EXECUTIVE SUMMARY AND CONCLUSIONS

Coal

Coal resources are addressed in separate reports, and the potential for the occurrence of coal and the likelihood of development are not considered herein.

Oil and Gas

Most of the planning area is rated as high potential for the occurrence of oil and gas. A recent discovery of oil near Richfield has promoted an increased interest in leasing and exploration. Development is considered likely in the vicinity of the Sevier and Sanpete Valleys and the Wasatch Plateau.

Coal Bed Methane

High potential for the occurrence of coal bed methane is assigned to the Ferron Trend on the Wasatch Plateau. Moderate potential is assigned to the central part of the Wasatch Plateau and to the west of the Henry Mountains. Low potential is assigned to other areas with coal beds, but limited information on the extent of the coal beds or due to the depth of the coal beds. Development is considered likely in the vicinity of the Wasatch Plateau in association with the Ferron Trend.

Tar Sands

Two defined tar sand locations are delineated at the Tar Sand Triangle Special Tar Sand Area in eastern Wayne and Garfield Counties and the Circle Cliffs Special Tar Sand Area that overlaps Capitol Reef National Park, and a high potential for occurrence is assigned to these two areas. Discontinuous deposits, primarily near Torrey and Thousand Lake Mountain, are assigned a moderate potential. Tar sand development is unlikely within the planning area during the planning horizon.

Geothermal Resources

High and moderate potential for the occurrence of the geothermal resources are assigned to the western part of the planning area with the high potential centered on volcanic and faulted terrains in the vicinity of the Sevier and Sanpete Valleys and Marysvale. The eastern part of the planning area is considered low potential. Geothermal resources are considered to be unlikely to be developed in the planning area in the next 15 years.

Metals

High potential for the occurrence of metals is assigned to the volcanic terrain in the western part of the planning area, which is associated with abundant mineral occurrences, including uranium, gold, silver, lead, and zinc, as well as historic and recent prospecting and/or mining. High potential is assigned to the eastern part of the

planning area, primarily for gold and copper associated with intrusive zones, placer gold, and sandstone-hosted uranium and vanadium deposits.

Currently, the Deer Trail mine is under development near Marysvale. This mill could promote prospecting and exploration for base and precious metals. Market conditions do not appear favorable for the development uranium and vanadium. Large-scale development of metals is considered to be unlikely during the planning horizon; however, small-scale prospecting, exploration, and development are considered likely.

Gypsum

Gypsum has a high potential for the occurrence of such deposits in the Sanpete and Sevier Valleys and in the eastern part of the planning area. Mining of gypsum is likely to continue near Sigurd and could include exploration and development on public lands. Exploration and development for gypsum in the eastern part of the planning area is considered unlikely, except at Cathedral Valley, where prospecting and small-scale mining for selenite crystals is considered likely.

Humates

High potential for the occurrence of humates is assigned to the eastern part of planning area near Factory Butte and to the eastern side of the Wasatch Plateau, where humates are associated with the outcrop of the Ferron Sandstone. Moderate and low potential are assigned to other areas with known or inferred coal beds of the Ferron Sandstone. Mining of humates on a limited scale currently occurs near Factory Butte, and such mining is likely to continue periodically during the planning horizon. Development in other areas with assigned high, moderate, or low potential is considered unlikely within the planning area during the planning horizon.

Clay Including Alunite

In the western part of the planning area, clay and alunite deposits are generally associated with altered volcanic rocks, and high potential is assigned to a broad region where clays have been reported or mined and the geologic setting is favorable for clay. In the eastern part of the planning area, high potential for the occurrence of clay is assigned in association with outcrop of the Morrison Formation and the Dakota Sandstone.

Two active clay mines are at Box Creek on the Sevier Plateau on Fishlake National Forest System land and the Redmond clay mine, north of Redmond on private land. One large disposal was authorized by BLM in the 1980s near Ticaboo. Otherwise, development has been periodic on a limited scale. Small-scale, periodic development is likely to continue in the planning area during the next 15 years.

Sand and Gravel

High potential for the occurrence of sand and gravel is assigned to the larger valleys and alluvial fan deposits throughout the planning area. Otherwise, moderate potential is assigned as sand and gravel in various deposits are found in many settings in the planning area. Development of sand and gravel has been mostly along highways in the valleys, and the State Department of Transportation and county road departments have been the largest-volume users of sand and gravel resources on public lands.

Stone

Stone is associated with various formations and has been used for various purposes, including building stone, decorative stone, riprap, coal-rock dust, and cement rock. In the western part of the planning area, high potential for the occurrence of stone is assigned near the population centers in the valleys. Various formations, including the Joe Lott Tuff, Green River Formation, and Flagstaff Formation, have been used for stone disposal. In the eastern part of the planning area, high potential is assigned to sandstone in the Moenkopi Formation and Navajo Sandstone in the vicinity of Torrey. In addition, field stone is utilized, mainly near the population centers, by local residents as a landscape rock, and these areas have been rated as high potential. Otherwise, as stone is ubiquitous to most formations with sandstone, limestone, and volcanic rocks, high potential could be assigned to most of the planning area; however a moderate potential is assigned, since demand has not been present in those areas.

Development has included relatively small quarries that are generally active on a periodic basis. Most of the development related to quarries and pick up of field stone has been relatively close to highways and other roads. The largest quarries are developed on stone of the Moenkopi Formation, which are primarily on public lands and the Green River Formation, which are primarily on private and state lands. Development is likely to continue at multiple quarries and dependent upon changing demands in the market.

Salt

High potential for the occurrence of salt is assigned to the Sevier and Sanpete Valleys and to eastern Wayne and Garfield Counties. This assignment is based upon known and inferred salt-bearing strata in the Arapien Shale in the Sevier and Sanpete Valleys and in the Paradox Formation in the eastern Wayne and Garfield Counties. The Arapien Shale crops out at the surface, and although salt at the surface erodes readily, salt deposits are inferred to be present in the subsurface. One operating mine exists near Redmond on private land. Salt-bearing strata in the Paradox Basin in the eastern part of the planning area are not exposed at the surface and are at considerable depth in the subsurface. Development of salt deposits on public land is considered unlikely within the planning horizon.