



COLORADO
Department of Public
Health & Environment



**U.S. DEPARTMENT OF
ENERGY**

- EPA, CDPHE, and DOE in the 2006 Corrective Action Decision/Record of Decision (CAD/ROD) determined that the portion of the Rocky Flats property comprising the refuge was already in a state that is protective of human health and the environment, where unrestricted and unlimited use is acceptable.
- The Remedial Investigation/Feasibility Study (RI/FS) for Rocky Flats was completed in 2006 and consists of 23 volumes of data and analysis. The database of sample results used to prepare the RI/FS and Comprehensive Risk Assessment contained approximately 6.9 million data records for all media (soil, groundwater, surface water, air).
- The Radionuclide Soil Action Levels (RSALs) developed under the Rocky Flats Cleanup Agreement (RFCA) were reduced in 2002 for plutonium to 50 picocuries per gram of soil, which is protective to the open space user.
- Residual plutonium concentrations in surface soil in the refuge average about 1.1 picocuries/gram (about a trillionth of a Curie per gram of soil), which is approximately 2% of the RSAL for plutonium. These concentrations are protective of human health for any exposure scenario.
- The highest concentration of plutonium detected in surface soil samples in the eastern refuge area was 20.3 picocuries per gram of soil. This equates to the very low end of the regulatory risk range for a refuge worker or visitor.
- The Colorado Standards for Protection Against Radiation sets the maximum annual dose from radioactivity for an individual to 25 mrem per year. This equates to approximately 231 picocuries of plutonium per gram of soil; this is the exposure scenario for an adult rural resident. This exposure scenario includes activities such as living at the site full-time and eating home-grown produce.
- The wildlife refuge visitor scenario used for risk calculations includes both a child and an adult who visit the site 100 days a year for 2.5 hours per day. The dose estimate for plutonium for the wildlife refuge visitor child is 0.2 mrem per year, which is less than one percent of the 25 mrem per year Colorado standard. The estimated 0.2 mrem per year is a very small fraction of the average annual dose to US public from all sources of 360 mrem/year.
- In consideration of the very low risks, EPA delisted (removed) the peripheral operable unit (refuge area) from the National Priorities List. The refuge is not a Superfund site.
- The vast majority of the site would be suitable for residential and/or industrial use. The main reason the DOE-retained lands are not part of the refuge and not open to the public is to protect the ongoing actions (e.g., treatment systems) from human interference. Access restrictions are not required in either the refuge or on DOE-retained lands to protect humans from residual risk in surface soils.
- The public, including local governments, has been extensively involved in the selection of the end use of the property as a wildlife refuge with public access. During the cleanup and post-cleanup periods, public involvement included public comment, working groups, oversight panels, a Citizens Advisory Board, and a Council of Local Governments/Rocky Flats Stewardship Council. Public use of the refuge was envisioned, thoroughly analyzed, and shared with the public and the local governments in numerous decision documents and mandated by the Refuge Act passed by the US Congress in 2001.