

Hydrology and Geology of the Black Hills

THE BLACK HILLS IS AN ISLAND of mountains surrounded by western short-grass prairie. Home to "clear, cool and pure" streams as noted by Lt. Col. R. "Irving" Dodge, US Army 1876, the "Hills" were created by an igneous uplift. The higher elevation central portion of the Black Hills is a crystalline core surrounded by a porous limestone ring. Springs flow from high elevations and gain water as they flow downstream. As the streams flow outward, they cross the limestone ring where they lose much of their water. Most streams are completely dry as they leave the Black Hills Trout Management Area.

Only a handful of natural lakes occur in western South Dakota. Except for Mirror #1, Mud, Bear Butte and Cox lakes, all of the lakes in the Black Hills are man-made reservoirs.

Black Hills Trout Management Area

Trout Management

The Black Hills provide ideal conditions for trout. The majority of streams contain self-sustaining wild populations of brown and brook trout. Little or no natural reproduction takes place in reservoirs, making annual stockings necessary. Less than 10 percent of the stream mileage in the Black Hills is stocked.

Black Hills trout waters are managed to provide fishing for a variety of anglers. Reservoirs provide opportunity for anglers seeking family fishing outings, while special management areas provide anglers the chance to catch large trout. Fishing pressure is low in the Black Hills. Anglers will find themselves alone on many streams and ponds. Low angler pressure allows for a year-round season on all waters.

BROOK TROUT

Brook trout are primarily found in small streams and beaver ponds at higher elevations. Notable exceptions are Deerfield Lake and Castle Creek, where large brook trout are found. All brook trout

in the Black Hills are wild.

BROWN TROUT

Brown trout management focuses on development of wild fisheries. Catchable brown trout are stocked in stream reaches where angler pressure is high or where low flows occur frequently. Most streams that exhibit frequent low flows are near the outer ring of limestone surrounding the Black Hills. Low flows once every five

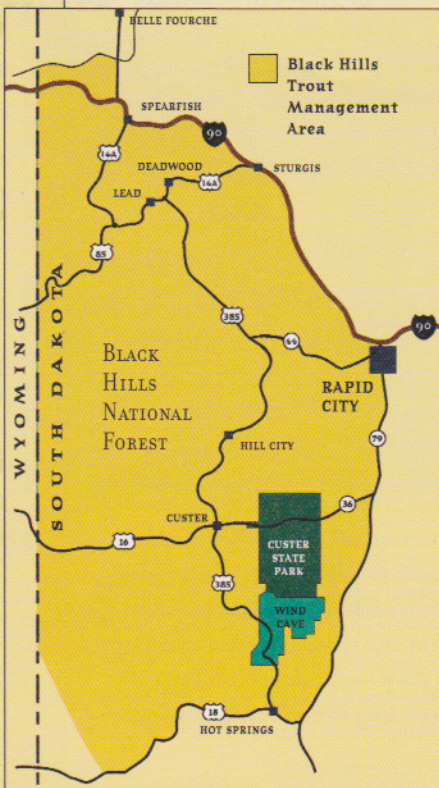
years is enough to preclude development of wild fisheries with adequate numbers of trout large enough to provide angling.

RAINBOW TROUT

Rainbow trout are primarily stocked in reservoirs. Fingerlings are stocked in larger reservoirs to create fisheries within three years. Larger, catchable trout are stocked in smaller reservoirs where fishing pressure is extremely high. Stocking takes place annually to maintain quality fishing.

HABITAT IMPROVEMENT

Stream and reservoir habitat projects are conducted to upgrade conditions for trout and anglers. Habitat improvement in streams increases holding cover that allows for higher densities of trout per unit area. Over 58 miles of stream have been improved since 1976. Habitat work in lakes is typically directed toward structural repair and silt removal.



DON'T BE THE ONE...

TROUT IN THE BLACK HILLS Trout Management Area have not yet been affected by outbreaks of WHIRLING DISEASE. Anglers who fish outside the Black Hills should take extreme care to clean equipment such as waders, felt sole wading shoes and float tubes of all mud and debris before fishing in the Black Hills. WHIRLING DISEASE is caused by a microscopic protozoan parasite that destroys the cartilage of juvenile trout, causing skeletal deformities and the erratic swimming behavior exhibited by infected trout. Neighboring states of Colorado, Montana and Wyoming have confirmed infestations of WHIRLING DISEASE, which in some cases has caused severe declines in rainbow trout populations. No cure for WHIRLING DISEASE is known.