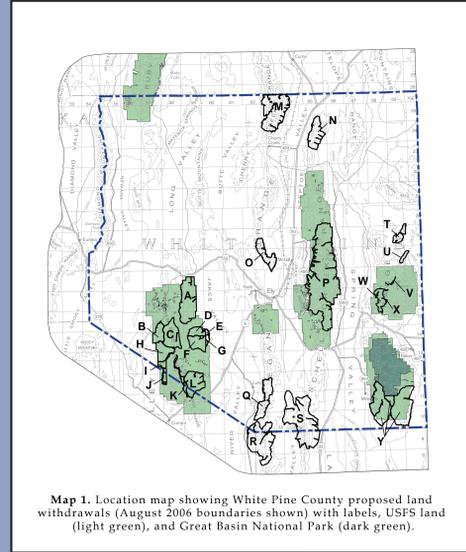
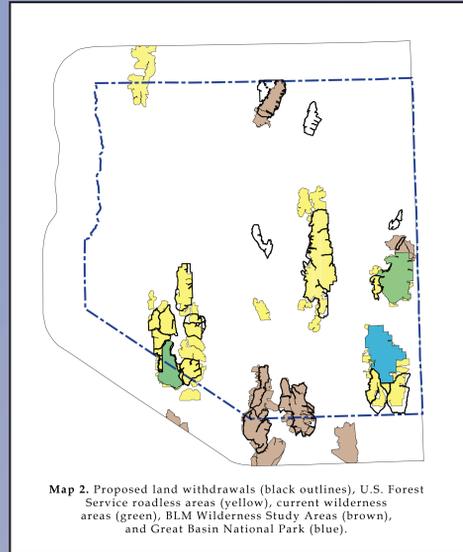


# MINERAL- AND ENERGY-RESOURCE POTENTIAL FOR WHITE PINE COUNTY, NEVADA

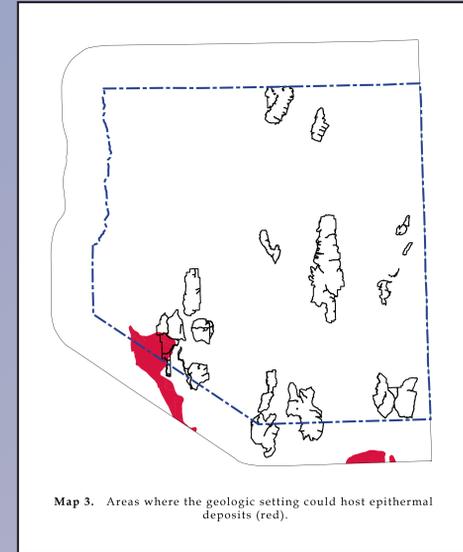
This poster illustrates where proposed land withdrawals in White Pine County coincide with areas of mineral- and energy-resource potential as determined in assessments made by the U.S. Geological Survey (USGS), the Nevada Bureau of Mines and Geology (NBMG), and others. Maps 3, 4, and 5 are from USGS assessments of favorable tracts for three broad types of metallic ore deposits, and Map 6 is a composite of these three maps. Map 7 is from an NBMG assessment of metallic and non-metallic mineral resources. Map 8 is an NBMG evaluation of geothermal resource potential. Map 9 is from an NBMG assessment of potential for discovery of petroleum resources. Maps 10, 11, and 12 illustrate potential for wind, biomass, and solar energy use. The table indicates which resources are likely to occur in each of the proposed areas of land withdrawal. This poster is available in PDF format at [www.nbmng.unr.edu](http://www.nbmng.unr.edu) under online documents, Open-File Report 06-5. This information is provided by the Nevada Bureau of Mines and Geology (Jonathan G. Price, Larry J. Garside, Ronald H. Hess, Lisa Shevenell, John Muntean) and the Nevada Division of Minerals (Christy Morris, Alan Coyner) to assist in factoring mineral- and energy-resource potential into decisions regarding land withdrawals and future economic development.



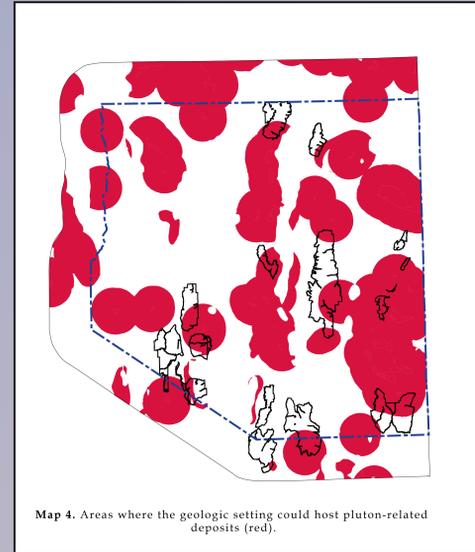
Map 1. Location map showing White Pine County proposed land withdrawals (August 2006 boundaries shown) with labels, USFS land (light green), and Great Basin National Park (dark green).



Map 2. Proposed land withdrawals (black outlines), U.S. Forest Service roadless areas (yellow), current wilderness areas (green), BLM Wilderness Study Areas (brown), and Great Basin National Park (blue).



Map 3. Areas where the geologic setting could host epithermal deposits (red).



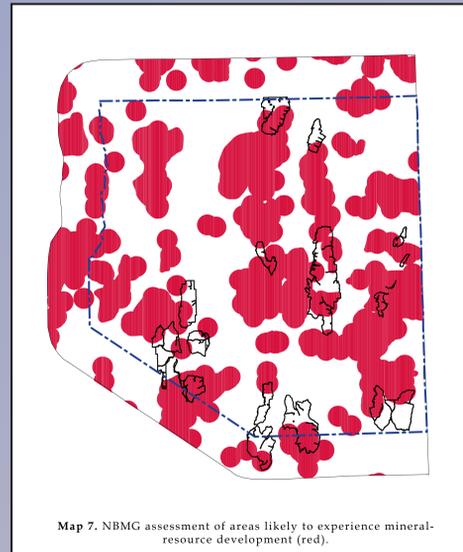
Map 4. Areas where the geologic setting could host pluton-related deposits (red).



Map 5. Areas where the geologic setting could host deposit types not related to plutonic activity (red).



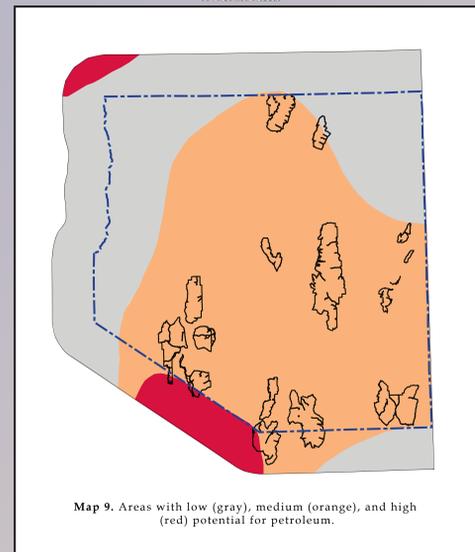
Map 6. Areas where the geologic setting could host metal-bearing mineral resources, derived by combining Maps 3, 4, and 5.



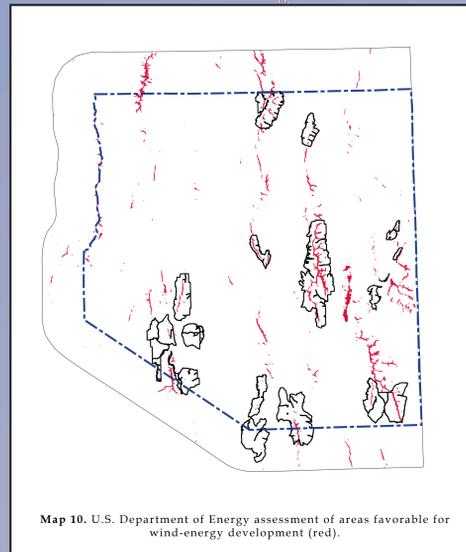
Map 7. NBMG assessment of areas likely to experience mineral-resource development (red).



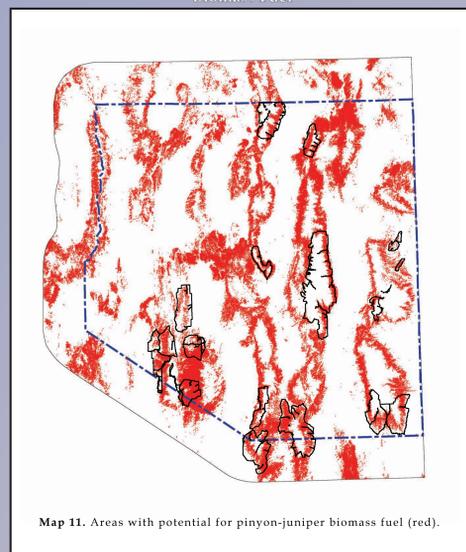
Map 8. NBMG assessment of areas of greatest potential for geothermal development (red).



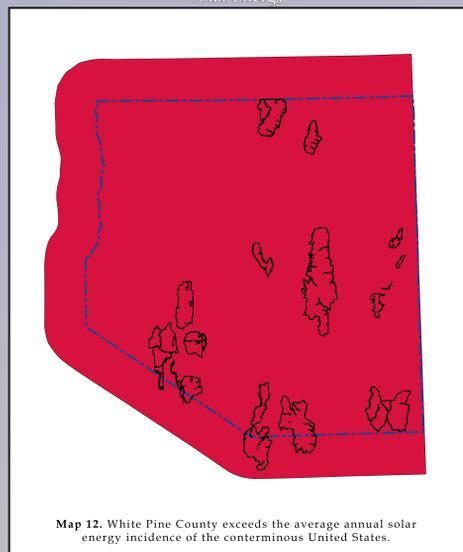
Map 9. Areas with low (gray), medium (orange), and high (red) potential for petroleum.



Map 10. U.S. Department of Energy assessment of areas favorable for wind-energy development (red).



Map 11. Areas with potential for pinyon-juniper biomass fuel (red).



Map 12. White Pine County exceeds the average annual solar energy incidence of the conterminous United States.

**Table 1. Areas favorable for mineral and energy resources within proposed land withdrawals.**

Area (See Map 1)	Mineral		Geothermal	Oil	Wind	Biomass	Solar
	Map 6	Map 7	Map 8	Map 9	Map 10	Map 11	Map 12
A Shellback	Yes	Yes	Yes	Medium	Yes	Yes	Yes
B White Pine Range - Lampsen Canyon	Yes	Yes	Yes	Medium	Yes	Yes	Yes
C White Pine Range - Sivmille	Yes	Yes	Yes	Medium	Yes	Yes	Yes
D Bald Mountain - North (USFS)	Yes	Yes	Yes	Medium	Yes	Yes	Yes
E Bald Mountain - North (BLM)	Yes	Yes	Yes	Medium	Yes	Yes	Yes
F Bald Mountain - South (USFS)	Yes	Yes	Yes	Medium	Yes	Yes	Yes
G Bald Mountain - South (BLM)	Yes	Yes	Yes	Medium	Yes	Yes	Yes
H White Pine Range - Cherry Spg	Yes	Yes	Yes	Medium	Yes	Yes	Yes
I Currant Mountain	Yes	Yes	Yes	Medium	Yes	Yes	Yes
J Currant Mountain	Yes	Yes	Yes	Medium	Yes	Yes	Yes
K Currant Mountain Additions	Yes	Yes	Yes	Medium	Yes	Yes	Yes
L Red Mountain	Yes	Yes	Yes	Medium	Yes	Yes	Yes
M Goshute	Yes	Yes	Yes	Medium	Yes	Yes	Yes
N Becky Peak	Yes	Yes	Yes	Medium	Yes	Yes	Yes
O Heusser Mountain	Yes	Yes	Yes	Medium	Yes	Yes	Yes
P South Shell Creek	Yes	Yes	Yes	Medium	Yes	Yes	Yes
Q Egan Ridge/line	Yes	Yes	Yes	Medium	Yes	Yes	Yes
R South Egan	Yes	Yes	Yes	Medium	Yes	Yes	Yes
S Mt. Grafton	Yes	Yes	Yes	Medium	Yes	Yes	Yes
T Government Peak	Yes	Yes	Yes	Medium	Yes	Yes	Yes
U Marble Mountain	Yes	Yes	Yes	Medium	Yes	Yes	Yes
V Mt. Moriah	Yes	Yes	Yes	Medium	Yes	Yes	Yes
W Mt. Moriah	Yes	Yes	Yes	Medium	Yes	Yes	Yes
X Mt. Moriah Removal	Yes	Yes	Yes	Medium	Yes	Yes	Yes
Y Highland Ridge	Yes	Yes	Yes	Medium	Yes	Yes	Yes

References and additional information

Map 3. Cox, D.P., Ludington, S., Berger, B.R., Moring, B.C., Sherlock, M.G., Singer, D.A., and Tagley, J.V., 1996. Tracts Permissive for Epithermal Deposits. Plate 12.2; in *An Analysis of Nevada's Metal-Bearing Mineral Resources*. Nevada Bureau of Mines and Geology Open-File Report 96-2, web address: <http://comstock.nbmng.unr.edu/pubs/doi/0602/index.htm>. This GIS data layer is available with NBMG Report 53 (Figure 11).

Map 4. Cox, D.P., Ludington, S., Berger, B.R., Moring, B.C., Sherlock, M.G., Singer, D.A., and Tagley, J.V., 1996. Tracts Permissive for Pluton-Related Deposits. Plate 12.3; in *An Analysis of Nevada's Metal-Bearing Mineral Resources*. Nevada Bureau of Mines and Geology Open-File Report 96-2, web address: <http://comstock.nbmng.unr.edu/pubs/doi/0602/index.htm>. This GIS data layer is available with NBMG Report 53 (Figure 12).

Map 5. Cox, D.P., Ludington, S., Berger, B.R., Moring, B.C., Sherlock, M.G., Singer, D.A., and Tagley, J.V., 1996. Tracts Permissive for Deposit Types not Directly Related to Plutonic Activity. Plate 12.5; in *An Analysis of Nevada's Metal-Bearing Mineral Resources*. Nevada Bureau of Mines and Geology Open-File Report 96-2, web address: <http://comstock.nbmng.unr.edu/pubs/doi/0602/index.htm>. This GIS data layer is available with NBMG Report 53 (Figure 13).

Map 6. This GIS data layer is available with NBMG Report 53 (Figure 14).

Map 7. Price, J.G., Hess, R.H., Fitch, S., Fawcett, J.L., Garside, L.J., Shevenell, L., and Warren, S., 2005. Preliminary assessment of the potential for carbon dioxide disposal by sequestration in geological settings in Nevada. Nevada Bureau of Mines and Geology Report 51, 35 p (Figure 19).

Map 8. Coelbaugh, M., Zahner, R., Krenner, C., Blackwell, D., Oppinger, G., Sawatsky, D., Rowin, G., Fawcett, J., Richards, M., Hildebrand, C., Shevenell, L., Raines, G., Johnson, G., Minor, T., and Boyd, T., 2005. Geothermal potential map of the Great Basin, western United States. Nevada Bureau of Mines and Geology Map 151 (<http://www.nbmng.unr.edu/doi/m151/m151plate.pdf>). While high-temperature geothermal activity is possible in all parts of the State of Nevada, not all are favorable for resource development. Map 8 shows areas that are considered at least marginally favorable for geothermal resource development in White Pine County. GIS data can be found at [www.unr.edu/geothermal](http://www.unr.edu/geothermal).

Map 9. Garside, L.J., Hess, R.H., Fleming, K.L., Weiner, B.S., 1988. Oil and gas developments in Nevada. Nevada Bureau of Mines and Geology Bulletin 104, 126 p (Figure 9).

Map 10. U.S. Department of Energy, National Renewable Energy Laboratory, [http://www.nrel.gov/energy/gov/wind/energy/windpower/energy/maps\\_complicat.asp?tabid=0](http://www.nrel.gov/energy/gov/wind/energy/windpower/energy/maps_complicat.asp?tabid=0). This map shows areas assessed as good (Class 4) to superb (Class 7) for wind-power generation at an elevation of 50 meters above the ground.

Map 11. Homer, C.G., 1997. Nevada landcover classification from Nevada GAP Analysis. 204, Dept. of Geography and Earth Resources, Utah State University, Logan, Utah, 1997. Web address: <http://www.geog.utah.edu/landcov/>

Map 12. U.S. Department of Energy, National Renewable Energy Laboratory, <http://www.nrel.gov/energy/gov/solar/solarcollector>. The average annual solar energy incidence throughout White Pine County exceeds 5.13 kilowatt-hours per square meter per day, the mean value for the conterminous United States.



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