*Impacts.* Environmental effects identified under the preferred alternative are primarily related to construction activities and include impacts to soils, land use, and biological resources. Construction of the RCSTS and associated facilities would disturb approximately 30 hectares (74 acres) of land, none of which are considered to be prime or unique farmland. Fugitive dust emissions are anticipated during earth moving activities, but would be mitigated by dust suppression measures.

Of the 30 hectares (74 acres) of land that would be disturbed while constructing the RCSTS, approximately 9 hectares (23 acres) would be mature sagebrush/cheatgrass habitat, a State designated Priority Habitat and important habitat for the loggerhead shrike, a Federal and State candidate species; the sagebrush lizard, a Federal candidate species; and the sage sparrow, a State candidate species. The 9 hectares (23 acres) represents 0.01 percent of the total sagebrush habitat at Hanford. The preferred alternative would include establishing habitat restoration sites to mitigate the disturbance of native soil and removal of vegetation in the construction area.

## Truck Transfer Alternative

This alternative includes truck transfer of all wastes listed under the preferred alternative, with the exception of solids from Tank 102-SY which would not be retrieved under this alternative. Mitigation of the Tank 101– SY safety issue by continued operation of the mixer pump would also occur under the truck transfer alternative. The alternative would transfer SWL from interim stabilization of 200 West Area SSTs and 200 West Area facility wastes to DSTs in the 200 East Area by truck, without using Tank 102-SY as a staging tank for complexed wastes. The SIS EIS evaluated the 3,800 liters (1,000 gallons) LR–56(H) truck and a hypothetical 19,000 liter (5,000 gallon) tanker truck. The alternative would utilize existing roadways and include construction and operation of a new load facility in 200 West Area and an unload facility in 200 East Area, including underground transfer piping to and from the facilities, and some additional roadway segments.

*Impacts.* Environmental effects from implementing the truck transfer alternative include impacts to soils, transportation, and worker health, due to the construction of load and unload facilities and roadway segments, and operation of the truck transfer system.

Construction of the load and unload facilities and roadways would disturb approximately 2 hectares (5 acres) of land, none of which is considered to be prime or unique farmland, or mature sagebrush habitat. During construction activities, dust suppression measures would be implemented to reduce fugitive dust emissions.

The truck transfer alternative would use existing Hanford Site roadways and new onsite road extensions to transport approximately 1.9 million liters (5 million gallons) of radioactive waste. Using the LR-56 truck (3,800 liters (1,000 gallons) capacity), approximately 4,691 truck trips would be required over 1,564 working days assuming three trips per day. If the 19,000 liters (5,000 gallons) capacity truck is used, approximately 938 truck trips over 313 working days would be required, assuming three trips per day. Potential traffic circulation impacts could occur from barricaded roads, speed limitations, escorts, and other administrative controls. However, based on a frequency of three truck trips per day, shipping during off-peak hours, and providing advanced notice of truck shipments, no significant adverse traffic circulation impacts are anticipated.

Operators and health physics technicians would be exposed to radiation within acceptable limits during operation of the load and unload facilities. However, estimates for radiation dose to the truck driver yielded an unacceptably high dose. Additional shielding analysis or restrictions on the quantities of radioactive materials would be necessary to ensure that radiation exposures would be as low as reasonably achievable for the drivers.

## **Rail Transfer Alternative**

This alternative includes rail transfer of all wastes listed under the preferred alternative, with the exception of solids from Tank 102-SY which would not be retrieved under this alternative. Mitigation of the Tank 101-SY safety issue by continued operation of the mixer pump would also occur under the rail transfer alternative. The alternative would transfer salt well liquids from interim stabilization of SSTs, and 200 West Area facility wastes by a hypothetical 38,000 liter (10,000 gallon) rail car. The alternative includes use of existing Hanford Site rail lines, construction and operation of some additional onsite rail line segments, as well as construction and operation of a new load facility in 200 West Area and a new unload facility in 200 East Area.

*Impacts.* Environmental effects associated with the rail transfer alternative include impacts to soils and transportation. Construction of the load and unload facilities and rail spurs would disturb approximately 2 hectares (5 acres) of land, none of which is considered to be prime or unique farmland, or mature sagebrush habitat. During construction activities, dust suppression measures would be implemented to reduce fugitive dust emissions.

Approximately 470 train trips, assuming one tank car per trip, would be required to transfer the subject waste. Assuming 2 train trips per day, 235 days would be required to transfer the wastes. The two additional daily trips would not impact existing rail operations. Significant impacts to road traffic from road closures during rail transport are not expected because of advance notice of shipments, restricting shipments to off-peak hours, and the short duration of road closures.

## New Storage Alternative

This alternative includes mitigation of the Tank 101–SY flammable gas safety issue by dilution and retrieval of the waste. Facilities constructed and operated to accomplish this action would include a new tank facility (NTF), including two new DSTs and associated facilities, a waste retrieval system in Tank 101-SY, a waste retrieval system in Tank 102-SY, and the RCSTŠ. This alternative also includes transfer of waste from Tank 102–SY, SWL from interim stabilization of SSTs in the 200 West Area, and transfer of 200 West Area facility wastes as described for the preferred alternative. This alternative would provide additional storage capacity that could be used for other future waste management needs.

Impacts. Environmental effects identified under the new storage alternative are primarily related to construction activities and include impacts to soils, land use, biological resources, and worker exposure. Construction of the RCSTS and NTF would disturb approximately 30 hectares (74 acres) and 20 hectares (50 acres) of land, respectively, none of which are considered to be prime or unique farmland. Fugitive dust emissions are anticipated during earth moving activities, but would be mitigated by dust suppression measures. The 50 hectares (124 acres) of land would be a small incremental addition of land committed to waste management at Hanford.

Approximately 30 hectares (74 acres) of mature sagebrush/cheatgrass habitat would be disturbed from constructing the RCSTS and NTF. The new storage alternative would include establishing habitat restoration sites to mitigate the disturbance of native soil and removal of vegetation in the construction area.