzed for sentiment focusing on the condition of the stock. Of the 365 comments, 31 did not provide comments that were determined to be related to the condition, health, or abundance of the stock, resulting in 334 unique comments applicable to stock condition. These comments were then classified based on whether they indicated that the stock was in good, negative, or neutral health (Figure 6).

Most comments indicated that the stock was in good condition (83%) and indicated that the stock has improved or remained robust throughout the years. The comments that indicated something negative about the stock condition (9.5%) suggested that larger fish were not as abundant as previous years. Recreational respondents also attributed commercial fishing to the reduced population of gag grouper.

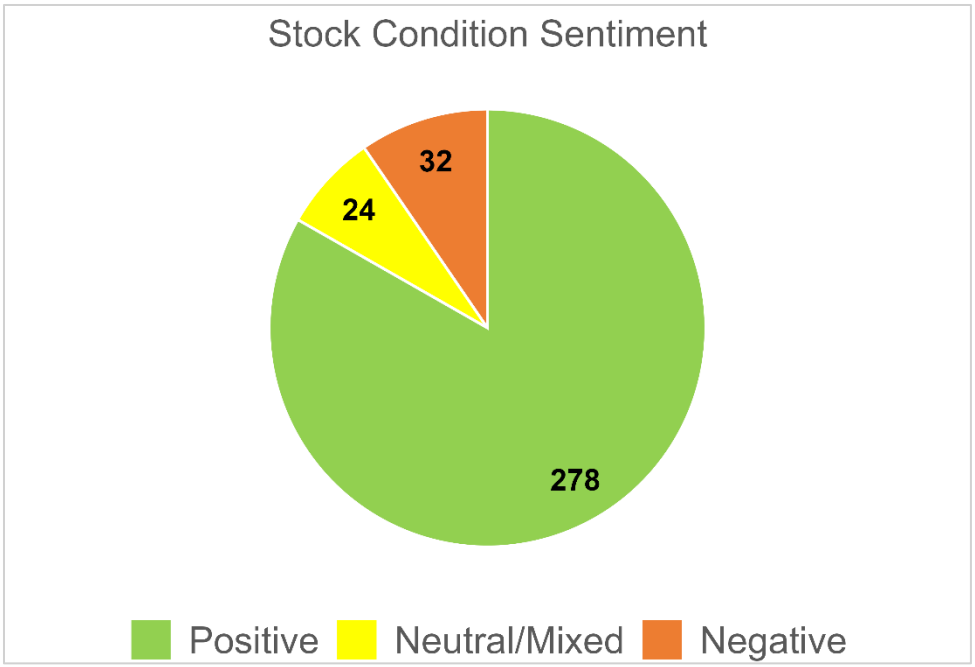

***Figure 6**: Number of comments indicating positive, negative, or neutral/mixed sentiment regarding stock condition (n=334)*

Results were also analyzed by sector (Figure 7). Respondents from all sectors expressed positive perceptions of the stock condition.

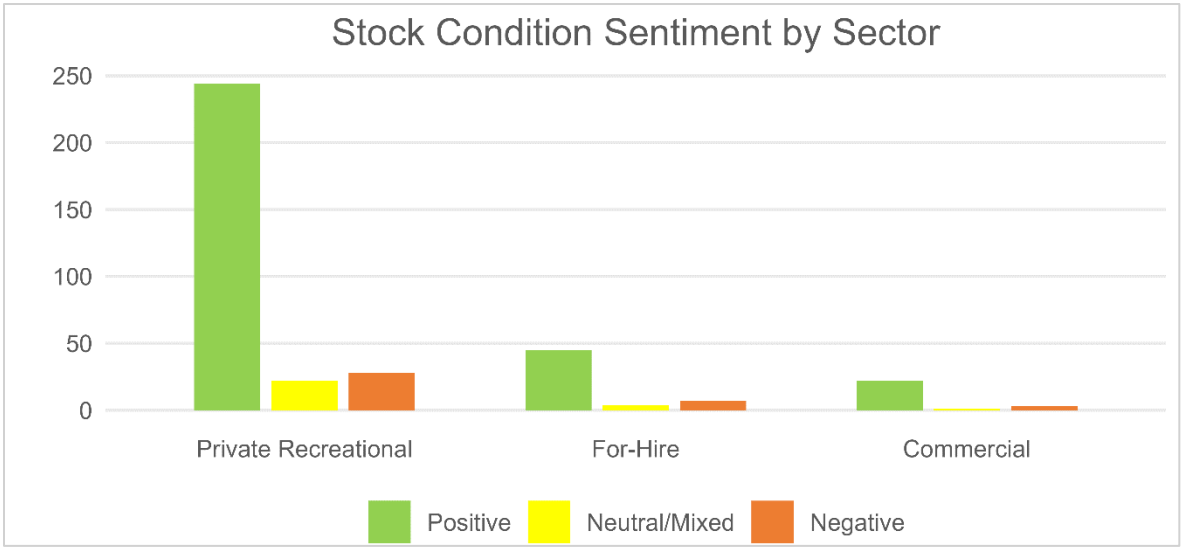

***Figure 7**: Number of responses related to stock condition (n=376) that indicate positive, negative, or neutral/mixed sentiment and sorted by commercial, private recreational, and federal for-hire fishing sector. Sector was self-selected by each respondent. Respondents were not limited to a single sector, so the total number of responses depicted in this figure exceeds the number of responses related to stock condition that were received (n=334). Comments that were not associated with the three primary fishing sectors were not analyzed.*

The sentiment of comments related to the condition, health, or abundance of the stock were also sorted by location (Figure 8). The area off the coast of Texas had few respondents and most areas indicated neutral/mixed sentiment regarding abundance, with the exception of a few

locations off the Louisiana coast. This reflects the natural range of the gag stock and the general absence of fish in those areas. Positive indications of stock abundance were ubiquitous off all areas west of Texas except for one zone in west Louisiana.

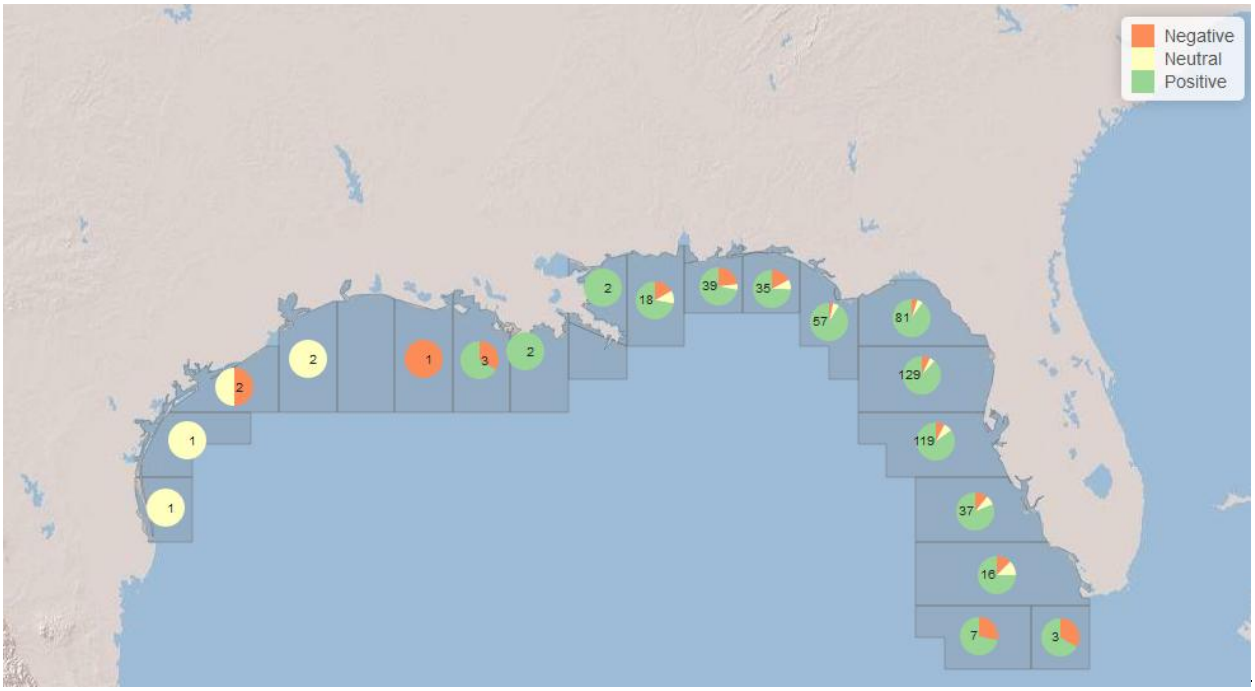

***Figure 8**: Sentiment analysis of the perception of stock condition by location. Each comment related to the health, condition, and/or abundance of the stock was characterized based on whether it indicated something positive, negative, or neutral/mixed about the stock (n =334). Each comment was then linked to one or more areas based on the self-reported locations. Respondents could select more than one area, so the total number illustrated in the map (n=555) exceeds the number of individual responses related to stock condition.*

Comments were analyzed for the words most frequently used to contribute to either positive or negative sentiment through automated analysis (Figures 9 and 10). The words that occurred most frequently in comments with a positive sentiment were plentiful, large, abundant, and healthy. This seems to indicate that most of the positive sentiment expressed was based on a positive perception of the abundance or condition of the stock. The words that occurred most frequently in comments with a negative sentiment were season, small, sharks, and weather. This seems to indicate that most of the negative sentiment expressed was based on dissatisfaction with the current season length and time of year, as well as predation.

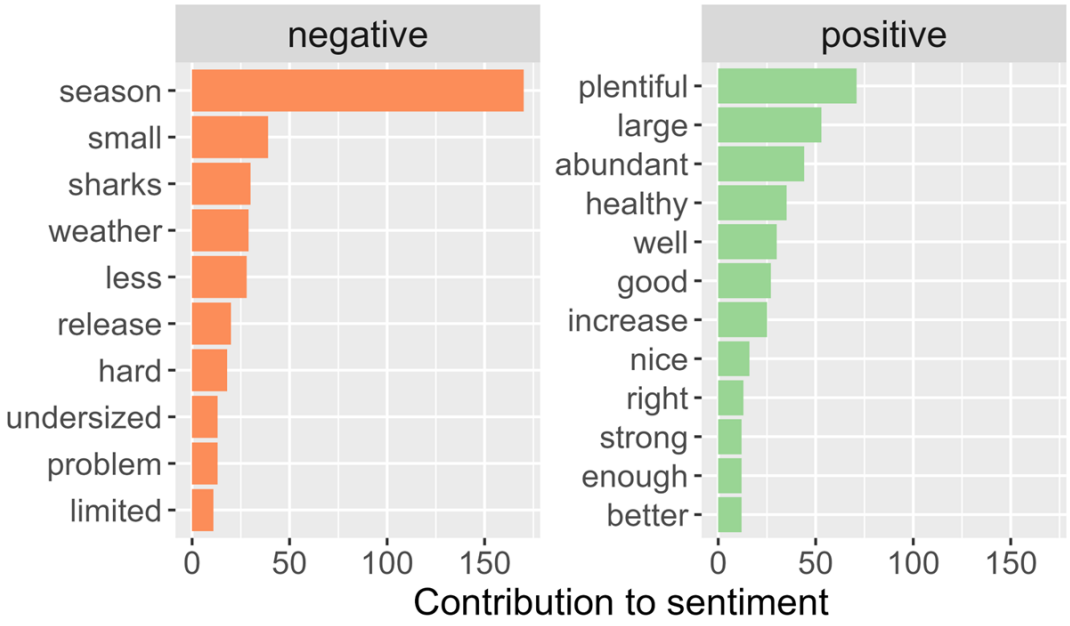

***Figure 9**: Most frequently used words contributing to comment sentiment identified using automated sentiment analysis.*

***Figure 10:** Most frequently used words contributing to comment sentiment identified using automated sentiment analysis.*

The Gulf Council utilized it's Fisherman Feedback Tool for gag grouper in 2021 and again in 2026 and generated summary reports for each. This report compares the responses from both efforts. There were 53 more responses received in 2021. The proportions of sector participation

did not change substaintially from 2021 to 2026, with the majority of respondents (>75%) associating with the private recreational sector (Figure 11).

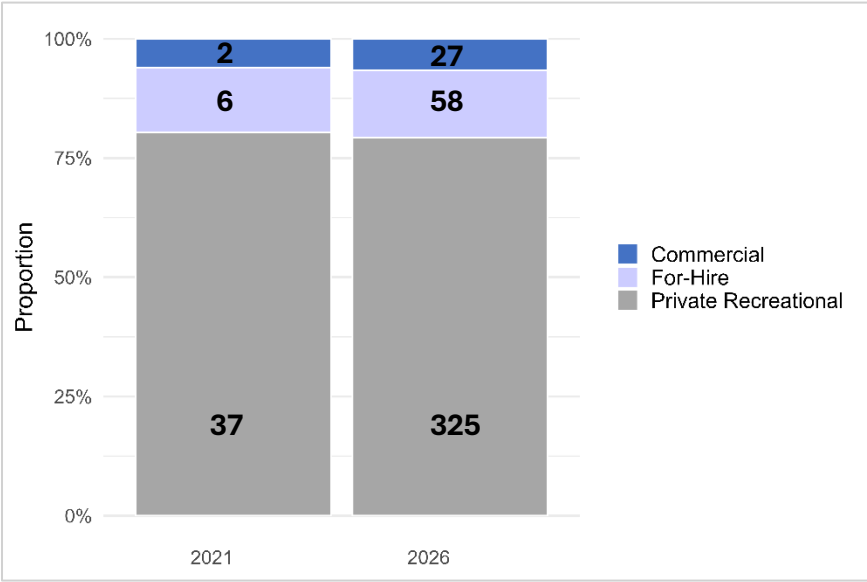

***Figure 4**: Results collected from the tool asking individuals to self-identify their fishing sector association. While 418 individuals answered the survey question in 2021 and 365 in 2026, they were not limited to a singular response and some identified with more than one sector of the fishery, resulting in a total of 468 and 410 responses, respectively.*

Geographic differences in responses between surveys were calculated by subtracting the number of responses from each grid in 2021 from 2026 (Figure 12). The region just south of Tampa Bay showed the greatest decrease in the number of respondents to the survey (Zone 4), followed by the West Florida Panhandle (Zone 9) and the Florida Keys (Zones 1 and 2). Conversely, the Big Bend region, Alabama, and Mississippi (Zones 7, 10, and 11, respectively) showed the greatest increase in the number of responses. There was little to no change in the number of responses west of Mississippi (Zone 13-21). The Tampa Bay regions (Zones 5 and 6) had the greatest number of responses for both surveys and had almost no change in the number of responses.

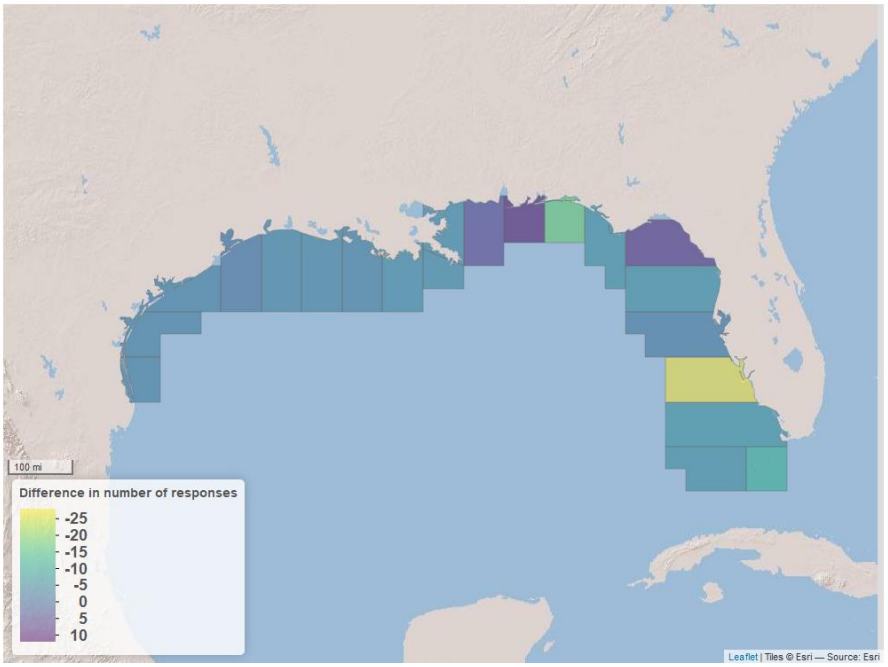

Figure 15: *Difference in number of responses received in each of 21 areas in the Gulf from 2021 to 2026. Respondents could select more than one area, so the total number illustrated in the map (n=659 and 603 respectively) exceeds the number of individual responses (n=418 and 365 respectively).*

There was a 10% increase in negative sentiment from 2021 to 2026 (Figure 13). Neutral/mixed sentiment proportions were similar between surveys (decreased 3%), and the proportion of positive responses decreased by 7%. Overall sentiment was expected to be more negative in the 2026 effort due to the large reductions to annual catch limits since 2022, which resulted in limited commercial harvest and shortened recreational seasons.

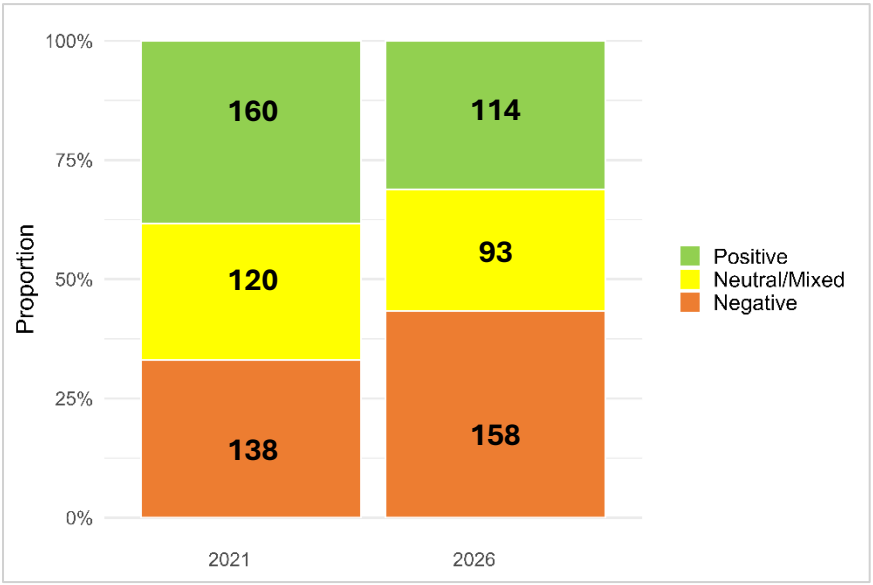

Figure 16*: Proportion of responses in 2021 and 2026 indicating positive, negative, or neutral/mixed sentiment (n=418 and 365 respectively) classified by manual analysis.*

Overall sentiment for each survey was also categorized by fishing sector (Figure 14). The proportion of negative sentiment in the private recreational sector increased substantially, while for-hire sentiment was consistent. Conversely, the commercial sector reported more positive sentiment despite a substantial quota reduction. Additionally, in 2021, the proportion of positive sentiment is highest from private recreational respondents and lowest from commercial sector respondents. In 2026, sentiment is very similar between the recreational sectors (for-hire and private), but more positive for the commercial sector.

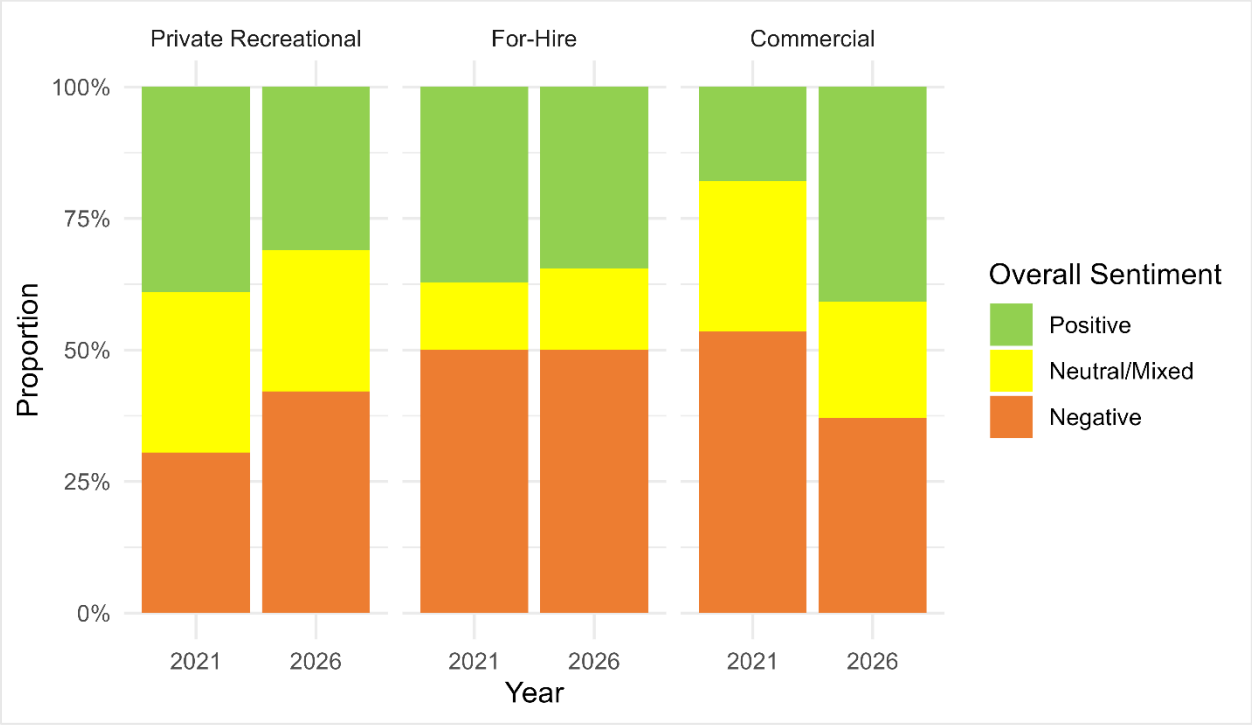

***Figure 14**: Proportion of responses indicating positive, negative, or neutral/mixed sentiment sorted by commercial, private recreational, and federal for-hire fishing sector for 2021 and 2026. Sentiment was classified by manual analysis and sector was self-selected by each respondent. Respondents were not limited to a singular sector declaration in their response (n=460 and 410, respectively). Comments that were not associated with the three primary fishing sectors were not analyzed.*

Geographically, average overall sentiment, or the mean of the numeric sentiment scores (i.e., -1 = Negative, 0 = Neutral/Mixed, 1 = Positive), changed in every grid (Figure 15). Other than Zone 4 (south of Tampa Bay), average overall sentiment decreased along peninsular Florida. These regions are most likely to encounter gag grouper; therefore, worsened overall sentiment aligns with the regulatory changes including decreased recreational season duration. The northern Gulf (Zones 8-15) all exhibited improved overall sentiment, although Zones 12-15 had low response rates. The western Gulf, with very low sample sizes (e.g., n = 2 in 2021 and n = 1 in 2026 for Zone 1), showed no trend in overall sentiment.

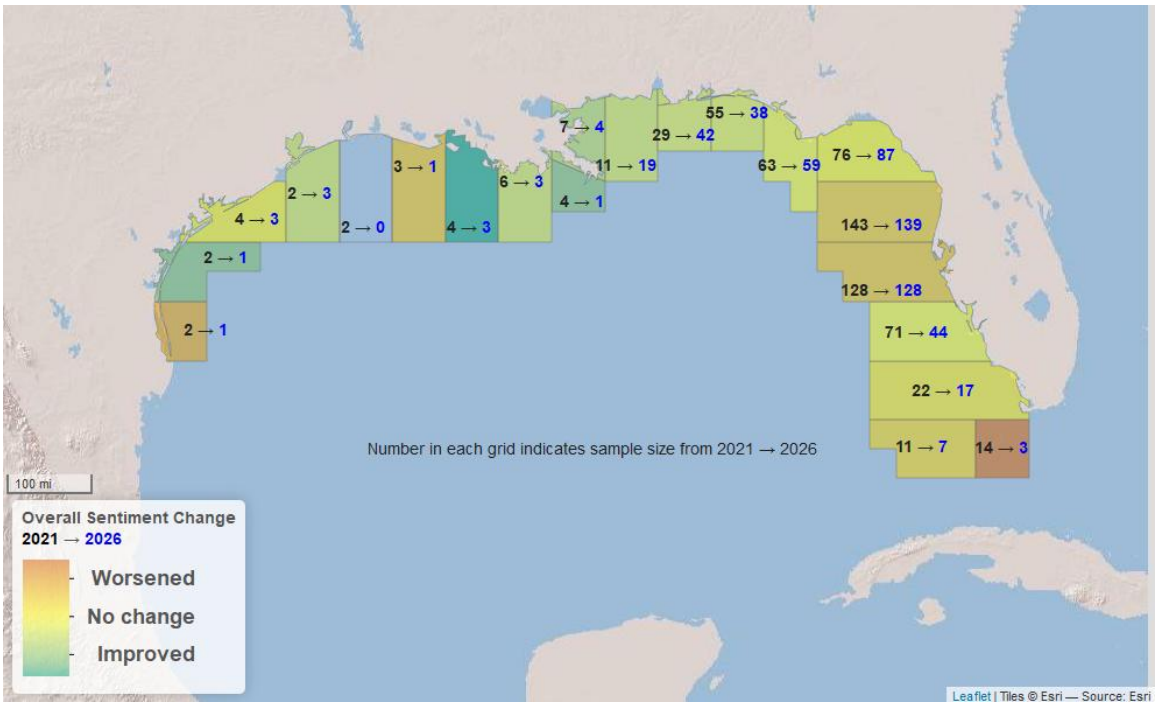

***Figure 15**: Change in average sentiment analysis for each area from 2021 to 2026. Numbers in each grid represent sample size from each year, color coded accordingly. Each comment (n=418 and 365, respectively) was characterized as positive, negative, or neutral/mixed based on independent review of each comment by two reviewers. Each comment was then linked to one or more areas based on the self-reported locations. Respondents could select more than one area, so the total number illustrated in the map (n=557 and 603, respectively) exceeds the number of individual responses.*

In 2021, 365 responses directly inferred something about the condition of the gag grouper stock in the Gulf. In 2026, 334 comments were applicable to stock condition. These comments were classified based on whether they indicated that the stock was in positive, negative, or neutral condition (Figure 16). The majority of responses in 2026 (83%) indicated positive sentiment regarding the health of the gag grouper stock. This is substantially different than the responses received in 2021, where 36% of respondents indicated negative sentiment regarding the health of the stock. This may indicate that the stock is recovering. It may also indicate that despite negative sentiment about gag grouper regulations, the rebuilding plan, which was implemented in 2024 through Reef Fish Amendment 56, is making a positive impact on the stock. Conversely, it also may be a result of negative sentiment regarding regulations and a desire to allow for increased harvest.

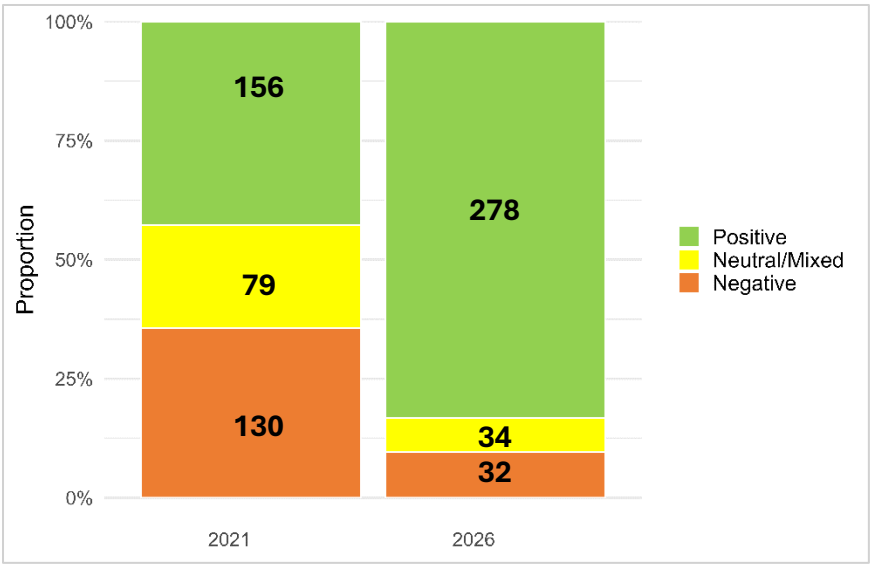

***Figure 16**: Proportion of comments in 2021 and 2026 indicating positive, negative, or neutral/mixed sentiment regarding stock condition (n=365 and 334, respectively).*

Stock condition sentiment was also compared across sectors (Figure 17). Stock perceptions varied between years in all sectors. In 2021, sentiment about the stock condition decreases from private to for-hire to commercial sectors, similar to Figure 14. However, respondents from all sectors expressed positive perceptions of the stock condition in 2026.

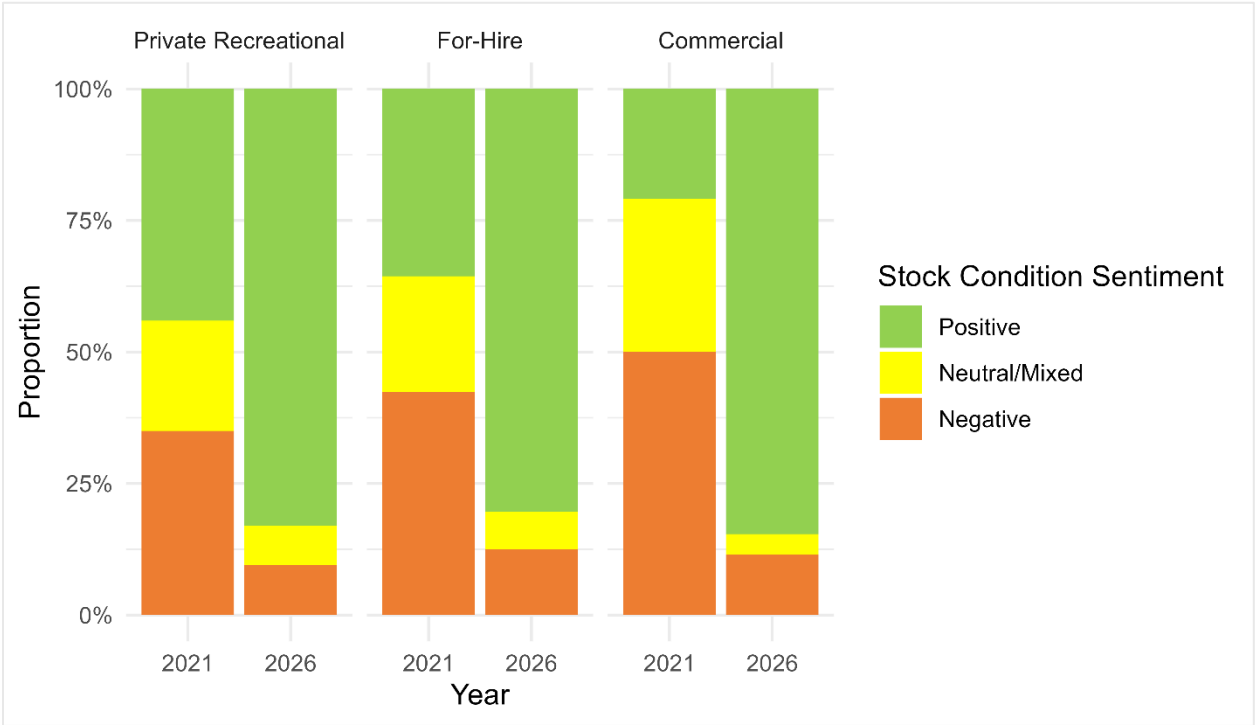

***Figure 17**: Proportion of responses in 2021 and 2026 related to stock condition (n=403 and 376, respectively) that indicate positive, negative, or neutral/mixed sentiment and sorted by commercial, private recreational, and federal for-hire fishing sector. Sector was self-selected by each respondent. Respondents were not limited to a single sector, so the*

total number of responses depicted in this figure exceeds the number of responses related to stock condition that were received (n=365 and 334, respectively). Comments that were not associated with the three primary fishing sectors were not analyzed.

Changes in sentiment of comments from 2021 and 2026 related to the condition, health, or abundance of the stock were also sorted by location (Figure 18). Almost every region in the Gulf indicated improved sentiment regarding stock condition of gag grouper. The two regions (Zones 16 and 19) that did not indicate improved stock condition had extremely low sample sizes (e.g., 2 in 2021 and 1 in 2026 for Zone 16, and 3 in 2021 and 2 in 2026 for Zone 19) and are not in the natural range of the stock (i.e., the west Florida shelf).

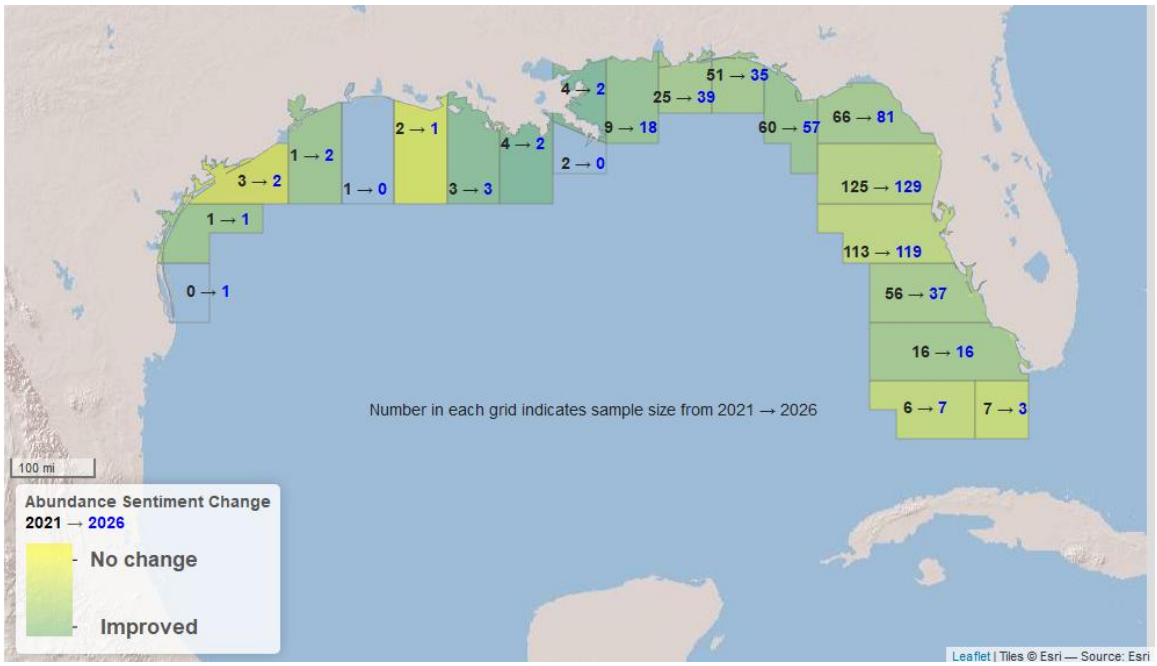

***Figure 18**: Change in sentiment analysis of the perception of stock condition by location from 2021 to 2026. Numbers in each grid represent sample size from each year, color coded accordingly. Each comment related to the health, condition, and/or abundance of the stock was characterized based on whether it indicated something positive, negative, or neutral/mixed about the stock (n=365 and 334, respectively). Each comment was then linked to one or more areas based on the self-reported locations. Respondents could select more than one area, so the total number illustrated in the map (n=659 and 555, respectively) exceeds the number of individual responses related to stock condition.*

Between 2021 and 2026, 41 respondents completed both surveys. The majority of respondents were from Florida (96%). The changes in overall sentiment for these respondents were compared between each survey (Figure 19). More than 50% of the respondents maintained the same sentiment between the two surveys. Only 15% of respondents had improved sentiment, while 34% of respondents indicated worsened sentiment in 2026 compared to 2021.

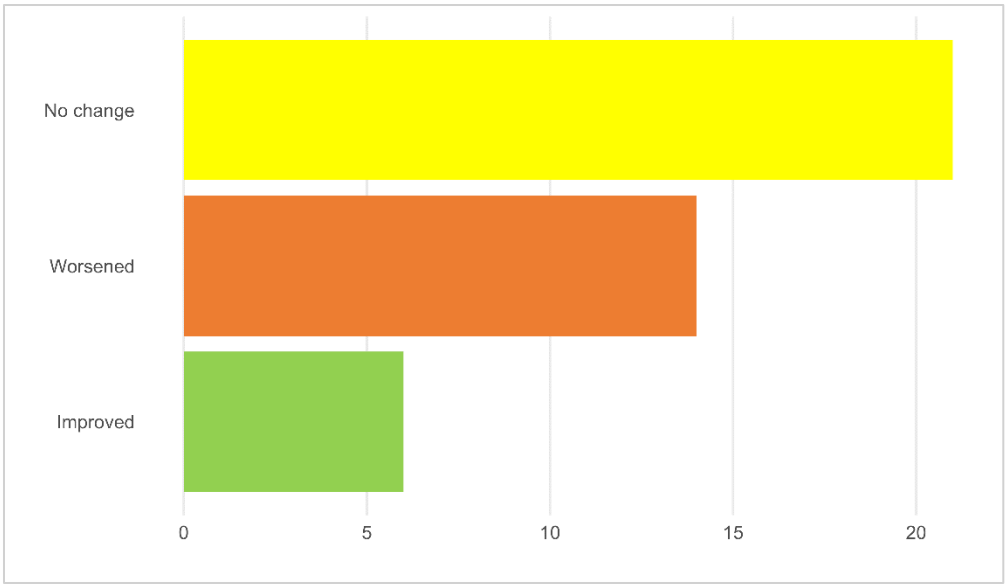

***Figure 19**: Overall sentiment comparison between respondents who completed both the 2021 and 2026 surveys (n=41). Responses were manually scored by whether they indicated positive, negative, or neutral/mixed sentiment.*

Of the 41 respondents who completed both surveys, 35 of them indicated something about the health of the gag grouper stock. The changes in sentiment regarding stock health for these respondents were compared between each survey (Figure 20). Similar to Figure 19, more than 50% of the respondents maintained the same sentiment between the two surveys. Conversely, 31% of respondents indicated improved sentiment about the health of the stock, while only 9% indicated worsened sentiment about the health of the stock in 2026 compared to 2021.

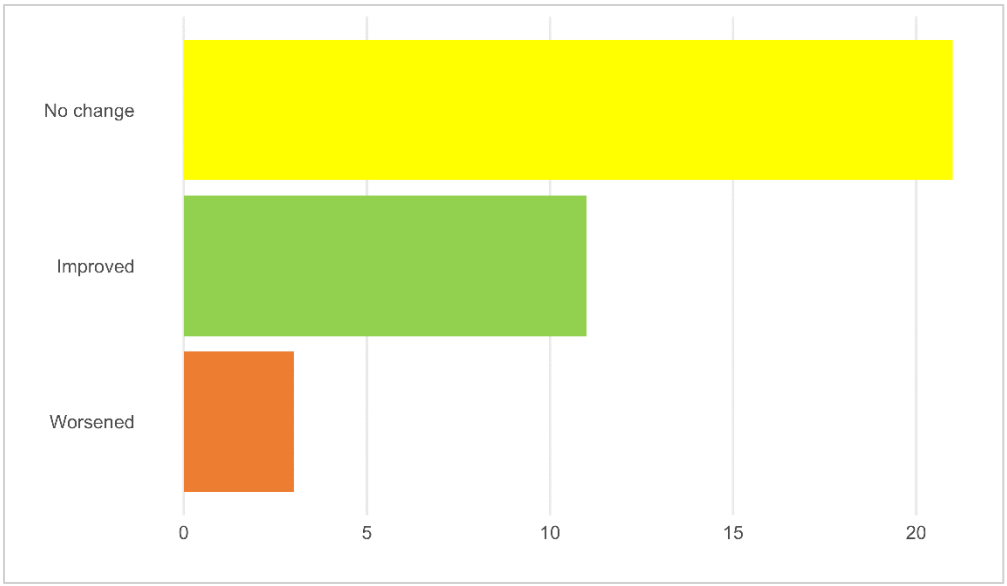

***Figure 20**: Stock sentiment comparison between respondents who completed both the 2021 and 2026 surveys and indicated something about the health of the stock (n=35). Responses were manually scored by whether they indicated positive, negative, or neutral/mixed sentiment.*

The results of Fisherman Feedback for Gag Grouper will be submitted to the NOAA Southeast Fisheries Science Center and shared with the Council and its Scientific and Statistical Committee as SEDAR 105: Gulf Gag Grouper Stock Assessment is completed and reviewed. The information collected through the tool is not intended to be considered as an index of abundance for direct incorporation into the stock assessment model. Instead, results of this effort are meant to supplement the role played by fisheries observers to the stock assessment process. The on-the-water perspective offered by respondents to this tool should be used to ground-truth the science and enhance our understanding of the stock.

Methods

Manual sentiment analysis was conducted by two independent readers and overall comment sentiment was broadly characterized as positive, neutral/mixed, or negative. Readers also determined whether comments were related to the condition, health, or abundance of the stock. Those comments were analyzed again and classified based on whether they indicated that the stock was in good, negative, or neutral health. Readers then compared characterizations and resolved any disagreements in interpretation so that both readers agreed.

Automated sentiment analysis characterized each response using the 'tidytext' package in R. For this analysis, the words in each comment were compared to a revised version of the 'Bing' lexicon library which has been amended with characterizations for words commonly used in reporting fishery information. The library categorizes words into positive, negative, or neutral sentiment and scores every word in each comment accordingly. This was used to identify the most common words associated with a positive and negative sentiment.

For the comparison of 2021 and 2026 efforts, manual sentiment analysis characterized overall sentiment of each comment as positive, neutral/mixed, or negative and determined whether comments were related to the condition, health, or abundance of the stock. Abundance related comments were analyzed and classified based on stock health indication by one reader as this was not done initially. Shifts in overall and abundance sentiment were characterized as improved, no change, or worsened.