

2.8 Action 8 – Revise the Recreational and Commercial Allocations for the Gulf Migratory Group King Mackerel

Alternative 1: No action – Maintain the current recreational and commercial allocations for Gulf migratory group king mackerel (68% recreational, 32% commercial). **(Gulf CMP AP Recommended)**

Alternative 2: Revise the recreational and commercial allocations for Gulf migratory group king mackerel by dividing the stock ACL using one of the options below.

Option a: 63% to the recreational sector, and 37% to the commercial sector.

Option b: 58% to the recreational sector, and 42% to the commercial sector.

Option c: 48% to the recreational sector, and 52% to the commercial sector.

Alternative 3: Revise the recreational and commercial allocations for Gulf migratory group king mackerel by transferring a percentage of the stock ACL to the commercial allocation annually until such a time that the recreational sector lands 80% of its allocation, after which no additional allocation will be transferred from the stock ACL to the commercial allocation.

Option a: Transfer 2% of the stock ACL annually to the commercial allocation.

Option b: Transfer 5% of the stock ACL annually to the commercial allocation.

Alternative 4: Conditionally transfer a certain percentage (*Options a-c*) of the stock ACL to the commercial sector until such a time that recreational landings reach a predetermined threshold (*Options d-f*). If this threshold is met, the recreational and commercial allocations will revert to 68% for the recreational sector and 32% for the commercial sector.

Conditional Quota Transfer (MUST CHOOSE ONE):

Option a: Transfer 5% of the stock ACL to the commercial sector.

Option b: Transfer 10% of the stock ACL to the commercial sector.

Option c: Transfer 20% of the stock ACL to the commercial sector.

Recreational ACL Threshold (MUST CHOOSE ONE):

Option d: Revert to the status quo sector allocations if 80% of the adjusted recreational sector ACL is landed.

Option e: Revert to the status quo sector allocations if 90% of the adjusted recreational sector ACL is landed.

Option f: Revert to the status quo sector allocations if 100% of the adjusted recreational sector ACL is landed.

Alternative 5: Establish a sunset provision for any change in the sector allocations for Gulf migratory group king mackerel. After the predetermined time period, any change in sector allocations would revert back to the allocations specified in the original Coastal Migratory Pelagics Fishery Management Plan for the Gulf of Mexico (68% for the recreational sector and 32% for the commercial sector).

Option a: Sunset any change in sector allocations after a five year period (2016-2020).

Option b: Sunset any change in sector allocations after a ten year period (2016-2025).

Option c: Sunset any change in sector allocations after a fifteen year period (2016-2030).

Discussion:

The Councils are considering modifying the sector allocations for Gulf migratory group king mackerel. Over the past ten years, the commercial sector has consistently landed near the commercial ACL while the recreational sector has landed decreasingly lower proportions of the recreational ACL. The Gulf Council has requested economic analyses to explore the effects of reallocating up to 10 percent of the Gulf king mackerel stock ACL to the commercial sector. Recent landings of Gulf migratory group king mackerel are shown in Table 2.8.1 and Figure 2.8.1. The fishing year for the time series presented is July 1 – June 30.

Table 2.8.1. Proportion of sector ACLs landed and proportion of total ACL landed for Gulf migratory group king mackerel, including those landings attributed to the Florida East Coast Zone (FLEC). The FLEC landings are included here since there is not a recreational allocation specifically for the FLEC Zone.

Fishing Year	Total TAC/ACL	Comm ACL	Comm Landings	Rec ACL	Rec Landings	% of Sector ACL Landed		Total ACL Landed
						Comm ¹	Rec ²	
2001-02	10.2 mp	3.264 mp	2.902 mp	6.936 mp	3.669 mp	88.9%	52.9%	64.7%
2002-03	10.2 mp	3.264 mp	3.186 mp	6.936 mp	2.816 mp	97.6%	40.6%	59.3%
2003-04	10.2 mp	3.264 mp	3.094 mp	6.936 mp	3.211 mp	94.8%	46.3%	62.7%
2004-05	10.2 mp	3.264 mp	3.215 mp	6.936 mp	2.532 mp	98.5%	36.5%	56.4%
2005-06	10.2 mp	3.264 mp	2.983 mp	6.936 mp	2.996 mp	91.4%	43.2%	58.9%
2006-07	10.8 mp	3.456 mp	3.231 mp	7.344 mp	3.305 mp	93.5%	45.0%	60.5%
2007-08	10.8 mp	3.456 mp	3.459 mp	7.344 mp	2.629 mp	100.1%	35.8%	56.3%
2008-09	10.8 mp	3.456 mp	3.833 mp	7.344 mp	2.350 mp	110.9%	32.0%	57.6%
2009-10	10.8 mp	3.456 mp	3.674 mp	7.344 mp	3.525 mp	106.3%	48.0%	68.0%
2010-11	10.8 mp	3.456 mp	3.522 mp	7.344 mp	2.181 mp	101.9%	29.7%	53.0%
2011-12	10.8 mp	3.456 mp	3.428 mp	7.344 mp	2.438 mp	99.2%	33.2%	54.3%
2012-13	10.8 mp	3.456 mp	3.539 mp	7.344 mp	2.710 mp	102.4%	36.9%	57.9%
2013-14	10.8 mp	3.456 mp	3.055 mp	7.344 mp	2.916 mp	88.4%	39.7%	55.3%

¹Commercial allocation = 32% ²Recreational allocation = 68%

Source: SERO

Gulf King Mackerel Landings and ACLs: 2000-2013

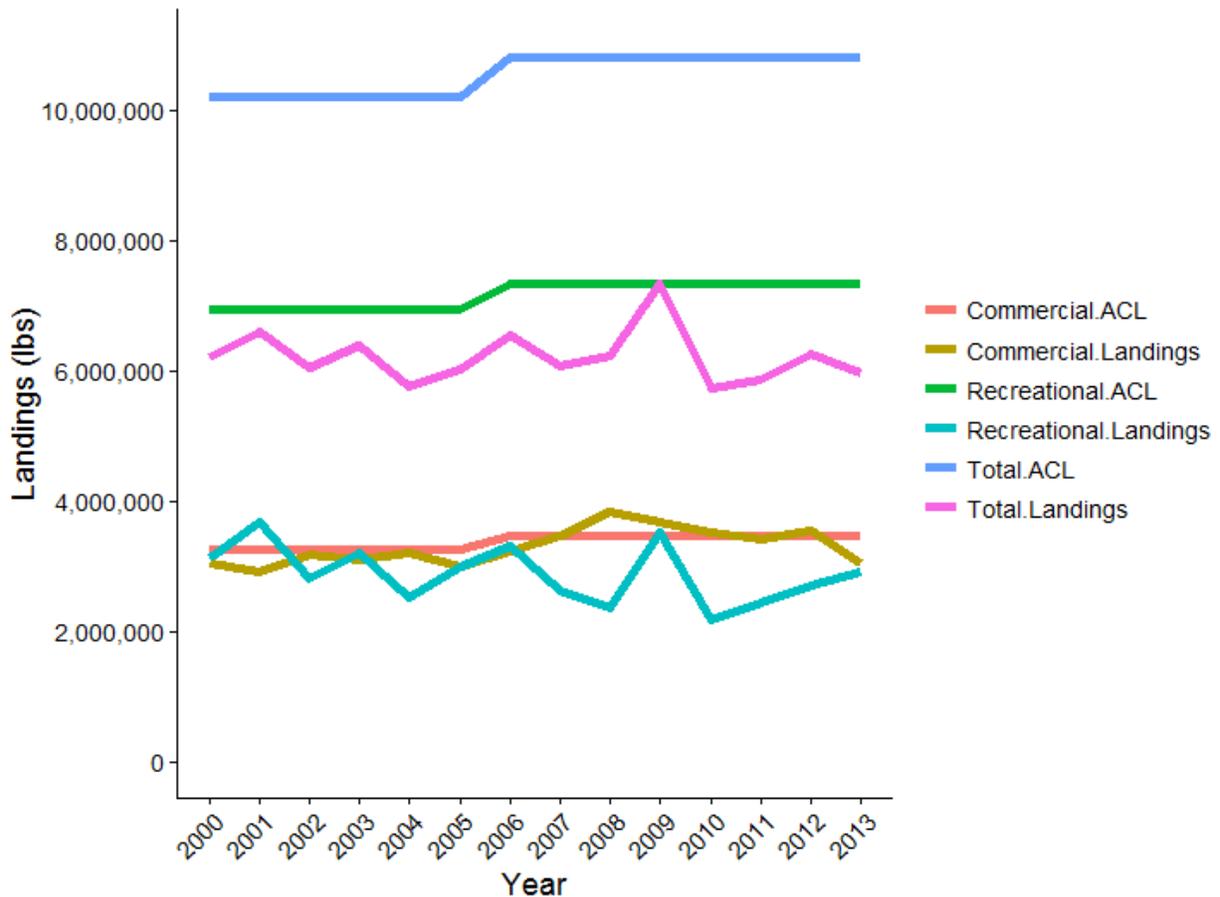


Figure 2.8.1. Trends in Gulf migratory group king mackerel landings by sector for the 2000-01 to the 2013-14 fishing seasons. Landings are in pounds.

Alternative 1 would maintain the current recreational and commercial allocations of 68% and 32% respectively, which were established in the original CMP FMP in February of 1983. Over the last decade, the recreational sector has not landed its allocation, while the commercial sector has typically met or exceeded its allocation. Closures for the commercial sector are facilitated by the National Marine Fisheries Service (NMFS), which provides notice to fishermen prior to closing each commercial zone to fishing when that zone’s ACL is projected to be reached. This trend would be expected to continue, at least in the short term, if **Alternative 1** is preferred.

Alternative 2 would revise the recreational and commercial allocations for Gulf migratory group king mackerel by transferring some percentage of the stock ACL to the commercial sector. Options for such a transfer in allocation include 5% (**Option a**), 10% (**Option b**), and 20% (**Option c**). Transferring allocation from the stock ACL to the commercial sector could increase the likelihood of an overage in the recreational sector if effort increases in the future. Likewise, increasing the commercial sector’s allocation will likely result in those additional fish allocated to the commercial sector being landed, in addition to those fish landed by the recreational sector,

thereby increasing the overall combined amount of Gulf migratory group king mackerel landed annually. Increased landings should not have an adverse effect on the health of Gulf migratory group king mackerel, so long as the ABC is not exceeded. Table 2.8.2 shows the resultant allocations based on the options presented in this action.

Table 2.8.2. Resultant allocations based on options presented in Action 8. Alternative 3 would be dependent upon the landings reported in the year during which the recreational sector landed 80% of its allocation.

Option	Commercial Allocation	Recreational Allocation
Alternative 1	32%	68%
Alternative 2, Option a	37%	63%
Alternative 2, Option b	42%	58%
Alternative 2, Option c	52%	48%
Alternative 3		
Alternative 4, Option a	37%	63%
Alternative 4, Option b	42%	58%
Alternative 4, Option c	52%	48%

Alternative 3 would revise the recreational and commercial allocations for Gulf migratory group king mackerel by transferring a percentage of the stock ACL to the commercial allocation annually until such a time that the recreational sector lands 80% of its allocation, after which no additional allocation would be transferred from the stock ACL to the commercial allocation. These annual percentage transfers could amount to 2% of the stock ACL (**Option a**) or 5% (**Option b**). The actual resultant sector allocations would depend on the landings reported in the year during which the recreational sector landed 80% of its allocation.

Alternative 4 would conditionally transfer a certain percentage of the stock ACL to the commercial sector until such a time that the recreational ACL is met. If the recreational ACL is met, then the recreational and commercial allocations will revert to 68% for the recreational sector and 32% for the commercial sector. The Councils proposed three options for transferring quota from the stock ACL to the commercial sector: 5% (**Option a**), 10% (**Option b**), and 20% (**Option c**). The resultant allocations for each sector under each option are shown in Table 2.8.2.

Council Conclusions:

4.8 Action 8 – Revise the Recreational and Commercial Allocations for the Gulf Migratory Group King Mackerel

Alternative 1: No action – Maintain the current recreational and commercial allocations for Gulf migratory group king mackerel (68% recreational, 32% commercial). **(Gulf CMP AP Recommended)**

Alternative 2: Revise the recreational and commercial allocations for Gulf migratory group king mackerel by dividing the stock ACL using one of the options below.

Option a: 63% to the recreational sector, and 37% to the commercial sector.

Option b: 58% to the recreational sector, and 42% to the commercial sector.

Option c: 48% to the recreational sector, and 52% to the commercial sector.

Alternative 3: Revise the recreational and commercial allocations for Gulf migratory group king mackerel by transferring a percentage of the stock ACL to the commercial allocation annually until such a time that the recreational sector lands 80% of its allocation, after which no additional allocation will be transferred from the stock ACL to the commercial allocation.

Option a: Transfer 2% of the stock ACL annually to the commercial allocation.

Option b: Transfer 5% of the stock ACL annually to the commercial allocation.

Alternative 4: Conditionally transfer a certain percentage (*Options a-c*) of the stock ACL to the commercial sector until such a time that recreational landings reach a predetermined threshold (*Options d-f*). If this threshold is met, the recreational and commercial allocations will revert to 68% for the recreational sector and 32% for the commercial sector.

Conditional Quota Transfer (MUST CHOOSE ONE):

Option a: Transfer 5% of the stock ACL to the commercial sector.

Option b: Transfer 10% of the stock ACL to the commercial sector.

Option c: Transfer 20% of the stock ACL to the commercial sector.

Recreational ACL Threshold (MUST CHOOSE ONE):

Option d: Revert to the status quo sector allocations if 80% of the adjusted recreational sector ACL is landed.

Option e: Revert to the status quo sector allocations if 90% of the adjusted recreational sector ACL is landed.

Option f: Revert to the status quo sector allocations if 100% of the adjusted recreational sector ACL is landed.

Alternative 5: Establish a sunset provision for any change in the sector allocations for Gulf migratory group king mackerel. After the predetermined time period, any change in sector allocations would revert back to the allocations specified in the original Coastal Migratory Pelagics Fishery Management Plan for the Gulf of Mexico (68% for the recreational sector and 32% for the commercial sector).

Option a: Sunset any change in sector allocations after a five year period (2016-2020).

Option b: Sunset any change in sector allocations after a ten year period (2016-2025).

Option c: Sunset any change in sector allocations after a fifteen year period (2016-2030).

4.8.1 Description of the Physical and Biological Environments

King mackerel are typically caught at the ocean surface, and typical gear types used in the harvest of king mackerel do not normally come in contact with bottom habitat. Therefore, the alternatives presented in Action 7 are not expected to result in any previously unconsidered direct effects to the physical environment. This action could indirectly affect the physical environment if changes in allocation result in an increase or decrease in the amount of fishing gear used to harvest the respective commercial and recreational quotas, which in turn could increase the probability of gear becoming lost and fouled (Barnette 2001).

Removal of fish from the population through fishing can reduce the overall population size if harvest is not maintained at sustainable levels. Effects of these alternatives on the biological environment would depend on the resulting reduction or increases in the level of fishing as a result of each alternative. Indirect impacts of these alternatives on the biological environment would depend on the resulting change in the level of commercial king mackerel fishing effort in the Gulf.

The no action alternative (**Alternative 1**) would maintain the current allocation of 68% of the Gulf migratory group king mackerel stock ACL reserved for the recreational sector, and the remaining 32% reserved for the commercial sector. **Alternative 1** would not result in any change in effects to the physical or biological environments.

Alternatives 2-4 propose, through different methods, some manner of reallocation from the recreational sector to the commercial sector. The resultant allocations from each proposed alternative, as intended by the Councils, are shown in Table 2.8.2. Since the recreational sector *is not* currently landing its allocation, and the commercial sector *is* landing its allocation (Table 2.8.1), any transfer of unharvested fish from the recreational sector to the commercial sector will result in additional removals from the Gulf migratory group king mackerel stock. It is also because of this trend in landings that the Councils are not considering reallocating some portion of the stock ACL to the recreational sector. These proposed additional removals would constitute a negative biological effect; however, so long as the respective sector ACLs are not exceeded, the effect of additional harvest on the stock is not expected to impact the long-term sustainability of Gulf migratory group king mackerel.

The difference between **Alternatives 2** and **3** is that **Alternative 2** would transfer the prescribed amount of allocation (Options a-c) all at once, while **Alternative 3** would do so gradually over time. Any negative effects from selecting **Alternative 2** will depend on the amount of allocation to be transferred to the commercial sector, with those effects becoming more substantial as the amount of allocation to be transferred increases. Negative effects from **Alternative 3** would be spread out over time, but could ultimately be greater than those on **Option c** of **Alternative 2** depending on how much allocation is actually transferred to the commercial sector. Ultimately, the amount of additional king mackerel which would be removed from the migratory group under **Alternative 3** is unknown and completely dependent upon changes in future recreational fishing effort. However, so long as the sector ACLs are not exceeded, neither **Alternative 2** nor **3** are expected to impact the long-term sustainability of Gulf migratory group king mackerel.

Alternative 4 would conditionally transfer a certain percentage of the stock ACL to the commercial sector until such a time that recreational landings reach a predetermined threshold. If this threshold is met, the recreational and commercial allocations will revert to 68% for the recreational sector and 32% for the commercial sector. **Alternative 4** differs from **Alternatives 2 and 3** in that the allocation transfer in **Alternative 4** only exists so long as the recreational sector's landings do not reach the prescribed threshold, while the allocation transfers in **Alternatives 2 and 3** are considered permanent unless adjusted by the Councils through future action. Biological effects from **Alternative 4** would be similar to those in **Alternatives 2 and 3** in that more king mackerel are likely to be harvested; however, as was previously stated, so long as the respective sector ACLs are not exceeded, the effect of additional harvest on the stock is not expected to impact long-term sustainability.

Alternative 5 would establish a sunset provision for any change in the sector allocations for Gulf migratory group king mackerel (68% for the recreational sector and 32% for the commercial sector). After the predetermined time period, any change in sector allocations would revert back to the allocations specified in the original CMP FMP for the Gulf of Mexico. **Alternative 5** can only be selected as preferred in conjunction with one of **Alternatives 2-4**. Increases in effects from fishing on the physical and biological environment are generally correlated to increases in fishing effort. Any future changes in fishing effort would be due to other factors and independent of the presence or length of the sunset period. If **Alternative 5** is selected as preferred along with some other change in sector allocation, the biological effects of removing additional king mackerel through commercial harvest (**Alternatives 2-4**) would persist only for the time period permitted in **Alternative 5**.

4.8.2 Description of the Economic Environment

Alternative 1 would continue to allocate 68% and 32% of the Gulf migratory group king mackerel ACL to the recreational sector and commercial sector, respectively. **Alternative 1** would not be expected to affect the recreational or commercial harvests and other customary uses of Gulf group king mackerel. Therefore, **Alternative 1** would not be expected to result in direct economic effects. However, **Alternative 1** would be expected to continue to result in indirect adverse economic effects stemming from forgone fishing opportunities. Because recreational anglers harvest well below their allotted ACL, at most 68% of the total Gulf migratory group king mackerel ACL is harvested annually. Forgone opportunities in the recreational sector could potentially generate economic benefits if the commercial sector, which has typically harvested its ACL, was allowed to harvest portions of the ACL currently left unused. **Alternatives 2-5** propose various reallocation approaches to facilitate the harvest of portions of the unused Gulf migratory group king mackerel ACL.

Alternative 2 would reallocate a portion of the Gulf migratory group king mackerel stock ACL to the commercial sector. **Options a, b and c** would reallocate 5%, 10% and 20% of the stock ACL to the commercial sector, respectively. Excluding considerations relative to non-use values, e.g., option value, **Alternative 2** would not be expected to result in economic effects to the recreational sector. Because the recreational sector consistently harvests well below its assigned ACL, none of the proposed reallocations in **Alternative 2** would be expected to result in economic losses to the sector. In contrast, the commercial sector has typically harvested the

totality of its ACL. Therefore, the commercial sector would be expected to potentially benefit from additional harvest opportunities afforded by proposed reallocations to the sector. The amount reallocated and the extent to which commercial fishermen elect to take advantage of the available additional harvest opportunities would determine the magnitude of the potential economic benefits expected to result from **Alternative 2**.

Alternative 3 proposes a gradual reallocation of portions of the Gulf migratory group king mackerel stock ACL to the commercial sector until the recreational sector lands 80% of its ACL. As discussed in **Alternative 2**, reallocations to the commercial sector would not be expected to affect the recreational sector as long as that sector's king mackerel landings continue to be well below the recreational ACL. Like **Alternative 2**, **Alternative 3** would also be expected to result in economic benefits for the commercial sector. These potential economic benefits would be dependent on the magnitude of the additional commercial harvests that would result from the reallocation of portions of the stock ACL.

Alternative 4 would conditionally reallocate a portion of the Gulf migratory group king mackerel stock ACL to the commercial sector provided that the recreational sector's landings are below a preset threshold. **Options a, b** and **c** would reallocate 5%, 10% and 20% of the stock ACL to the commercial sector, respectively. **Options d, e** and **f** would set recreational landings thresholds at 80%, 90% and 100% of the recreational ACL, respectively. If the threshold is reached, the commercial and recreational allocations would revert to 32% and 68% of the stock ACL, respectively. Based on the recreational king mackerel landings recorded during the past 15 years, it is not likely that any one of the proposed thresholds would be met in the foreseeable future. Similar to **Alternatives 2** and **3**, **Alternative 4** would not be expected to result in economic effects for the recreational sector. Commercial fishermen would be expected to benefit from increased harvest opportunities afforded by proposed reallocations to the sector. The amount reallocated and the propensity with which commercial fishermen to take advantage of the additional harvest opportunities would determine the size of the potential economic benefits expected to result from **Alternative 4**.

Alternative 5 would establish a sunset for any reallocation (**Alternatives 2-4**) after a predetermined time period and revert to the no action allocation. **Options a, b** and **c** would sunset reallocations after a five-year, ten-year, and fifteen-year period, respectively. **Alternative 5** is not comparable to the previous alternatives and would eliminate expected economic benefits for the commercial sector on the sunset date.

4.8.3 Description of the Social Environment

Over the last decade, the commercial sector has regularly landed near the commercial ACL, while the recreational sector has landed decreasingly lower proportions of the recreational ACL (Table 2.8.1). For example, over the last ten years, the recreational sector has harvested an average 38% of the recreational ACL, and in each of those years, the recreational sector landed less than half of its ACL. However, as noted in Section 2.8, increased landings would not be expected to negatively affect the health of the stock so long as the ABC is not exceeded. King mackerel is not overfished nor undergoing overfishing (SEDAR 38 2014), and the total amount of allowable harvest is expected to increase through this amendment (Action 6).

Alternative 1 (No Action) would retain the current sector allocations for the Gulf migratory group king mackerel ACL. Although additional effects would not be expected under **Alternative 1** as fishing practices and customary uses of Gulf group king mackerel would not change, optimum yield is not being achieved. Thus, indirect negative effects would be expected to continue under **Alternative 1** as fishing opportunities continue to go unused.

It is possible that some of these foregone fishing opportunities could be used by the recreational sector through an increase in the bag limit, as evaluated in Action 9. However, increasing the bag limit is not expected to increase landings substantially (Section 2.9 and 4.9), and it is likely that the recreational sector would continue to harvest well below its sector ACL even under a larger bag limit. Further, the recreational sector does not have a closed season for the harvest of king mackerel; the fishing season is open year-round. Thus, it is not possible to further extend when the recreational sector may harvest king mackerel. However, these unused fishing opportunities could provide benefits to the commercial sector, which typically harvests its sector ACL. The commercial fishing zones are regularly closed when the ACL for a zone is estimated to be reached; in some zones, the quota is caught quickly resulting in a very short season. It is highly likely that allocating some of the unused recreational fishing opportunities to the commercial sector would result in those fish being caught. In turn, benefits would result for the commercial sector.

Because **Alternatives 2-4** all transfer a certain amount of quota from the stock ACL to the commercial sector, the types of effects on the social environment would be similar among the alternatives. The effects would vary in scope and strength relative to the amount of quota that is reallocated. Most generally, the quality of social impacts differs between the sectors, in that a gain of commercial access to king mackerel could benefit the livelihoods of commercial fishermen, especially small-scale owner-operators, hired captains and crew, and the well-being of commercial communities. Direct effects would not be expected for the recreational sector, which is not catching its portion of the quota. Should fishing behavior change or effort increase substantially in the future such that the recreational sector meets its quota, a reallocation of quota could result in constraints on recreational fishing opportunities, which would entail some negative effects for the recreational sector. However, given current fishing practices and behavior, it seems unlikely for recreational effort towards king mackerel to increase substantially in the near future. Further, there are no additional biological benefits to allowing a portion of the allowable harvest to remain in the water, unfished, since the stock is not overfished or undergoing overfishing. Thus, no long-term benefits would be expected for the recreational sector by not harvesting part of its quota. **Alternatives 2-4** propose various reallocation approaches to facilitate the harvest of portions of the unused Gulf migratory group king mackerel ACL. Compared with **Alternative 1**, social benefits would be expected for the commercial sector under each of **Alternatives 2-4**, while effects would not be expected for the recreational sector.

Alternative 2 would reallocate a set portion of the stock ACL to the commercial sector, 5% (**Option a**), 10% (**Option b**), or 20% (**Option c**). Because the recreational sector consistently harvests well below its assigned ACL, none of the proposed reallocation options in **Alternative 2** would be expected to affect the sector. In contrast, the commercial sector has typically harvested the totality of its ACL. Therefore, the commercial sector would be expected to benefit

from additional harvest opportunities afforded by proposed reallocations to the sector. The amount reallocated and the extent to which commercial fishermen elect to take advantage of the available additional harvest opportunities would determine the magnitude of the potential benefits expected to result from **Alternative 2**.

Alternative 3 would gradually reallocate portions of the Gulf migratory group king mackerel stock ACL to the commercial sector until the recreational sector lands 80% of its ACL. As discussed in **Alternative 2**, reallocations to the commercial sector would not be expected to affect the recreational sector as long as recreational king mackerel landings remain well below the recreational ACL. Like **Alternative 2**, **Alternative 3** would also be expected to result in benefits for the commercial sector, which would relate to the magnitude of the additional commercial harvests that would result from the reallocation.

Alternative 4 would conditionally reallocate a portion of the stock ACL to the commercial sector (**Options a-c**), provided that the recreational sector's landings are below a preset threshold (**Options d-f**). If the threshold is reached, the recreational and commercial sector allocation would revert to that under **Alternative 1**, 68% and 32% of the total ACL, respectively. Based on the recreational king mackerel landings recorded during the past 15 years, it is not likely that any one of the proposed thresholds (**Options d-f**) would be met in the foreseeable future. Similar to **Alternatives 2** and **3**, **Alternative 4** would not be expected to result in effects for the recreational sector. Positive effects would be expected for the commercial sector, which would benefit from increased harvest opportunities afforded by the proposed reallocations. These benefits would relate to the extent that commercial fishermen take advantage of the additional harvest opportunities.

Alternative 5 would end the reallocation implemented through this action after 5 (**Option 5a**), 10 (**Option 5b**), or 15 years (**Option 5c**), and the allocation would revert to that under **Alternative 1**, the sector allocation established in 1983. **Alternative 5** can be selected alongside any of the reallocation approaches in **Alternatives 2-4**, setting a sunset date for the reallocation, and thus, is not comparable to these alternatives. Selecting **Alternative 5** with any of **Options a-c** would eliminate the expected social benefits to the commercial sector at the time of the sunset.

4.8.4 Description of the Administrative Environment

The alternatives provide options which ultimately change the division of quota among the commercial and recreational sectors. The change in the division of the ACL under **Alternative 2** would not result in any increase in administrative burden compared to **Alternative 1**, besides the noticing of the resultant changes in allocation and commercial season lengths in the Federal Register. **Alternatives 3** and **4** both would result in increased administrative burdens in the form of increased personnel hours to track sector landings of Gulf king mackerel and to apply the prescribed modifications when necessary. These additional administrative burdens would be greater with **Alternative 3** than **Alternative 4**, since **Alternative 3** constitutes a continual modification over time while **Alternative 4** constitutes a single allocation transfer which only changes if the prescribed recreational landings threshold is met.

Alternative 5 would add a sunset provision, which would result in the expiration of any changes in sector allocations after five years (**Option a**), ten years (**Option b**), or fifteen years (**Option c**). If this alternative is selected as preferred, it would result in a negative effect on the administrative environment in that the allocations would have to be changed back to the current status quo. This adverse effect to the administrative environment would come in the form of additional rulemaking. The likelihood of this occurring would be greatest under **Option a**, and least under **Option c**.

Other administrative burdens that may result from all of the action alternatives considered would take the form of development and dissemination of outreach and education materials for fishery participants.