

GAME MANAGEMENT UNIT 20D

DELTA JUNCTION AREA OFFICE

Area Biologist: Darren L. Bruning
Seasonal Wildlife Technician IV (Manager, Delta Junction Bison Range): Robert Schmidt
Seasonal Fish and Wildlife Technician III (Public Information): Ellie Mason

DESCRIPTION

Game Management Unit 20D is located in the middle Tanana River Valley of Interior Alaska, approximately 100 miles east of Fairbanks, and is approximately 5,633 mi². Most land is in state or private ownership, with some federal land in the Ft. Greely Military Reservation and Ft. Wainwright Donnelly Training Area.

The Tanana River bisects Unit 20D into southern and northern portions (Fig. 1). Both the Richardson and Alaska Highways pass through southern Unit 20D, along with numerous other roads and trails. The Richardson Highway traverses the western portion of northern Unit 20D, otherwise there is no road access.

South of the Tanana River, Unit 20D consists of the lowlands of the Tanana River valley and the foothills and mountains of the eastern Alaska Range. North of the Tanana River the unit consists of lowlands along several major rivers and uplands of the Tanana Hills.

Communities in Unit 20D (Fig. 1) and their approximate populations include the following:

- Delta Junction (840)
- Big Delta, Deltana area (2,320)
- Ft. Greely Military Reservation (500)
- Dry Creek (100)
- Dot Lake (80)
- Healy Lake (25)

SPECIAL USE AREAS (Fig. 2)

Controlled Use Areas:

- Delta Controlled Use Area (DCUA): The DCUA was created in 1971 and encompasses 1,680 mi² primarily in southern Unit 20D with smaller portions in Units 13B and 20A. It was established to meet sheep hunter demand for uncrowded hunting conditions and for a walk-in hunting opportunity free of motorized vehicles. The

goals are met by conducting 2 drawing permit hunts. The first hunt is August 10–25 with no motorized vehicles. The second hunt is August 26–September 20 with unrestricted access. Seventy-five permits are issued for each hunt.

Based on communications with DCUA hunters, the management goals of providing aesthetically pleasing hunting conditions and addressing conflicts between walking, ATV, air-transport, and horse hunters were met. Results from a DCUA hunter questionnaire in RY03 indicated 96% of respondents (n = 74) agreed with the aesthetic goals of the area and 81% were satisfied with their DCUA hunt. Personal communication between ADFG Biologists and hunters during sheep sealing has also signified high satisfaction with the management goals of the DCUA.

The DCUA has contributed to meeting an ADF&G Dall sheep management plan goal of recognizing diversified human recreational uses of Dall sheep and has also contributed to addressing the issue of increased Dall sheep hunting pressure in the eastern Alaska Range. A repeal of the DCUA would result in the loss of a high-quality walk-in Dall sheep hunting experience that was requested by hunters in the early 1970s. And, if the DCUA did not exist, a re-emergence of conflicts between walking, ATV, air-transport, and horse hunters could occur.

- **Macomb Plateau Controlled Use Area (MPCUA):** The MPCUA covers 304 mi² in southeastern Unit 20D. It was created in 1974 to protect a small area of critical caribou habitat on the Macomb Plateau for the Macomb caribou herd and to regulate hunting. MPCUA regulations restrict motorized vehicles from the area during August 10–September 30. The Macomb Plateau is the core calving grounds for the Macomb caribou herd and the MPCUA is meeting its objective to protect important caribou habitat and to help provide a sustainable harvest from this small road-accessible herd.

The Macomb caribou herd size has increased since creation of the MPCUA. The 2010 population estimate of 1,800 caribou is the highest herd size recorded since the early 1970s. The harvest quota and harvest for the Macomb herd also increased (see Page 6, Macomb caribou herd status).

The MPCUA has contributed to meeting the intensive management objectives for population size and harvest of the Macomb caribou herd. A repeal of the DCUA would result in motor vehicle disturbance to this small caribou population in their core rutting and calving habitat. Additionally, if the MPCUA did not exist and motor vehicle use was allowed in this area during the RC835 hunt, it would likely increase the rate of caribou harvest. The increased rate of harvest could cause the harvest quota to be achieved earlier in the season therefore reducing the amount of hunting opportunity.

Other Special Use Areas:

- **Delta Junction Bison Range (DJBR):** The DJBR is 90,000 acres located in southern Unit 20D, southeast of Delta Junction. It was created in 1979 by the Alaska

Legislature to perpetuate free-ranging bison and diminish bison damage to private agricultural crops. ADF&G produces and enhances bison forage on 2,800 acres of the DJBR to attract the Delta bison herd away from private agricultural land. ADF&G is the primary land manager for the DJBR, which is managed as a multiple use area for activities ranging from hunting and berry picking to timber sales and watershed protection. Work continues to increase the amount and quality of bison forage on the DJBR.

- **Bison Range Youth Hunt Management Area (BRYHMA):** The BRYHMA is 6,380 acres located within the DJBR boundaries and encompasses the two DJBR fields of bison forage. The BRYHMA was created in 2002 to improve ADF&G's ability to meet DJBR legislative mandates and goals and objectives of the Delta Bison Management Plan by: 1) reducing the number of moose hunters in DJBR fields thus reducing the level of human activity and disturbance to bison in the DJBR fields prior to and during the moose hunting season, 2) reducing damage to bison forage crops by large numbers of moose hunters, and 3) providing a safer work site for ADF&G staff conducting DJBR field operations during the moose hunting season by reducing the risk of hunting-related accidents. The BRYHMA is meeting all of its objectives by reducing moose hunting activity via a drawing permit youth hunt. A secondary benefit of the hunt is to introduce a limited number of youth to moose hunting.
- **Delta Junction Management Area (DJMA):** The DJMA is a 278-mi² area surrounding Delta Junction that was created as a moose hunting closed area in 1974 at the request of the Delta Fish and Game Advisory Committee. The area was reduced in size in 1991. Hunting was reestablished in the DJMA in 1996 with a drawing limited to 5 permits. Currently, there are 19 drawing permits available to resident and nonresident hunters, and an additional 6 drawing permits made available to qualified resident and nonresident disabled veterans. The Delta Advisory Committee is satisfied with current DJMA management.

Communities in Unit 20D are represented by two Fish and Game Advisory Committees. Delta Junction, Dry Creek, and Ft. Greely are represented by the Delta Fish and Game Advisory Committee. Dot Lake and Healy Lake are represented by the Upper Tanana-Fortymile Fish and Game Advisory Committee.

BISON

STATUS: Bison utilize southwestern Unit 20D, with summer range including federal land on the Ft. Wainwright Donnelly Training Area and winter range primarily on private agricultural land and state land in the DJBR. The Delta bison herd numbered approximately 435 bison in fall 2013. The current pre-calving (spring) population objective is 360 bison.

The Delta bison herd is managed based on goals and objectives in the Delta Bison Interim Management Plan that was completed in late 2011. The Interim Management Plan was developed with public input from the Delta Bison Working Group. Management goals include maintaining a healthy, free-ranging herd; reducing conflicts

between bison and the public; and providing the greatest opportunity to hunt and view bison.

The Delta bison hunt is one of the most popular permit drawing hunts in the state, with 18,000–19,000 applicants in recent years for up to 120 permits. Hunters must complete a mandatory orientation to learn how to identify bulls and cows, to review land status, and to be informed about other hunt-related issues and topics. The required orientation was placed online for the 2009 hunting season. Regulations allow the hunting season to open July 1, but under the Department’s discretionary authority, hunting does not begin until October 1 when local farmers have completed the fall harvest. The July opening date is to allow the Department to use hunting as a tool to reduce bison damage in agricultural areas if necessary. The season closes March 31. The bag limit is 1 bison every 10 years.

Several regulatory changes to the Delta bison hunts were implemented and became effective in 2010. These include: allowing the use of radio communication, including cellular and satellite phones, between bison hunters; prohibiting the take of specific radiocollared bison; and extending the hunting season to allow year-round issuance of permits when deemed necessary by ADF&G.

MANAGEMENT ACTIVITIES: Population management activities for bison include the following:

- Aerial population surveys.
- Ground-based sex and age composition surveys.
- Calculation of pre-calving and pre-hunting herd population estimates.
- Maintenance of 8–12 active radio collars on bison to facilitate locating the herd for surveys.
- Conduct drawing permit hunt.
- Tissue sample collection for use in bison genetics research.

ADF&G bison habitat management activities are directed at administration and maintenance of the DJBR. Bison forage is managed on the DJBR to attract bison away from private agricultural land until fall harvest of crops is completed. Forage management activities include planting annual crops, managing perennial crops, prescribed fires, controlling noxious vegetation, and providing water and mineral supplements for bison.

ISSUES: The highest priority long-term bison management issue is to diminish bison damage to private agricultural crops while maintaining a free-ranging herd. This task is accomplished by managing the DJBR to produce forage to attract bison away from private land and maintaining herd size through hunting. The DJBR delays bison movement onto private agricultural lands but does not prevent it.

Other bison management issues include 1) cooperating with U.S. Army planners to minimize impacts to critical bison range as the Army expands training facilities on the Ft. Wainwright portion of the herd’s summer range along the Delta River, 2) assessing the impacts of fence construction within the Delta Agricultural Project to bison

movement and hunting, 3) managing the bison hunt in a manner that retains hunter access to private land to ensure long-term success of managing the population through hunting, 4) working with owners of domestic bison to reduce the chance of domestic bison escaping and joining the wild herd, and 5) communicating with State Agricultural and Animal Health agencies and livestock producers to bring attention to the risk of potential disease transmission from domestic livestock diseases to wild bison.

BLACK BEAR

STATUS: Accurate estimates of black bear population size and trends are not available for Unit 20D due to the difficulty of enumerating black bears. However, black bears appear to be numerous in the forested portions of the unit. In the mid 1990s, a Unit 20D black bear population estimate was extrapolated using research data from adjacent Unit 20A and resulted in a Unit 20D estimate of 750. Hunting black bears is popular in Unit 20D, and bait stations are commonly used in the spring. The current hunting season is open year-round with a bag limit of 3 bears/year. Harvest averages about 17 bears/year.

MANAGEMENT ACTIVITIES: Harvest is monitored by harvest tickets and registration of black bear bait stations. Delta Area staff responds to public calls about nuisance black bears.

ISSUES: No current black bear issues.

GRIZZLY BEAR

STATUS: Accurate estimates of grizzly bear population size and trends are not available for Unit 20D because it is difficult to survey them. In 1993, a Unit 20D grizzly bear population estimate was extrapolated using research data from adjacent and similar portions of Units 20A and 20E. This calculation produced a Unit 20D population estimate of 181–210.

Since intensive management was adopted for Unit 20D in 1995, the grizzly bear hunting season and bag limit has been liberalized to August 10–June 30 with a bag limit of 1 bear/year and no resident tag fee. As part of the Unit 20D intensive management program, the Board of Game adopted an annual harvest goal of 5–15 grizzly bears/year. No population size goal has been established.

Prior to implementation of intensive management in Unit 20D, grizzly bear mortality averaged 8 bears/year. Mortality increased after hunting regulations were liberalized. Mortality (hunting, defense of life and property, nuisance bears killed on a hunting license, etc.) is meeting the Board's goal, with a mean annual kill of 11 bears/year since fall 2008.

MANAGEMENT ACTIVITIES: Harvest is monitored by requiring grizzly bear hunters to have their bears sealed. Occasionally nuisance grizzly bears threaten life and property around Delta Junction and staff is asked to address these issues.

ISSUES: Grizzly bears are an important predator on moose and caribou calves. Their role in the Unit 20D intensive management program should be regularly evaluated.

CARIBOU

Macomb Caribou Herd

STATUS: The Macomb caribou herd is small and ranges primarily in the Alaska Range foothills of southern Unit 20D. In the 1980s the herd size was 700–800. Herd size decreased in the early 1990s to a low of 458 in 1993, due to severe summer and winter weather and poor calf survival. Hunting was discontinued in 1992 but resumed in 1997.

In December 1994 the Board determined that human use of the Macomb caribou herd is the preferred use and adopted intensive management for this herd in Unit 20D. In March 1995 the Board adopted a Macomb caribou herd population goal of 600–800 with a harvest goal of 30–50/year.

When intensive management was adopted in 1995, the fall herd size was estimated to be 477, with 10 calves:100 cows and 39 bulls:100 cows. The Macomb caribou hunting season had been closed since 1992 and remained closed through 1996. A registration permit hunt resumed in 1997, and during 1997–2003 harvest averaged 30 caribou/year but the season had to be closed by emergency order most years. Regulatory changes in 2004 resulted in a registration permit with a season of August 15–25 and a harvest quota of 25, and motorized access restricted in the MPCUA and DCUA portions of the herds range. As herd size has increased in recent years, the hunting season dates were extended to August 10–27 in 2008, which allows two days of motorized hunting on August 26–27 after Delta Controlled Use Area restrictions end. The harvest quota was increased to 50 caribou/year in regulatory year 2008–2009 (RY 08), and to 70 caribou/year in RY 10, which meets the intensive management harvest objective. Harvest was 72 in RY12 and 64 in RY13. In fall 2013, the herd was meeting the population goal with an estimate of at least 1,500 caribou, and a composition of 15 calves:100 cows and 37 bulls:100 cows.

MANAGEMENT ACTIVITIES: An annual aerial population estimate and composition survey is conducted in the fall. Active radio collars are kept on 8–12 caribou to facilitate locating the herd for population estimates. Harvest is managed by registration permits.

ISSUES: The primary management issue with the Macomb caribou herd is meeting intensive management harvest goals without overharvesting a small, road accessible herd.

FURBEARER

STATUS: All furbearer species endemic to Interior Alaska are present in Unit 20D. Species of highest interest to trappers include lynx, marten, wolverine, wolf, and red fox. The most intensive trapping effort occurs along the road system in southern Unit 20D

from a combination of part-time and full-time trappers. During RY09– RY11, several indicators suggested the lynx population in GMU 20D was likely on a downward trend. These indicators were decline in harvest, decline in the proportion of juvenile lynx in the harvest, and decline in the number of hares seen during surveys. Wolverine harvest (reported) during RY09–RY11 was lower than during RY06–RY08. The reduced harvest was likely a function of a decreased trapping effort, as reported in the Trapper Questionnaire Statewide Annual Report: 1 July 2010–30 June 2011. Population status analyses remained general and incomplete for most of the furbearer populations in GMU 20D due to the lack of reproductive, harvest, and sex and age composition data. These data will continue to be lacking unless research is conducted or there are changes to regulation.

MANAGEMENT ACTIVITIES: Trappers are required to seal lynx, river otter, wolf, and wolverine. Harvest data are analyzed. A questionnaire is sent to trappers annually to assess their impression of population trends. An annual snowshoe hare population trend survey is also conducted.

ISSUES: Working with trappers to improve techniques to avoid capturing nontarget species. This is especially important for inexperienced trappers.

MOOSE

STATUS: Moose are distributed throughout about 4,400 mi² of moose habitat in Unit 20D. The Board of Game has determined that human use of moose is the preferred use and adopted intensive management with a population objective of 8,000–10,000 and a harvest objective of 500–700 moose/year. The fall 2011 Unit 20D population estimate south of the Tanana River is 4,134 (2.2 moose/mi²), with a calf:cow ratio of 35 calves:100 cows and a bull:cow ratio of 30 bulls:100 cows. The fall 2012 population estimate in northern 20D was 2,406 observable moose and the population composition was 13 calves:100 cows and 59 bulls:100 cows. Preliminary Unit 20D moose harvest for RY13 is 185. The majority of moose and harvest occur in southern Unit 20D.

Antlerless moose hunting was initiated in fall 2006 in southwestern Unit 20D when southern Unit 20D was estimated to have 7,406 moose (3.9 moose/mi²). Moose density was highest west of the Johnson River (5.6 moose/mi²). The calf:cow ratio was 41 calves:100 cows and the bull:cow ratio was 21:100. An abundance of good habitat was created in southwestern Unit 20D in the last 15–30 years from land clearing and several large wildfires which produced an abundance of high quality moose forage, thus stimulating growth in the moose population. Moose browse surveys conducted in spring 2007 indicated that moose were removing 25% of the current annual growth over the winter. Moose twinning rates were moderately low, averaging 24% over the previous 2 years. Consequently, antlerless moose hunts for cows without calves were initiated in southwestern Unit 20D during 2006–2009. The area was subdivided into 3 hunt zones which were managed with a combination of drawing and registration permit hunts. Moose browse surveys conducted in spring 2010 indicated that removal of current annual

growth by moose was reduced to 15%. The twinning rate in Unit 20D has exhibited an increasing trend since 2009. The 2013 twinning rate was 26%.

The general moose hunting season in southern Unit 20D is September 1–15, with a bag limit east of the Johnson River of 1 bull and a bag limit west of the Johnson River of 1 bull with spike/fork or 50-inch antlers or at least 4 brow tines on 1 side. A 278 mi² area surrounding Delta Junction is managed as the DJMA where hunting is by drawing permit, with a maximum of 30 permits authorized. Ten drawing permits are also issued for a 6,380-acre portion of the DJBR managed as the Bison Range Youth Hunt Management Area (BRYHMA) to reduce disturbance from moose hunters to the Delta bison herd and DJBR management activities. Each BRYHMA hunter is assigned a 4-day hunt period centered on the first 3 weekends in September. The bag limit is 1 moose per lifetime: either 1 bull with spike/fork or 50-inch antlers or at least 4 brow tines on 1 side, or 1 cow without a calf.

The general moose hunting season in northern Unit 20D is September 1–15 for 1 bull west of the Volkmar River drainage and September 1–20 from the Volkmar River drainage east. The Healy River drainage has an additional hunting season of August 15–28 for a bull with spike/fork antlers to allow residents of Healy Lake village additional opportunity to harvest moose to meet their community needs before the waterfowl hunting season opens in the area. Access for hunters is good along the Richardson Highway and several major rivers, but poor away from them.

MANAGEMENT ACTIVITIES: We conduct annual aerial surveys to estimate population size and composition. Aerial surveys are flown in spring to estimate twinning rates in southwestern Unit 20D where moose densities are highest. ADF&G research staff began a project in October 2009 to assess moose movements, short yearling weights, and sightability of moose during aerial surveys in southwestern Unit 20D. Data collection is on-going. We conduct periodic evaluations of browse in southwestern Unit 20D to assess the extent of habitat utilization by moose. Moose population health is monitored opportunistically by sampling tissue and blood from live moose and mortalities for laboratory analysis. We also provide input to Alaska Division of Forestry on how wildfire can affect moose habitat. Public meetings are held to gather comments about moose management and regulations. Signs are posted along the road system to provide moose hunting regulation information to hunters. We address nuisance moose concerns in the Delta Junction area.

ISSUES: The primary issue is managing a high density moose population in southern Unit 20D west of the Johnson River, while much of the high quality habitat created in the last 30 years is aging and will decline in quality in coming years. Therefore, antlerless moose hunts have been conducted in this area as part of the intensive management program, and additional hunts will likely be conducted in the future. An antlerless moose hunt also helps meet the harvest objective. There is some hunter dissatisfaction with the antler restriction regulations in southwestern Unit 20D. There is potential for the transmission of domestic livestock diseases to moose.

SHEEP

Eastern Alaska Range: Delta Controlled Use Area

STATUS: The Delta Controlled Use Area (DCUA) is 1,495 mi² in Units 20D, 13B, and 20A. It was established in 1971 to provide a walk-in hunting opportunity and uncrowded conditions for Dall sheep hunters. Objectives for the DCUA are to manage for a population of 1,800 sheep, with a mean annual harvest of 35 full-curl rams with a mean horn length of 36 inches and mean age exceeding 8 years.

The Dall sheep population in the DCUA was estimated at 1,700 sheep in 2010, slightly below the population objective. The DCUA hunt is split into two drawing permit hunts. The first season, during August 10–25 is for nonmotorized access. The second season, during August 26–September 20 allows motorized access. Seventy-five permits are issued for each season. Hunters have killed an average of 42 sheep/year the last 3 years, exceeding the harvest objective.

MANAGEMENT ACTIVITIES: Aerial surveys are flown to collect data on the number of sheep and their sex and age composition. Sheep population health is monitored opportunistically by examining carcasses and sampling tissue from mortalities for laboratory analysis. Two drawing permit hunts are administered for Dall sheep hunters in the DCUA.

ISSUES: The primary management issues are protecting Dall sheep habitat from development and preventing the transmission of diseases from livestock to the Dall sheep population.

Mt. Harper–Goodpaster River

STATUS: The Mt. Harper–Goodpaster River sheep population in northern Unit 20D is a small population of approximately 100 animals that occupy about 240 mi² of sheep habitat in the Tanana Hills on the boundaries of Unit 20D with Unit 20B on the north and Unit 20E on the west. These sheep comprise several small subpopulations that persist at low density, separated by areas of unsuitable habitat. Hunting this area is limited by issuing only 4 drawing permits annually for 1 ram with full-curl horns or larger. Three sheep have been harvested in this area in the last 3 years.

MANAGEMENT ACTIVITIES: Aerial surveys are flown to collect data on the number of sheep and their sex and age composition. Hunting is regulated in most of the area by drawing permit, and harvest outside of the drawing permit area is monitored by harvest tickets.

ISSUES: Managing a sustainable harvest for this small population of sheep.

SMALL GAME

STATUS: Small game species of highest interest to hunters in 20D include ruffed grouse, sharp-tailed grouse, spruce grouse, and snowshoe hare. Ptarmigan are also present in 20D, but are pursued by hunters less than the other small game species. Unit 20D is a popular small game hunting destination for grouse hunters from throughout the state. Development of the private agricultural lands and wildfires in southern Unit 20D have improved habitat for ruffed and sharp-tailed grouse.

MANAGEMENT ACTIVITIES: Ruffed grouse drumming counts and sharp-tailed grouse lek surveys are conducted to estimate abundance and population trend. Habitat improvement for ruffed grouse has been conducted on the DJBR.

ISSUES: Developing habitat improvement techniques for ruffed and sharp-tailed grouse to replace the natural wildfire regime in southern Unit 20D is an important issue.

WOLF

STATUS: Wolves are present throughout Unit 20D. The current population estimate is 100–115 in 12 packs.

The Board of Game has determined that human consumption of moose and caribou is the preferred use for these species and has implemented intensive management in Unit 20D. In March 1995, the Board of Game established a population objective of 15–125 wolves in Unit 20D. The broad range was necessary to allow temporary reduction of the wolf population to low levels if needed to stimulate prey population increases. The Board also extended the wolf trapping season. In October 1995, the Board adopted a wolf predation control implementation plan for Unit 20D. A portion of northern 20D is in the Upper Yukon–Tanana wolf control area.

The wolf hunting season is August 10–May 31 with a bag limit of 5 wolves. The trapping season is October 15–April 30 with no bag limit. Harvest of wolves varies annually and has averaged 25 wolves/year during RY10–RY12, with most taken by trapping.

MANAGEMENT ACTIVITIES: Trappers and hunters are required to have wolves sealed to monitor harvest. Population size is estimated from aerial surveys, harvest data, and trapper interviews.

ISSUES: Wolves are important predators on moose and caribou and thus their role in the Unit 20D intensive management program and in the Fortymile Caribou Recovery Program will be monitored closely.

OTHER ISSUES

Forestry: Delta staff cooperates with Alaska Division of Forestry to implement timber sales, wildland fire policies and wildfire management practices to benefit wildlife.

Mining: A major gold mine, the Pogo Mine, has been developed in the Goodpaster River drainage of northern Unit 20D. A road with no public use allowed was built to access the mine in this previously roadless area. Department staff will monitor the increased activity and development in this roadless area and any changes in wildlife resource use that may result.

Domestic and Exotic Livestock Production: Domestic and exotic livestock being raised in the Delta Junction area include cattle, yak, horses, sheep, hogs, bison, elk, and reindeer, with smaller numbers of other livestock such as goats and domestic fowl. Proximity and interactions between wildlife and domestic livestock create the potential for pathogen transmission, competition for space and food, and predation.

Military Activity: The National Missile Defense Site is being developed on Ft. Greely Military Reservation, and the Army is developing a Stryker force training area on the Ft. Wainwright Donnelly Training area. The influx of people associated with these projects will place an increasing demand on wildlife resources. Continuing expansion of military training facilities is encroaching on wildlife habitat and particularly bison migratory routes. Ft. Greely currently is located within an area of high quality moose habitat with a high density of moose. The presence of moose on the Allen Army Airfield on Ft. Greely continues to be a risk to aircraft safety, and it is important to resolve the issue of open gates that allow moose access to the airfield.

Game Management Unit 20D

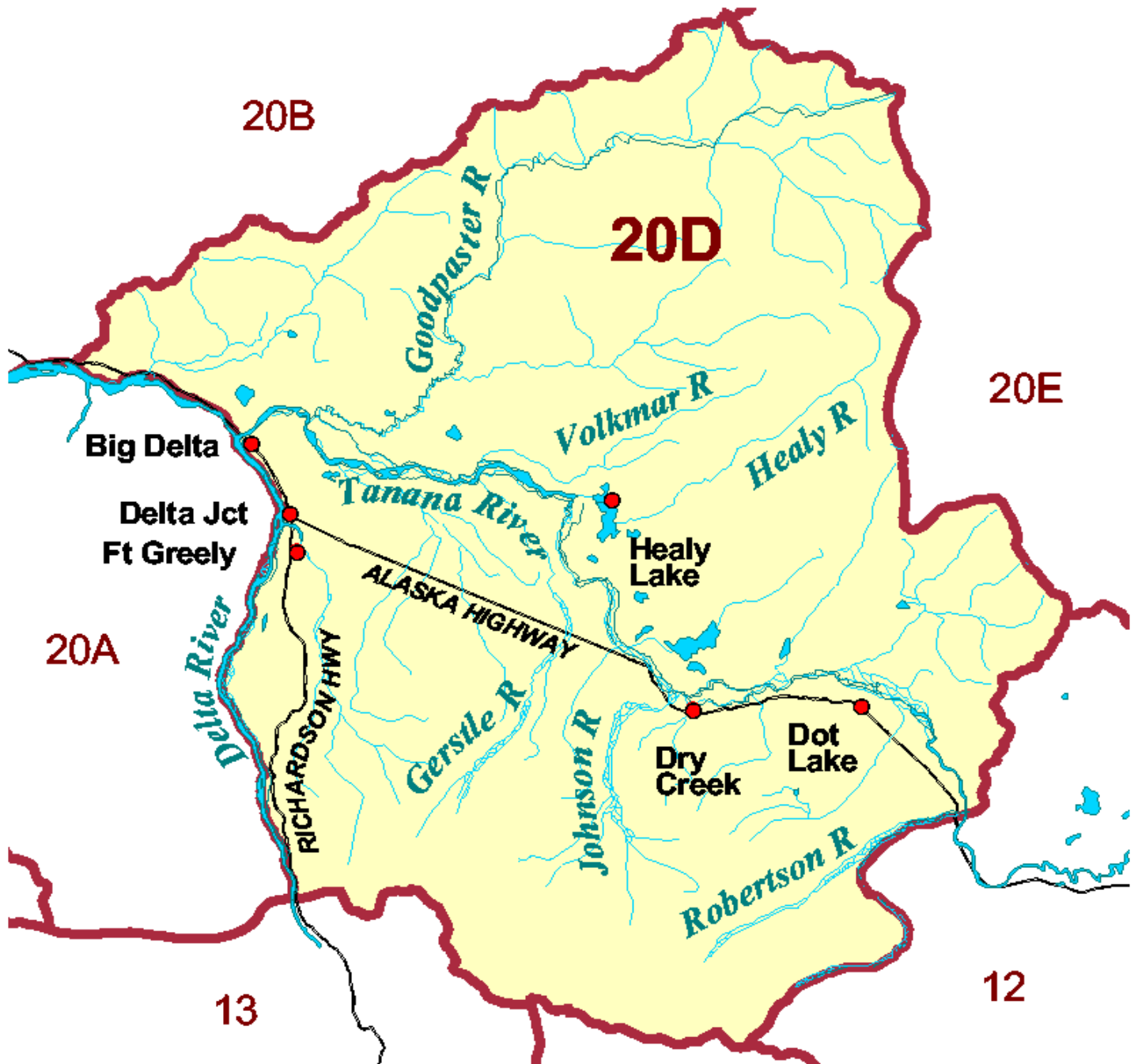


Figure 1. Game Management Unit 20D.

GMU 20D Special Use Areas

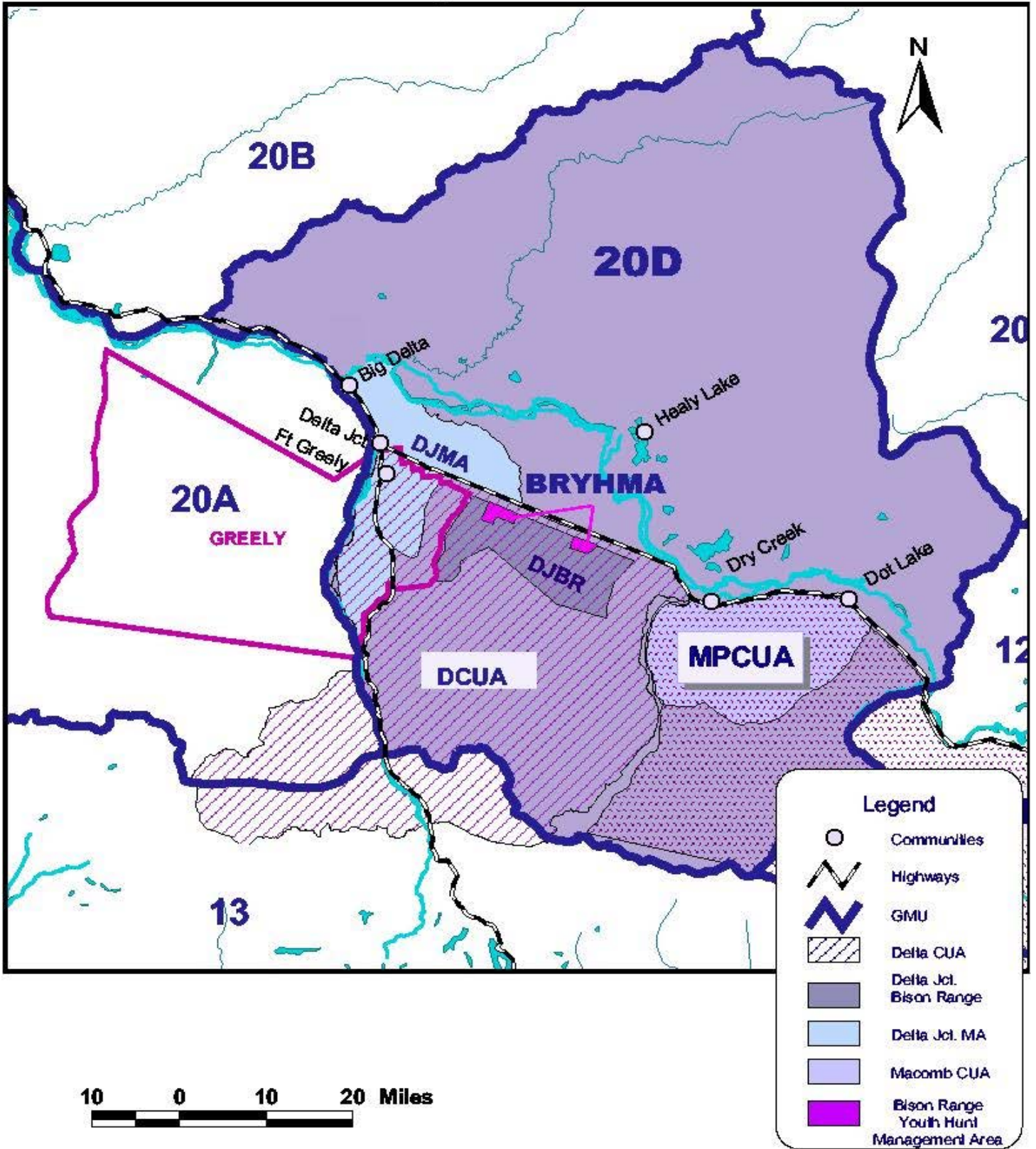


Figure 2. Game Management Unit 20D special use areas.