

How will mortality be managed post-delisting?

- **Goal:** Maintain the GYE grizzly bear population **at** the average population estimate for 2002–2014 of 674 (95% CI = 600–757).
- The population inside GYE demographic monitoring area will be estimated annually by the IGBST using the model-averaged Chao2 method.
- The States will meet each January to review the population monitoring data supplied by the IGBST and collectively establish discretionary mortality within the total mortality limits per **each** age/sex class available for regulated harvest for each jurisdiction (MT, ID, WY) **inside** the DMA.
- The IGBST will conduct a management review every 5–10 years to assess if the management system is ensuring a recovered grizzly bear population and to assess vital rates for the GYE population. Based on these results, total mortality levels **may** be adjusted if necessary.

What types of mortalities count against the **total** mortality limits inside the DMA?

- Total mortality includes documented known and probable grizzly bear mortalities from all causes including but are not limited to: management removals, illegal kills, mistaken identity kills, self-defense kills, vehicle kills, natural mortalities, undetermined-cause mortalities, grizzly bear hunting, and a statistical estimate of the number of unknown/unreported mortalities.

- **The table below shows the total allowable mortalities from all causes inside the DMA for independent females, independent males, and dependent young at different population sizes.** These mortality rates were calculated as those limits necessary to manage toward the long-term average population size that occurred from 2002 to 2014 using the model-averaged Chao2 population estimate method (674, 95% CI = 600–747). If the population is estimated as fewer than or equal to 600 in any year, no discretionary mortality will occur unless necessary for human safety.

	Population size			
	600 to 673	674	675 to 747	>747
Total annual mortality limit from all causes for independent FEMALES (≥2 years).	At <7.6% mortality = 16 to 17	At 7.6% mortality = 18	At 9% mortality = 21 to 23	At 10% mortality = >26
Total annual mortality limit from all causes for independent MALES (≥2 years).	At 15% mortality = 31 to 34	At 15% mortality = 35	At 20% mortality = 47 to 52	At 22% mortality = >57
Total annual mortality limit from all causes for DEPENDENT YOUNG (<2 years).	At <7.6% mortality = 14 to 15	At 7.6% mortality = 16	At 9% mortality = 19 to 21	At 10% mortality = >23

- Total mortality limits for each sex/age class are based on the size of each sex/age cohort, which changes with population size.

Example calculation of expected number of independent female and male bears available for hunting allocation at estimated population sizes of 674 and 717.

	Estimated population size			
	674		717	
	Independent Females	Independent Males	Independent Females	Independent Males
Size of sex/age cohort at a population size	236	236	250	250
Total allowable mortality rates	7.6	15	9	20
Total allowable mortality numbers	18	35	22	50
Average background mortality from 2012–2015, inside the DMA.	15	22	15	22
Bears available for discretionary hunting mortality	3	13	7	28

- Inside the DMA, expected background mortality is calculated by taking the average number of mortalities from the most recent 4-year period from all sources other than grizzly bear hunting. Because background mortality levels vary from year to year, averaging these over several years is a reasonable predictor of these numbers.
- This average number of expected background mortalities for independent females and males is then subtracted from the total number of allowable mortalities for the most recent population estimate, as per the Table above, resulting in the expected number of independent female and male bears available for hunting allocation.
- Background mortality: mortalities that occur every year due to causes other than hunting, including management removals, illegal kills, self-defense, calculated unknown/unreported mortalities, natural mortalities, and other causes such as vehicle collisions.

What population parameters will be monitored?

- **Goal:** maintain the GYE grizzly bear population at the average population estimate for 2002–2014 of 674 (95% CI = 600–757).
- To achieve this goal, within the GYE demographic monitoring area (DMA) the IGBST will monitor:
 - The number of females with cubs
 - Distribution of females with cubs
 - Survival rates for all sex/age classes
 - All sources of mortality
 - Population trend
 - Cub production
 - Movements in relation to any changes in foods
 - Spatial distribution of grizzly bear-human conflicts

Under what circumstances could GYE grizzly bears be relisted?

1. If there are deviations from any population goal or habitat standard and the Yellowstone Grizzly Bear Coordinating Committee (YGCC) concludes that the desired goals cannot be met, then the YGCC **can** petition the Service for relisting; **or**
2. The Service can implement emergency relisting (**within 2 weeks**) under the ESA if the threats were severe and immediate; **or**
3. The Service may initiate a formal status review and could emergency relist (**within 2 weeks**) the GYE grizzly bear population until **a** formal status review is complete if **any of these conditions exist**:
 - There are any changes in Federal, State, or Tribal laws, rules, regulations, or management plans that depart significantly from the specifics of population or habitat management detailed in the proposed rule and significantly increases the threat to the population.
 - The population falls below 500 in any year using the model-averaged Chao2 method or counts of females with cubs fall below 48 for 3 consecutive years.
 - Independent female total mortality limits as per Tables 1, 2, and 3, in the proposed rule, are exceeded for 3 consecutive years and the population is fewer than 600.
 - Fewer than 16 of 18 bear management units are occupied by females with young for 3 consecutive 6-**y**ear sums of observations.

Will there be a hunting season for grizzly bears?

- Once delisted, management of grizzly bears will be returned to the States.
- The states will classify grizzly bears as a game species in the States of Wyoming, Montana, and Idaho outside of the National Parks and the Wind River Reservation.
- While this means there may be a limited hunting season, it also affords grizzlies the same protections that other game animals receive:
 - Grizzly bears cannot be killed out of season or without a hunting license
 - All hunting mortalities must be reported
 - Poachers may be prosecuted under State laws
- Because any hunting mortalities will be strictly limited and within the limits of sustainable mortality, hunting will not threaten the GYE grizzly bear population.
- **All** necessary State regulations **as specified in the proposed Rule** that will serve as adequate mechanisms **controlling** human-caused mortality, including from sport hunting, must be implemented **and in place** prior to a final rule to delist.
- Mortalities outside of the DMA are the responsibility of each State and will not count against total mortality limits **inside the DMA**.

What State regulations are necessary **inside the DMA before any** final rule **to** delist?

- All discretionary mortality inside the DMA will be suspended, except if required for human safety, if the model-averaged Chao2 population estimate falls below 600.
- Grizzly bear hunting inside the DMA will be suspended **in that state** if total mortality limits for any age/sex class (as per Tables 1, 2, and 3 in the proposed rule) are met **inside that state** at any time during the year.
- Any mortality exceeding total mortality limits in any year will be subtracted from that age/sex class total mortality limit the following year.
- Female grizzly bears with young **are protected from hunter** harvest.