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SOME ENVIRONMENTAL USES OF MINERALS

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<p><u>BARITE</u> Hazardous Wastes: Weighting agent in oil well drilling mud to keep oil in the drill hole (prevents "gushers" which would contaminate soil on the surface around the oil well).</p>
<p><u>CLAYS</u> Air Quality: Replacement for asbestos in many construction and industrial applications. Hazardous Waste Disposal: Solidification of organic wastes and salt solutions containment of hazardous wastes by encasement or by impermeable barrier. Water Treatment: Selective absorbance of organic contaminants from waste water removal of paint residue from water in industrial processes.</p>
<p><u>DIATOMITE</u> Horticulture: Non-chemical insecticide Water Treatment: Purification of water by removing impurities down to 0.1 micron without the use of filtration chemicals (uses from water treatment plants to swimming pools).</p>
<p><u>GOLD</u> Energy Conservation: Microcoating on glass reflects solar energy, reducing air conditioning electrical demand.</p>
<p><u>HALITE (SALT)</u> Water Treatment: Provides the chlorine used as a disinfectant.</p>
<p><u>LIMESTONE</u> Agriculture: Soil stabilization and pH control. Air Quality: Neutralizes sulfur oxides from industrial stock gases. Hazardous Waste Disposal: PCB sludge solidification and neutralization. Solid Waste Disposal: Stabilize sludge from sewage and desulfurization plants. Waste Water Treatment: Removes phosphorus and nitrogen, odor control, kills bacteria; aids in clarification. Water Treatment: Potable water softening and clarification; acid-rain and acid-drainage neutralization.</p>
<p><u>LITHIUM</u> Energy Conservation: High density, high energy batteries for numerous applications including propulsion of electric cars.</p>
<p><u>PERLITE</u> Horticulture: Soil conditioning and water retention. Water Treatment: Filtration of water in food processing, industrial application, and swimming pools.</p>
<p><u>PLATINUM</u> Hazardous Waste: Shows promise in treating toxic wastes. Air Quality: Automobile catalytic converters; also used in the synthesis of MTBE, a gasoline additive to replace lead and reduce automobile carbon monoxide emissions. Waste Treatment: Used in the detoxification of ground water and soil.</p>
<p><u>RARE EARTHS</u> Air Quality: Automobile catalytic converters; petroleum refining catalysts to control sulfur dioxide emissions. Energy Conservation: Phosphors in low-energy fluorescent lighting; replaces cadmium (toxic) in certain batteries. Recycling: Use in permanent magnets for separation of metals from other wastes.</p>
<p><u>SANDSTONE AND CRUSHED ROCK</u> Water Conservation: Groundcover for xeriscape (low water use) landscaping.</p>
<p><u>SILVER</u> Water Treatment: Kills bacteria in water purification systems.</p>
<p><u>SULFUR</u> Energy Conservation: Phosphor in low-energy lighting.</p>
<p><u>ZEOLITES</u> Agriculture: Stabilization of ammonium and potassium in soil. Air Quality: Air filtration, odor control, and purification of gases and air by selectively adsorbing gases such as: ammonium, hydrogen sulfide, carbon monoxide, carbon dioxide, nitrogen, formaldehyde and mercaptan. Hazardous Waste: Heavy metal and nuclear waste containment. Water Treatment: Ammonium removal.</p>