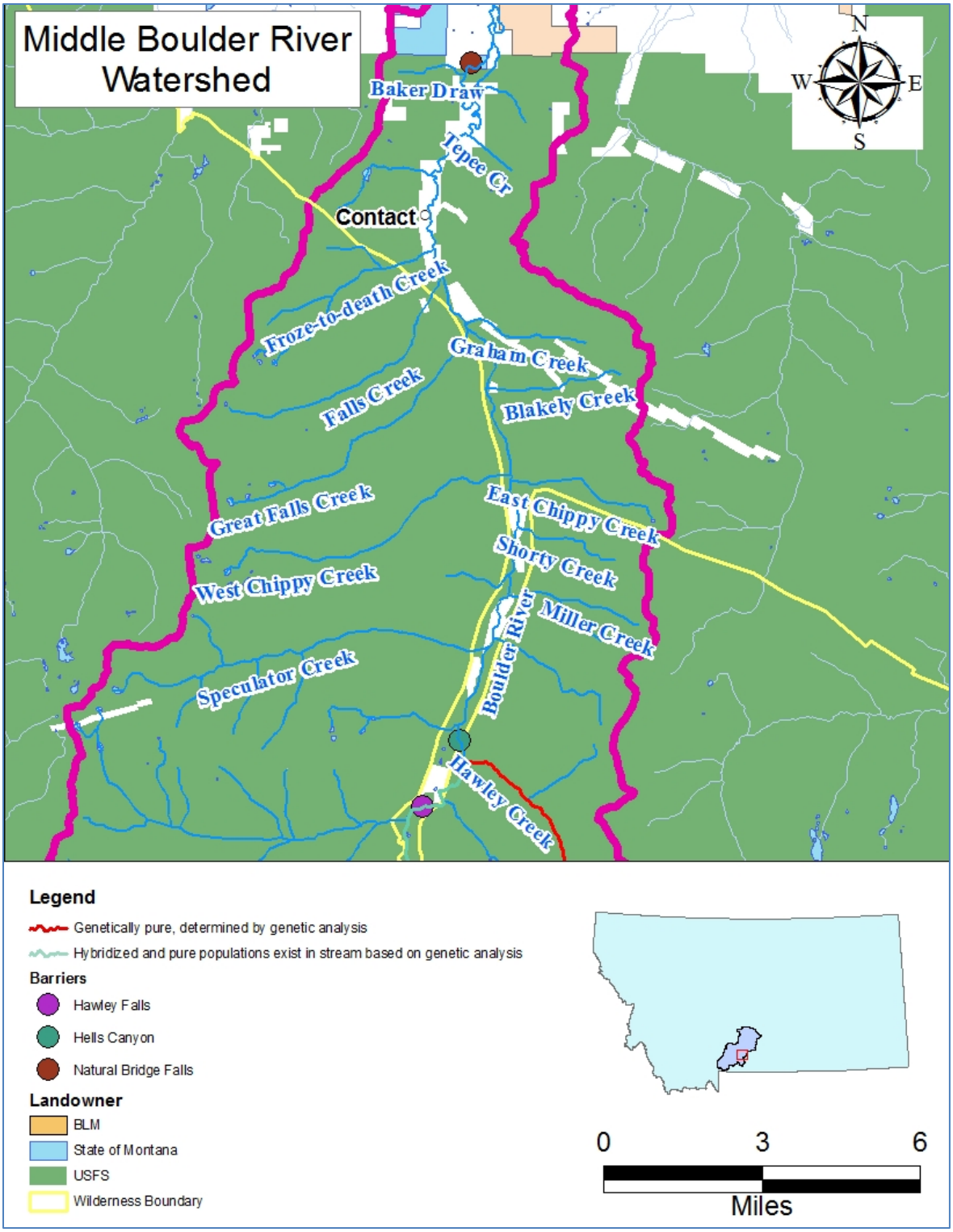

Figure 6-22: Boulder River watershed between Hawley Falls and Natural Bridge Falls

West Chippy (Weasel) Creek

West Chippy Creek (Figure 6-22), also known as Weasel Creek, flows about 6.5 miles through very steep terrain from its headwaters to the Boulder River. Of the eight lakes in the drainage, two support Yellowstone cutthroat trout, owing to fish stocking beginning in 1979. The extent of the Yellowstone cutthroat trout population in the creek is unknown, but is likely limited due to the stream's small size and steep gradient. Further investigation is necessary to characterize this population. Electrofishing sampling near the mouth of the creek in 2009 resulted in the capture of numerous rainbow trout and brook trout and a few Yellowstone cutthroat trout (J.R. Wood, FWP, personal communication). The rainbow and brook trout had likely moved upstream from the Boulder River, while the Yellowstone cutthroat trout may have moved downstream from areas of the creek inaccessible from below.

Great Falls Creek

Three lakes form the headwaters of Great Falls Creek (Figure 6-22), which flows about 6 miles before entering the Boulder River. The lowermost lake, Great Falls Creek Lake #55, has been stocked with Yellowstone cutthroat trout since 2007 in an effort to replace a small rainbow trout population through genetic swamping. A combination of rainbow trout, Yellowstone cutthroat trout and hybrid fish may occur in the creek, but future survey work would be necessary to determine their extent. Great Falls Creek Lake # 53 and 54 are likely fishless, and their ability to support fish is unknown.

Falls Creek

Falls Creek (Figure 6-22) flows for about 5 miles before its confluence with the Boulder River. Falls Creek is likely too small and steep to support a fish population throughout most of its length. In 2003, electrofishing near the mouth of the Boulder River yielded only rainbow trout (Olsen 2003).

Froze-to-Death Creek

Froze-to-Death Creek (Figure 6-22) is a small tributary to the north of Falls Creek. Froze-to-Death Creek is likely too small and steep to support a fish population throughout most of its length. Rainbow trout were the only species captured in the creek near the mouth of the Boulder during electrofishing sampling in 2003 (Olsen 2003).

West Boulder River

The West Boulder River (Figure 6-23) flows approximately 30 miles and joins the Boulder River in the town of McLeod, MT. In its lower reaches, brown trout dominate the fish community, and rainbow trout and mountain whitefish are present in low densities. Further upstream, rainbow trout, Yellowstone cutthroat trout, and rainbow × Yellowstone cutthroat trout hybrids become more common. Fish are present from the mouth of the West Boulder River upstream to what is likely a fish passage barrier just upstream from the mouth of Falls Creek. Above this probable barrier, an estimated minimum of 4 to 6 miles of suitable, high-quality habitat exists, but this reach is likely fishless. If introduced to the creek, a new Yellowstone cutthroat trout population

would likely thrive, particularly in the slow-moving meadow reaches. An obstacle to introducing Yellowstone cutthroat trout introduction into the upper West Boulder River is the potential conflict with wilderness values. Future work on the main stem of the West Boulder River should focus on identifying the distribution of Yellowstone cutthroat trout, assessing their genetic purity, and determining the effectiveness of the probable barrier in blocking upstream movement of fish.

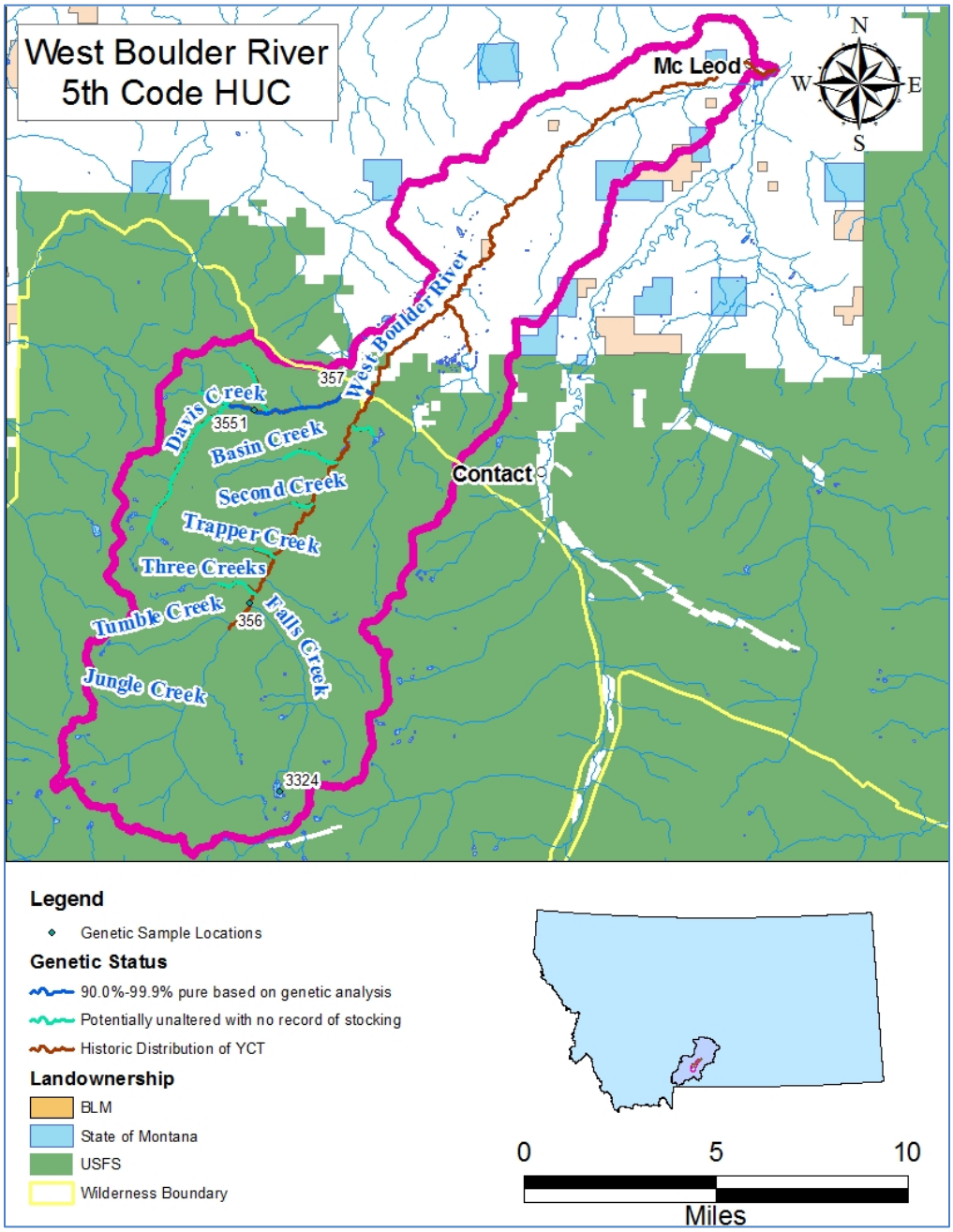

Figure 6-23: Distribution of Yellowstone cutthroat trout in the West Boulder Watershed (FWP GIS database).

Four fish-bearing lakes drain into the main West Boulder River. Kaufman and West Boulder lakes are at the head of Falls Creek, which flows 6 miles before reaching the West Boulder River. West Boulder Lake is the uppermost lake and contains a stocked population of Yellowstone cutthroat trout. Golden trout were stocked here in 1958, but recent genetics results show that the fish currently residing in the lake are nonhybridized Yellowstone cutthroat trout. Just down from West Boulder, Kaufman Lake contains a self-sustaining population of Yellowstone cutthroat trout. Kaufman was stocked with golden trout in 1958 as well, but similar to West Boulder Lake, genetic analyses indicate this lake supports nonhybridized Yellowstone cutthroat trout. Yellowstone cutthroat trout may move downstream and reside in Falls Creek, but its steep nature likely prevents them from thriving here. Future survey work may better evaluate the presence and abundance of Yellowstone cutthroat trout in Falls Creek.

Alpine Lake contains a stocked population of Yellowstone cutthroat trout and drains into the Three Creeks then the West Boulder River, just downstream of Falls Creek. Below Three Creeks, the outlet of Icicle Lake drains into the West Boulder. Icicle Lake contains a self-sustaining population of rainbow trout whose origin is unknown (no stocking history is available). Restoration of a Yellowstone cutthroat trout population in the West Boulder River near Icicle Lake would require removal of these fish, as they likely contribute to downstream movement of rainbow trout into the West Boulder River.

Davis Creek

The largest tributary to the West Boulder River is Davis Creek (Figure 6-23), flowing about 9.5 miles and entering the West Boulder just below the wilderness boundary. In the lower 2 to 3 miles of the creek, a barrier to upstream fish passage apparently keeps fish downstream from colonizing most of Davis Creek. Upstream from this barrier, a nonhybridized population of Yellowstone cutthroat trout exists in the creek. This population is likely present because of past stocking of lakes in the drainage.

The Davis Creek drainage contains four fish-bearing lakes. Davis Lake, at the head of the drainage, was stocked with Yellowstone cutthroat trout in 1934, which is likely the origin of the Yellowstone cutthroat trout population in Davis Creek. The lake now contains a self-sustaining population of Yellowstone cutthroat trout. Lower in the drainage, Blacktail Lake was stocked with Yellowstone cutthroat trout beginning in 1945, and stocking continues periodically. Near Davis Lake, McKnight and Upper McKnight lakes contain a stocked population of golden trout, most recently stocked in 2005. Although the outlet of these lakes would certainly discourage downstream movement of golden trout, there is potential for golden trout to move downstream and hybridize with Yellowstone cutthroat trout in Davis Creek, thus compromising this nonhybridized population. Therefore, plans call for discontinuing golden trout stocking in the McKnight lakes.

East Boulder River

The East Boulder River (Figure 6-24) flows over 20 miles from its headwaters to the confluence with the Boulder River. The lower ¼ of the watershed is in private ownership. The remaining is in the GNF, with a small portion of the extreme headwaters being within the Absaroka-Beartooth Wilderness.

For planning purposes, the East Boulder River can be broken into two segments. The lower segment begins at the mouth of the river and extends upstream to about the mouth of Brownlee Creek. This portion of river is large with relatively low gradient, and provides high quality fish habitat. Brown trout, rainbow trout, and brook trout are common, with an occasional Yellowstone cutthroat trout dropping down from upstream. The stream is chronically dewatered during most years. The only major tributary that enters the East Boulder in this area is Elk Creek, a small stream that flows for several miles and contains brown, rainbow and brook trout. Dry Fork Creek and Burnt Gulch are likely too small to support fish populations, although fish surveys are needed to verify their status. Canyon Creek is very small and steep, but may contain some Yellowstone cutthroat trout that drop down from Camp Lake. Camp Lake is the only fish-bearing lake in the East Boulder drainage. The origin of the fish in Camp Lake is unknown, but the lake contains a self-sustaining population of Yellowstone cutthroat trout.

Yellowstone cutthroat trout are the only fish occupying the upper segment of the East Boulder, extending from the mouth of Brownlee Creek to the headwaters. Near the mouth of Brownlee Creek, a large series of cascade waterfalls prevents upstream passage of fish. The East Boulder River upstream of here was historically fishless until being stocked with Yellowstone cutthroat trout from 1970 to 1972. The area, which is also known locally as Placer Basin, now contains a healthy, self-sustaining population of Yellowstone cutthroat trout that is not threatened by nonnative fish species. Forge Creek, a tributary to East Boulder Creek in Placer Basin, also contains Yellowstone cutthroat trout in its lower reaches.

The Stillwater Mine is within the East Boulder Creek watershed and mining activities have the potential to affect water quality and fish habitat. A monitoring program that evaluates fish, macroinvertebrates, and water quality is in place. Likewise, a mitigation plan has been developed to address any adverse effects of the mining operation on fish, water quality, and in-stream habitat.

Because of connectivity with the main stem of the Boulder River and the abundance of nonnative trout, opportunities to restore Yellowstone cutthroat trout in this reach are limited. The upper segment, which supports nonhybridized Yellowstone cutthroat trout, does have potential for maintenance of a core population of Yellowstone cutthroat trout. Continued monitoring of this population is the primary relevant conservation action.

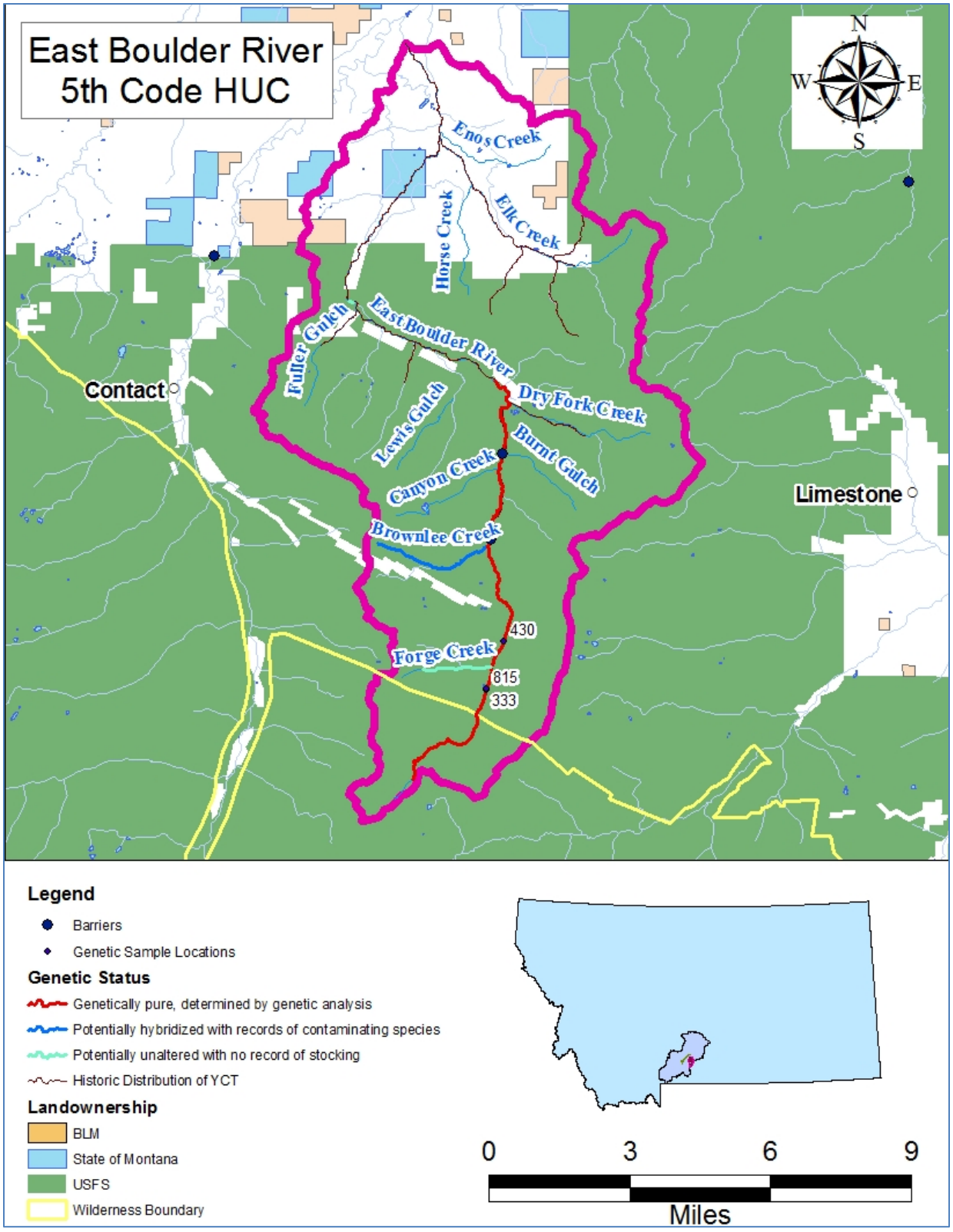

Figure 6-24 East Boulder River 5th order HUC.