

***Environmental Management
Richland Operations Office
FY 2011 Public Briefing***



U.S. Department of Energy

July 22, 2009

Key Points

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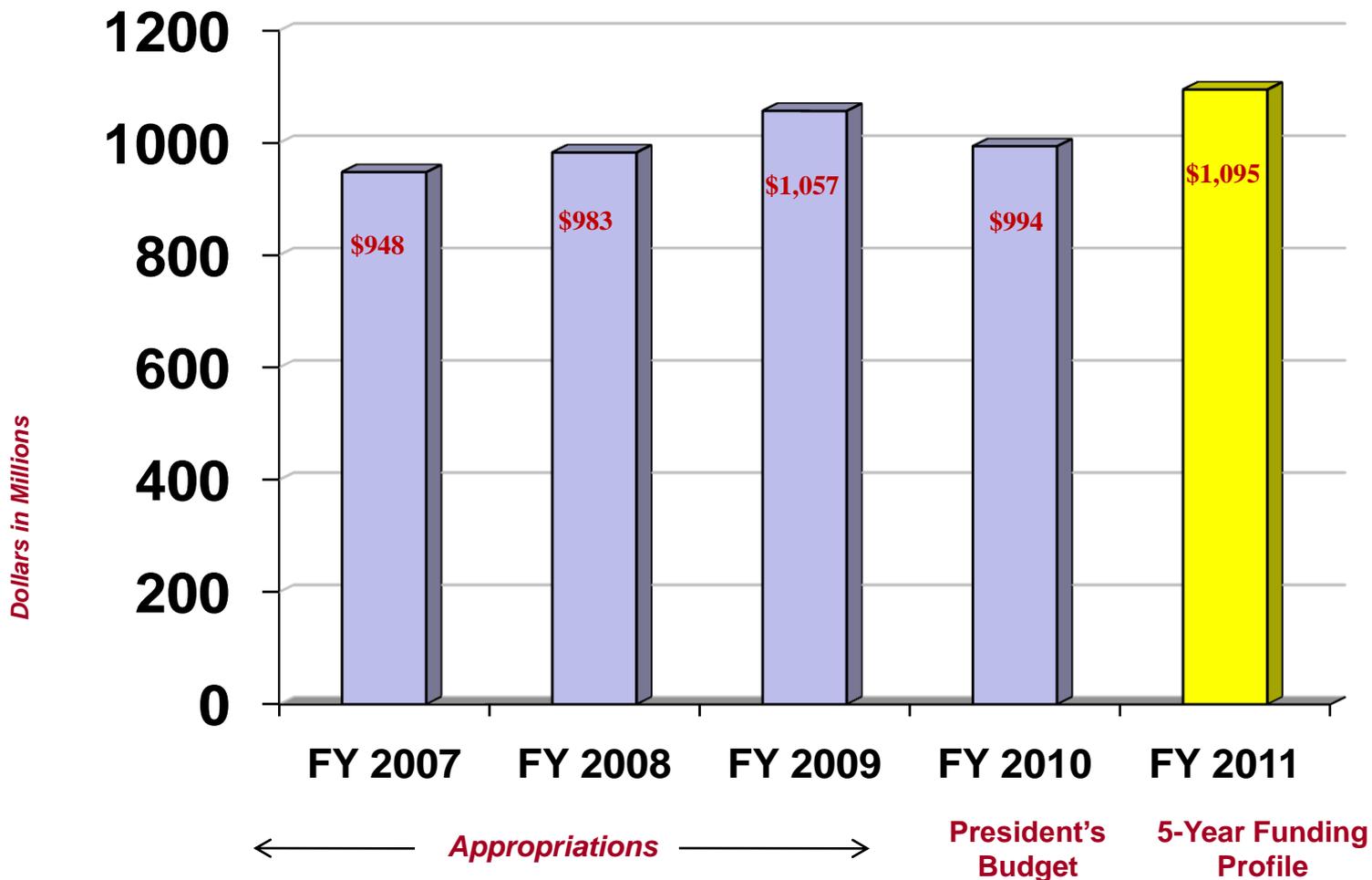
- RL is committed to significant accomplishment in cleaning up the site and meeting our compliance commitments
- This briefing reflects the proposed milestones in the TPA tentative agreement dated February 2009
- This briefing presents work scope accomplishments to be performed in FY 2011 as part of the base budget request

RL Funding

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(Dollars in Millions)



Note: These numbers exclude Program Direction funding

Funding Profile

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PBS	PBS Title	FY09 Omnibus	FY 2010 President's Budget	FY 2011 Budget Request
RL-0011	NM Stabilization and Disposition - PFP	\$113,483	\$118,087	\$77,067
RL-0012	SNF Stabilization and Disposition	\$122,171	\$55,325	\$94,016
RL-0041	Nuclear Facility D&D - River Corridor Closure Project	\$240,837	\$327,955	\$368,060
Subtotal 2012	2012 Accelerated Completion	\$476,491	\$501,367	\$539,143
RL-0013	Solid Waste Stabilization and Disposition - 200 Area	\$189,930	\$132,757	\$135,026
RL-0030	Soil and Water Remediation - Groundwater/Vadose Zone	\$185,010	\$176,766	\$212,531
RL-0040	Nuclear Facility D&D - Remainder of Hanford	\$95,925	\$70,250	\$99,641
RL-0100	Richland Community and Regulatory Support	\$19,620	\$21,940	\$27,588
Subtotal 2035	2035 Accelerated Completion	\$490,485	\$401,713	\$474,786
RL-0020	Safeguards and Security	\$79,765	\$82,771	\$77,412
RL-0042	Nuclear Facility D&D - Fast Flux Test Facility Project	\$10,755	\$7,652	\$3,659
Total - RL	Office Base Funding Total	\$1,057,496	\$993,503	\$1,095,000

Projected ARRA Funding

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PROJECT	WORKSCOPE	FY09- FY11
Plutonium Finishing Plant	<ul style="list-style-type: none"> Plutonium Finishing Plant (remove glove boxes, hoods, and process equipment; Plutonium Finishing Plant 234-5Z Process Areas and ancillary facilities ready for demolition) 	\$317M
River Corridor Closure Project - Soil Remediation	<ul style="list-style-type: none"> Characterize, remediate 618-10 Burial Ground trenches 	\$78M
River Corridor Closure Project – D&D	<ul style="list-style-type: none"> Reduce River Corridor footprint Environmental Restoration Disposal Facility: construct super-cells 9 & 10, expand operations K Area: demolish facilities, remediate waste sites Disposition K East Reactor 	\$442M
Central Plateau D&D and Soil Remediation	<ul style="list-style-type: none"> Central Plateau Outer Zone footprint reduction (200 North and other waste sites) Remediation of the U Plant Zone canyon and structures D&D 15 surplus facilities D&D Semi Works Zone structure D&D excess Arid Lands Ecology Reserve structures 	\$423M
Soil and Water Remediation - Groundwater	<ul style="list-style-type: none"> Construct groundwater remedies in River Corridor (100 Areas) Accelerate construction of groundwater treatment system for both 200 West Operable Units Accelerate remedial investigations, treatability tests, cleanup decisions, and well decommissioning in the Central Plateau Area 	\$146M
Solid Waste Stabilization and Disposition	<ul style="list-style-type: none"> Retrieve 10,800 drums-worth of contact-handled transuranic (TRU) waste Repackage 4,100 drums-worth of contact-handled TRU waste inventory Eliminate backlog of current legacy waste 	\$229M

Shrinking the Footprint of Active Site Cleanup

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The 2015 Vision

Hanford Site Cleanup

Richland Operations Office



B & C Area

- ✓ Interim Safe Storage of C Reactor Complete
- ✓ B Reactor Designated as a Museum or Interim Safe Storage Complete
- ✓ All B & C Area Final ROD Remedial Actions Complete
- ✓ All B & C Area Groundwater Remedies Implemented
- ✓ 6 Facilities Demolished
- ✓ 40 Waste Sites Remediated
- ✓ ~381,000 Tons of Soil Removed

K Area

- ✓ K East Basin Demolished
- ✓ Interim Safe Storage of K East Reactor Complete
- ✓ K West Sludge Removed from the River Corridor
- ✓ Interim Safe Storage of K West Reactor Initiated
- ✓ All K Area Final ROD Remedial Actions Complete and TSD Units Closed with the exception of those associated with K West
- ✓ All K Area Groundwater Remedies Implemented
- ✓ 2300 Tons of Scrap Nuclear Fuel Removed
- ✓ 109 Facilities Demolished
- ✓ 2 Waste Sites Remediated
- ✓ ~361,000 Tons of Soil Removed

N Area

- ✓ Interim Safe Storage of N Reactor Complete
- ✓ All N Area Final ROD Remedial Actions Complete and TSD Units Closed
- ✓ All N Area Groundwater Remedies Implemented
- ✓ 108 Facilities Demolished
- ✓ 61 Waste Sites Remediated
- ✓ ~157,000 Tons of Soil Removed

D & H Area

- ✓ Interim Safe Storage of D, DR, and H Reactors Complete
- ✓ All D & H Area Final ROD Remedial Actions Complete
- ✓ All D & H Area Groundwater Remedies Implemented
- ✓ 18 Facilities Demolished
- ✓ 56 Waste Sites Remediated
- ✓ ~1,700,000 Tons of Soil Removed

IU2 & IU6 Area

- ✓ Interim Safe Storage of F Reactor Complete
- ✓ All IU2 & IU6 Area Final ROD Remedial Actions Complete
- ✓ All IU2 & IU6 Area Final ROD Groundwater Remedial Actions Complete
- ✓ 1 Facility Demolished
- ✓ 50 Waste Sites Remediated
- ✓ ~962,000 tons of Soil Removed

Central Plateau Cleanup

- ✓ All 200 West Carbon Tetrachloride, Uranium and Technetium 99 Groundwater Remedies Implemented
- ✓ Conduct Additional Cleanup as Funds Become Available

300 Area

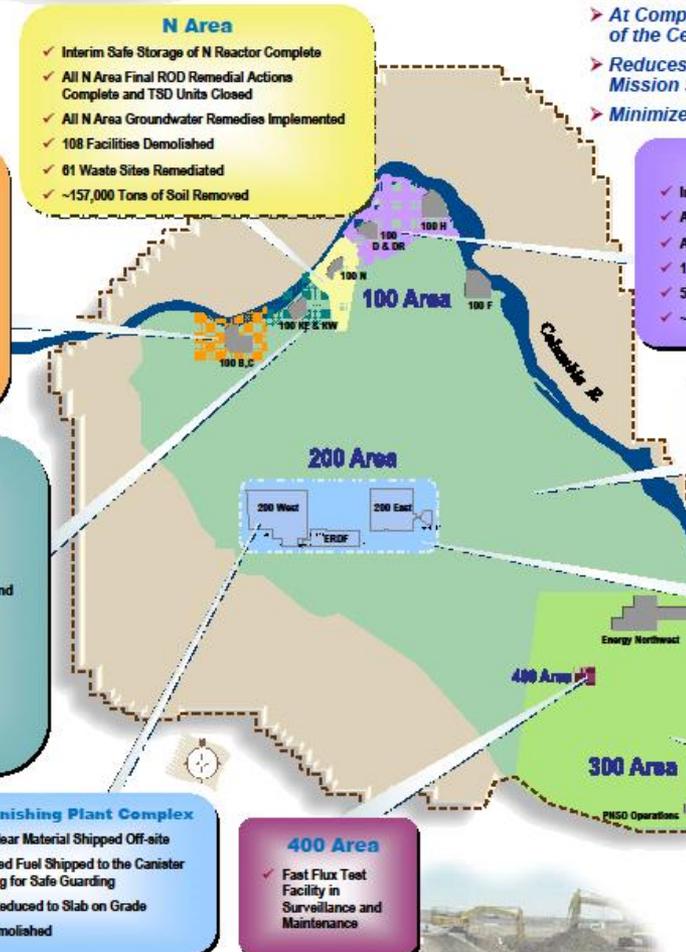
- ✓ All 300 Area Final ROD Remedial Actions Complete and TSD Units Closed
- ✓ All 300 Area Groundwater Remedies Implemented
- ✓ 186 Facilities Demolished
- ✓ 95 Waste Sites Remediated
- ✓ ~623,000 Tons of Soil Removed
- ✓ Final Remediation of 618-10 & 618-11 Burial Grounds Complete

Plutonium Finishing Plant Complex

- ✓ All Special Nuclear Material Shipped Off-site
- ✓ Slightly Irradiated Fuel Shipped to the Canister Storage Building for Safe Guarding
- ✓ PFP Complex Reduced to Slab on Grade
- ✓ 18 Facilities Demolished

400 Area

- ✓ Fast Flux Test Facility in Surveillance and Maintenance



Safe and Effective Cleanup that Protects the Columbia River

- Reduces the Active Site Footprint of Cleanup to 75 Square Miles (586 → 75)
- Significantly Reduces Long-Term Mortgage Costs
- At Completion, Shifts Emphasis and Resources to Full Scale Cleanup of the Central Plateau (75 square miles)
- Reduces Costs by "Right Sizing" Hanford's Infrastructure via a Mission Support Contract
- Minimizes Injury to Natural Resources



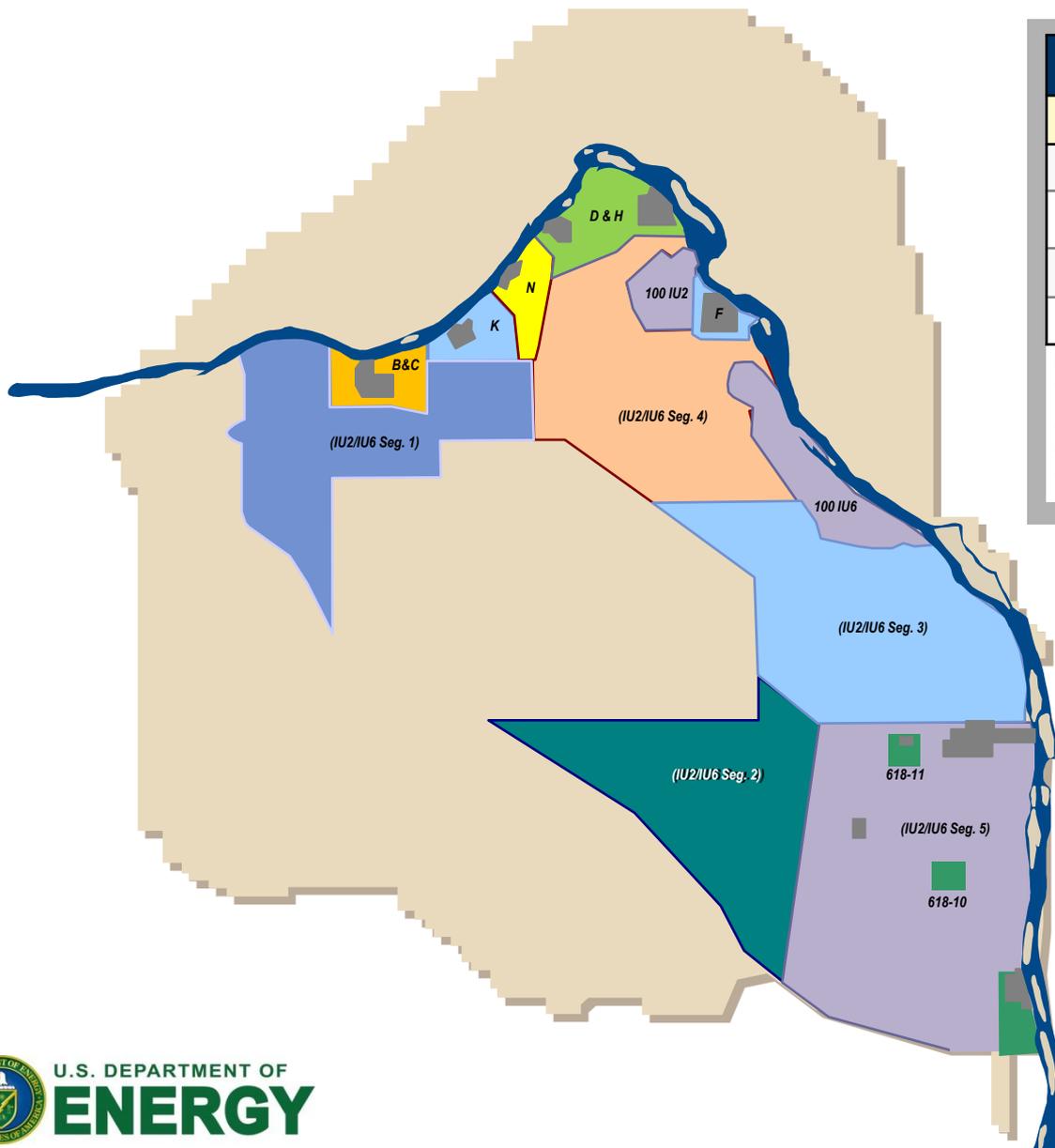
* Does not reflect all work

IU = Isolated Unit
 ROD = Record of Decision
 TSD = Treatment, Storage, Disposal

River Corridor Cleanup Strategy

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Status		
Work Activities as of March 2009		Projected Total
Facilities Demolished	181	625
Waste Sites Remediated	442	828
Reactors Cocooned	5	8
Waste Sent to ERDF	8.1M Tons	10.4M Tons*

NOTES:

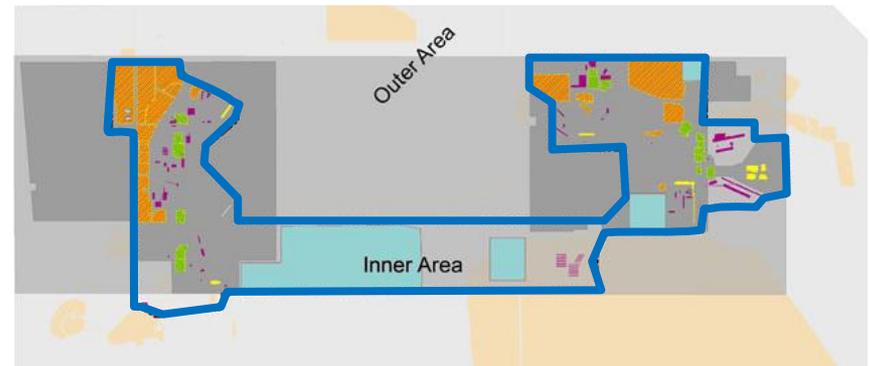
- Evaluating path forward for 618-10 and 618-11 using ARRA funding to accelerate completion to 2015
- Evaluating experimental in-situ remediation to accelerate C-7 completion to 2015.
- *Will increase projected ERDF waste up to 12.5M tons in new baseline
- Using ARRA funding to accelerate implementation of Groundwater remedial action capacity

Central Plateau Cleanup Strategy: Inner Area Principles and Objectives

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- Minimize the size of the area requiring long-term management (the final footprint)
- Configure waste and residual contamination to be protective of human health and the environment
- Monitor inner area to ensure cleanup remedies are protective (defense in depth)
- Make consistent cleanup decisions at the largest scale possible
- Implement cleanup decisions using a geographical approach

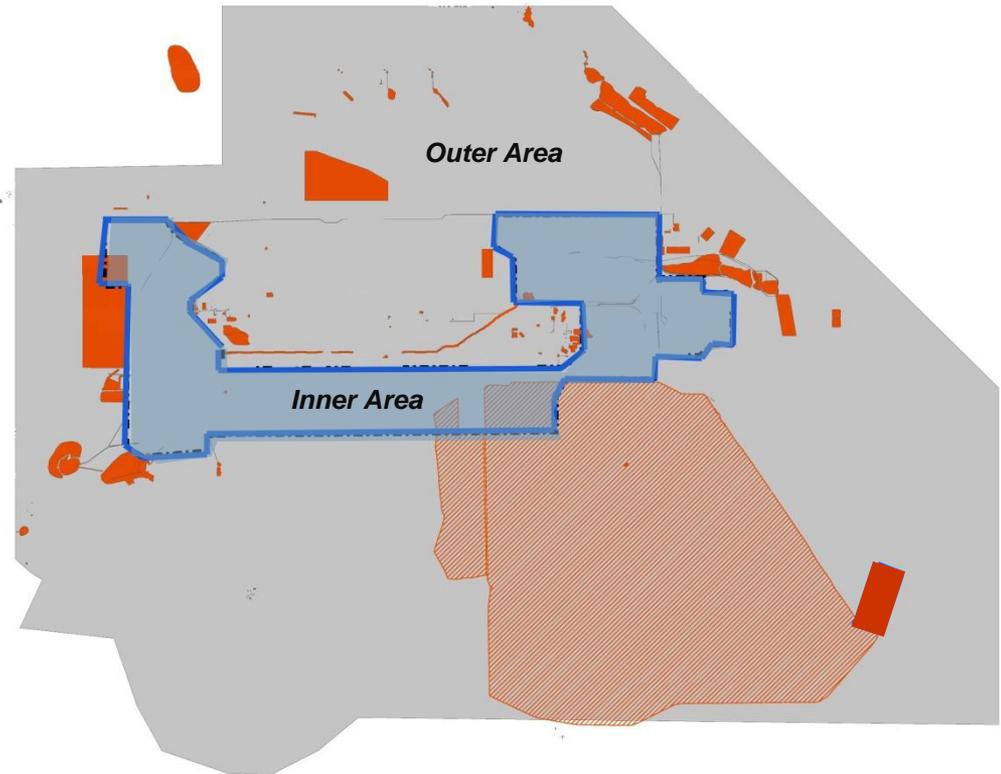


Central Plateau Cleanup Strategy: Outer Area Principles and Objectives

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- Clean up waste sites (about 180) comparable to the River Corridor with some exceptions
- D & D excess facilities
- Start cleanup with interim decisions using ARRA funds
- Make final cleanup decisions with one Record of Decision



Richland Cleanup Priorities

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- Maintain Safe & Compliant Facilities and Provide Essential Services
 - Safeguards and Security
- Execute RL 2015 Vision and Achieve Regulatory/TPA Compliance
 - Columbia River Corridor cleanup/demolition of facilities, waste sites, and groundwater
 - Sludge Treatment
 - PFP D&D
 - Central Plateau Groundwater Remediation
 - Central Plateau - Waste site remediation (with Outer Area Priority)
 - Repack TRU waste for certification and shipment
 - Retrieve suspect TRU waste from underground storage
 - Continue Remedial Investigation/Feasibility Study Process for Central Plateau
 - Central Plateau D&D Activities (other than PFP)
 - MLLW Treatment
- Community & Regulatory Requirements
- Replace, renovate, and restructure essential infrastructure to support Hanford cleanup

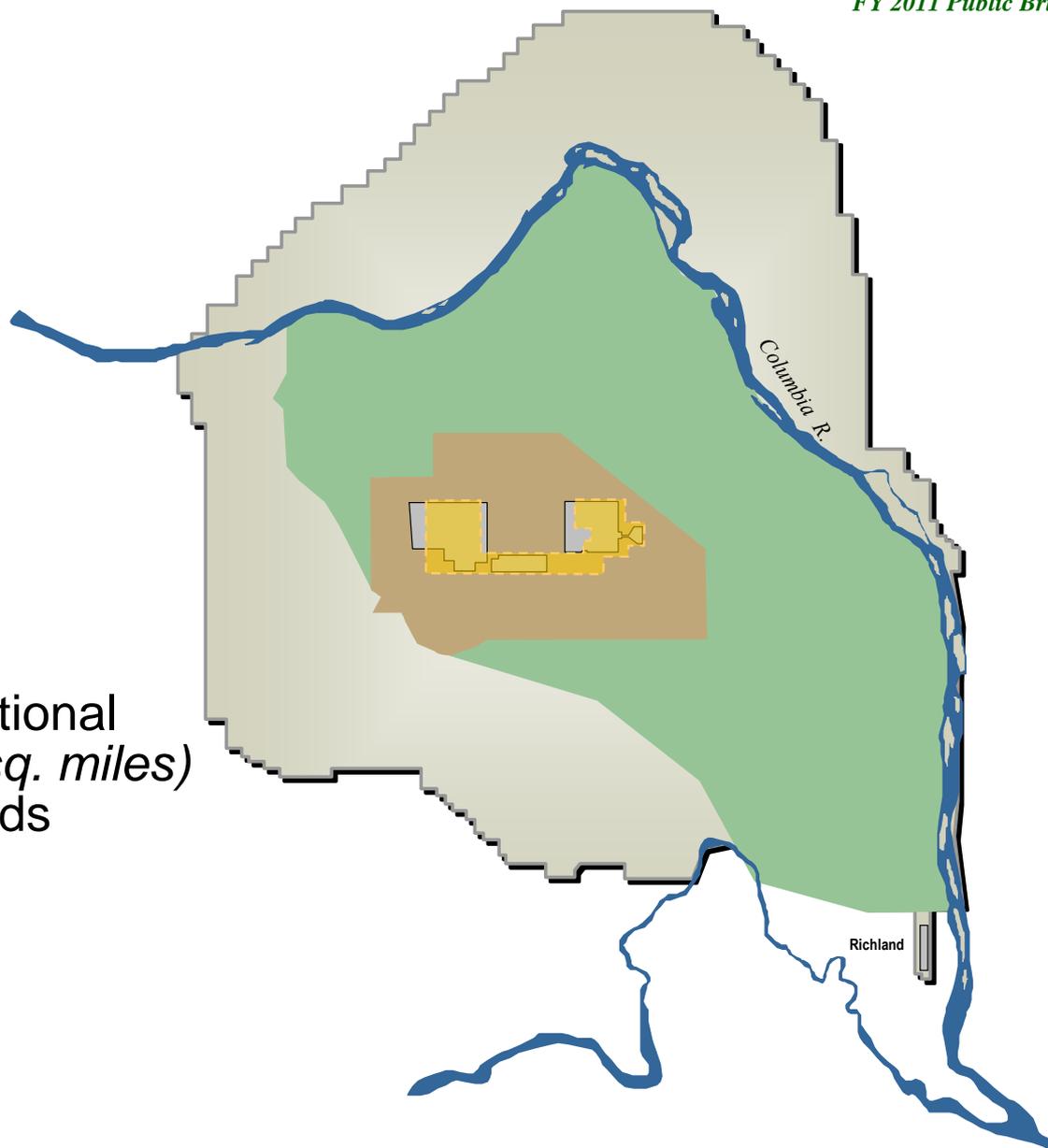
Shrinking the Footprint of Active Site Cleanup

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Work in four areas

-  River Corridor
(~210 sq. miles)
-  Central Plateau,
Outer Zone
(~65 sq. miles)
-  Central Plateau,
Inner Zone
(~10 sq. miles)
-  Hanford Reach National
Monument (~300 sq. miles)
(including Arid Lands
Ecology Reserve)





River Corridor (~210 sq. mi.)

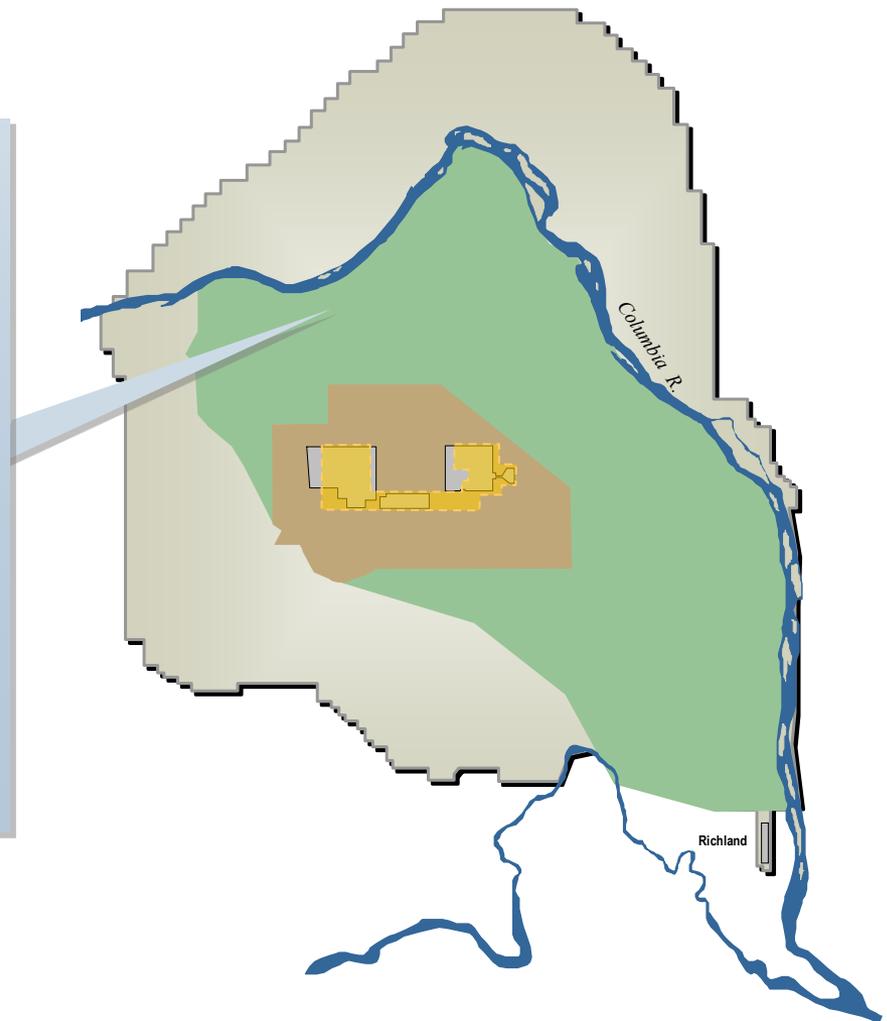
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SNF Stabilization/Disposition (RL-0012)

100 K Area

- Operate and maintain K-West Basin and associated structures in a safe and compliant manner
- Support the continuation of sludge treatment design with procurement of Multiple Canister Overpacks (Knock-Out Pot Disposition), Sludge Treatment Storage Containers and a Phase I storage pad





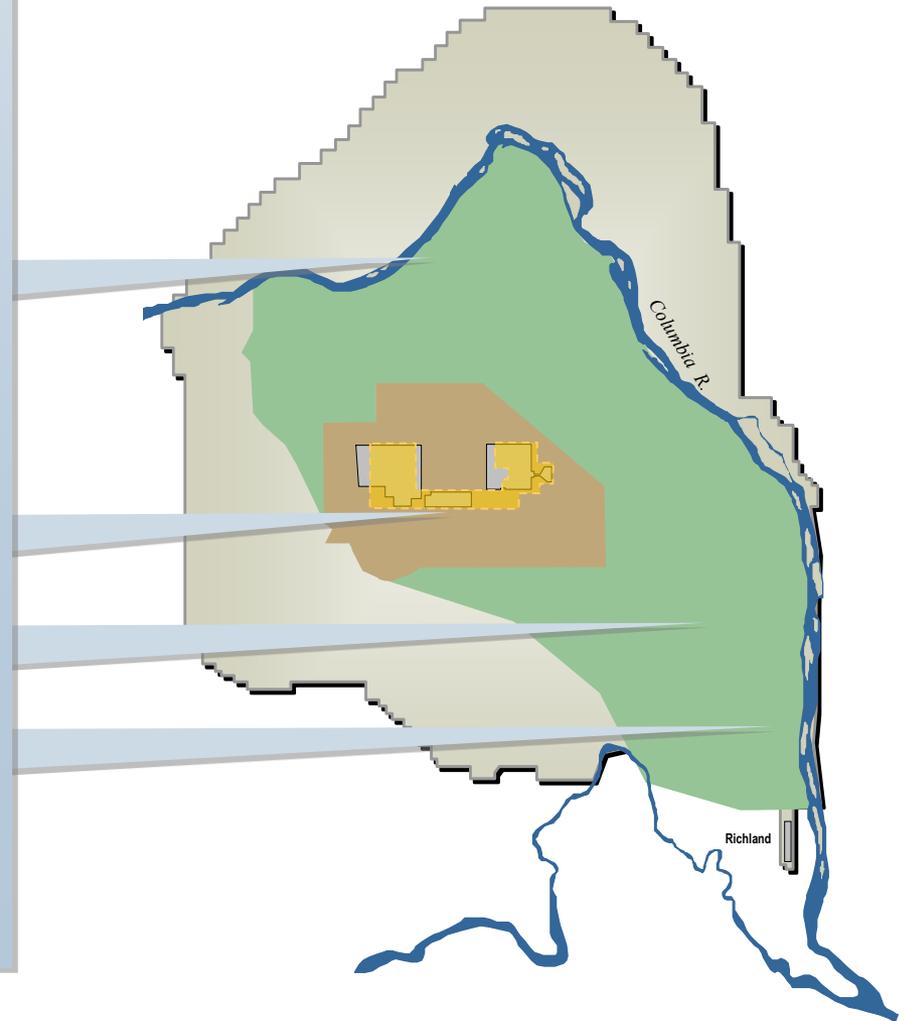
River Corridor (~210 sq. mi.)

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Nuclear Facility D&D – River Corridor Closure Project (RL-0041)

- Complete: excavation of a total of 3 of 5 100-H burial grounds (M-016-51-T02); 22 interim remedial actions at the 100 B/C Area (M-16-94); disposition of 8 facilities
- Continue remedial investigation and feasibility studies
- Continue D4 of 324 Building (Chemical Engineering Laboratory) in the 300 Area consistent with the proposed revision to TPA milestone M-89-00
- Continue interim safe storage of the 105-N Reactor
- Support continued field remediation of ancillary facilities and waste sites in the 100 K-Area
- Operate Environmental Restoration Disposal Facility to support field remediation and demolition activities
- Field remediation (FR), D4, and ISS will continue in other Areas along the Columbia River Corridor including maintaining critical functions in engineering, SH&Q, environmental compliance, and project controls





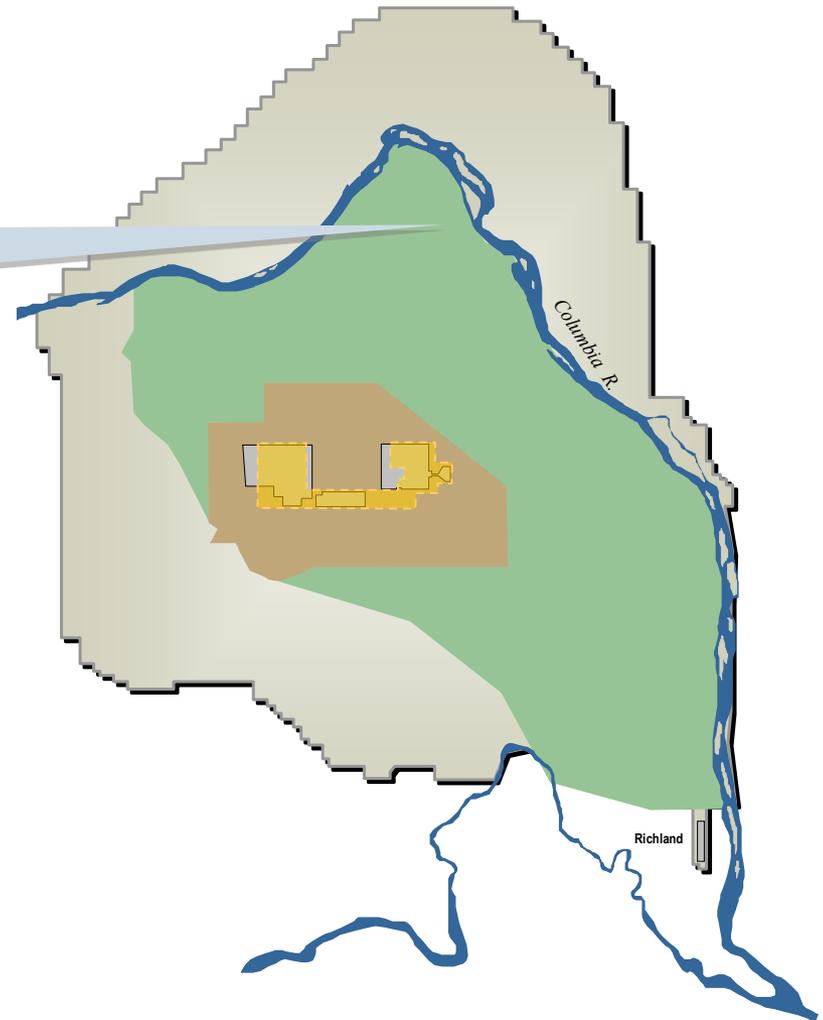
River Corridor (~210 sq. mi.)

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Groundwater Protection (RL-0030)

- Operate and maintain existing and expanded groundwater remediation systems
- Continue groundwater monitoring
- Achieve progress on completing the CERCLA Process (Remedial Investigation / Feasibility Study and Proposed Plan) to obtain final Record of Decision for the 100 Area and the 300-FF-5 groundwater operable units
- Continue groundwater integration activities and environmental data management





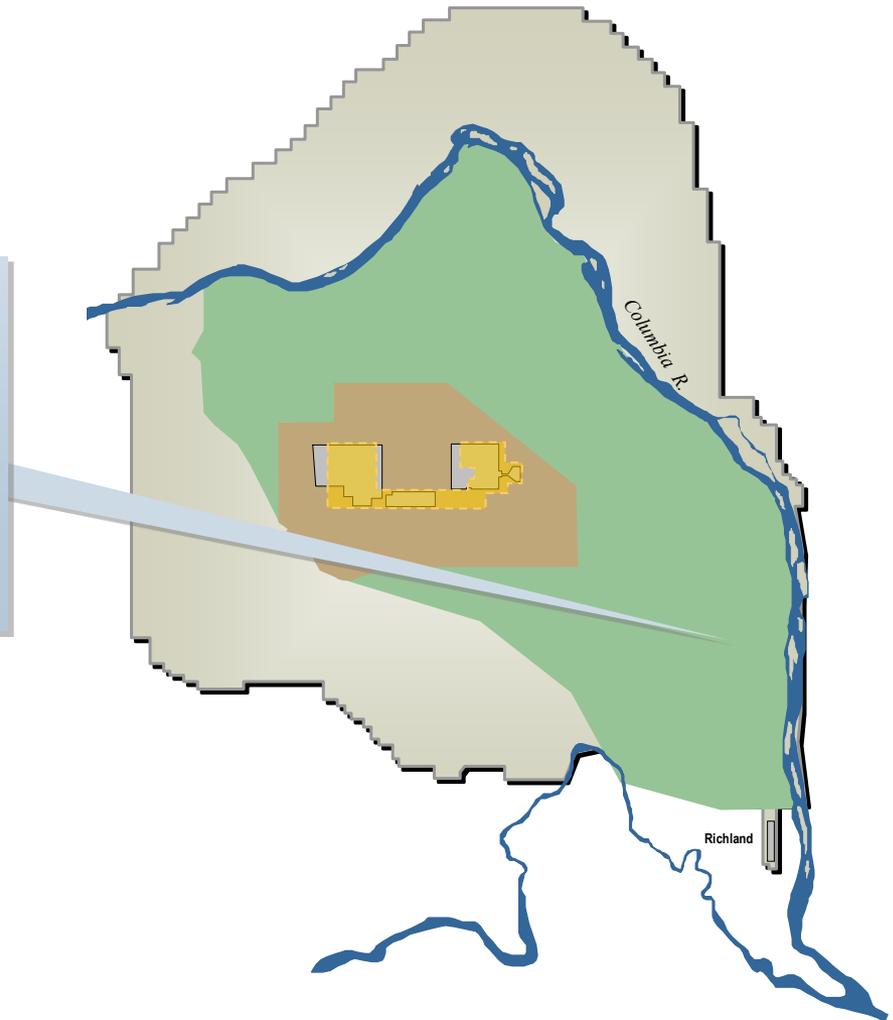
River Corridor (~210 sq. mi.)

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Nuclear Facility D&D FFTF (RL-0042)

- Maintain long-term safe and compliant Surveillance and Maintenance of FFTF and support facilities
- Maintain the Sodium Storage Facility and 260,000 gallons of sodium under an inert atmosphere



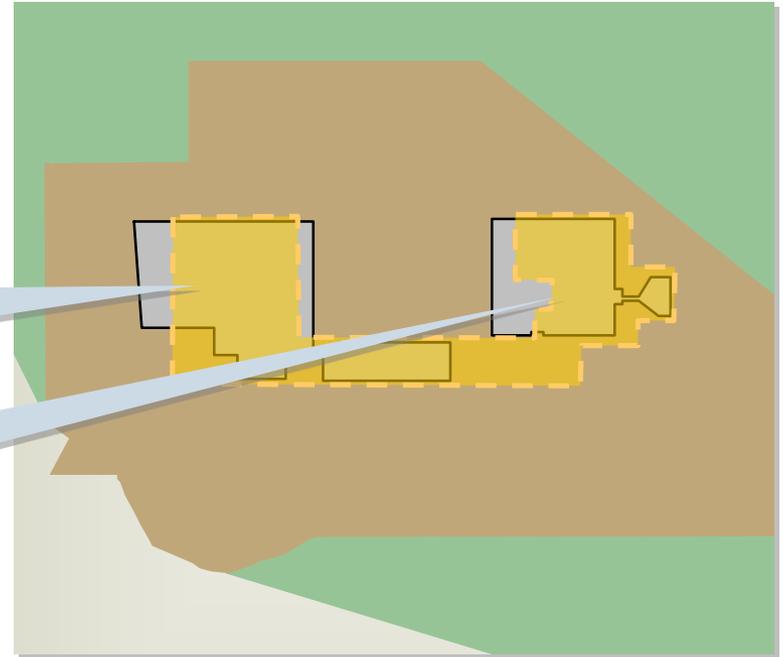
Central Plateau Inner Zone (~10 sq. mi.)

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Groundwater Protection (RL-0030)

- Operate and maintain existing and expanded groundwater & soil remediation systems
- Continue groundwater monitoring
- Maintain strategic and technical integration between groundwater and vadose zone field activities
- Continue construction of new groundwater wells necessary to complete CERCLA process (Remedial Investigation / Feasibility Study and Proposed Plan)
- Achieve progress on completing the CERCLA Process decision documentation to obtain final Records of Decision for groundwater operable units





Central Plateau Inner Zone (~10 sq. mi.)

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NM Stabilization/Disposition – PFP (RL-0011)

Plutonium Finishing Plant

- Maintain Plutonium Finishing Plant complex facilities
- Deactivation and decommissioning of the 236-Z (PRF), 242-Z, 2736-Z/ZB Complex facilities





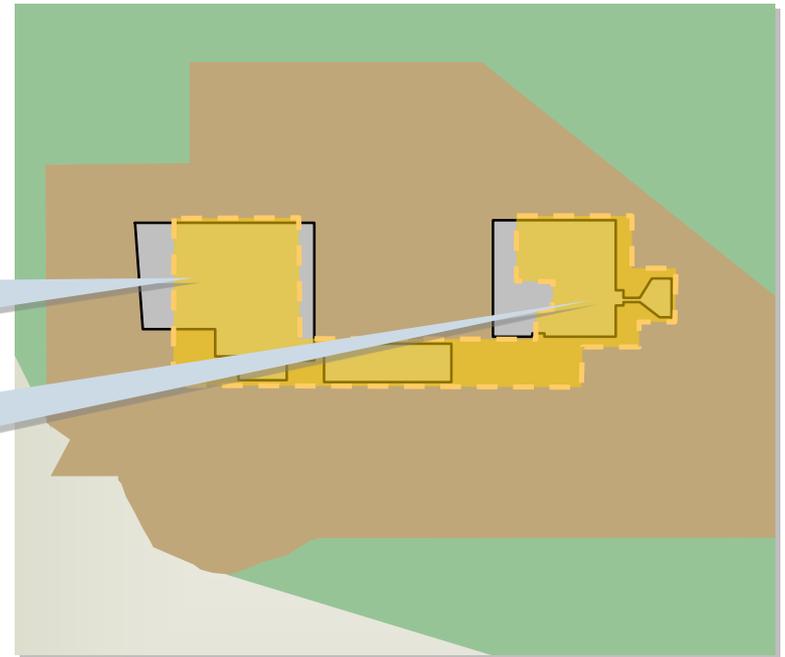
Central Plateau Inner Zone (~10 sq. mi.)

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Nuclear Facility D&D – Remainder of Hanford (RL-0040)

- Maintain Surveillance and Maintenance for Central Plateau waste sites and facilities awaiting final disposition
- Replace, renovate, and restructure essential infrastructure to support Hanford cleanup
- Support infrastructure activities such as steam, occupational medicine and service contracts





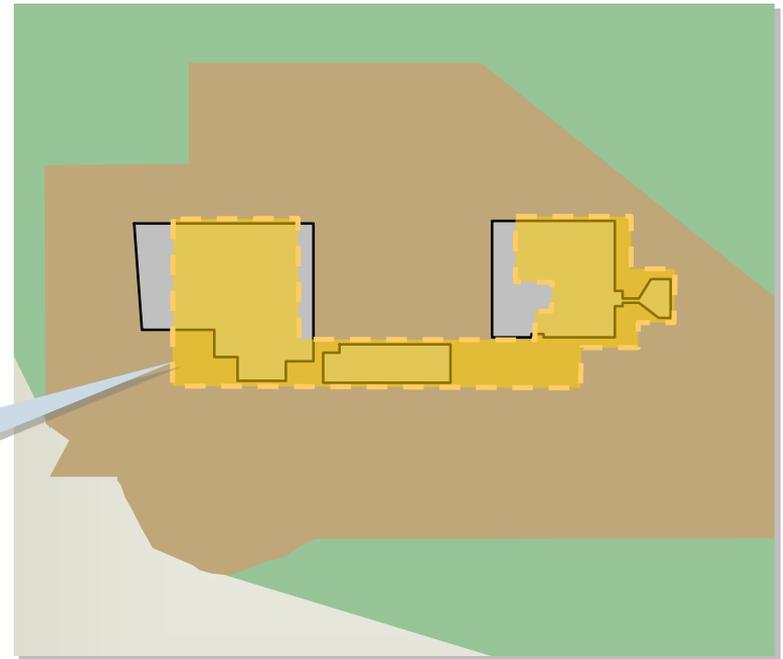
Central Plateau Inner Zone (~10 sq. mi.)

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Solid Waste Stabilization/Disposition (RL-0013)

- Operate Treatment Facilities
 - 200 Effluent Treatment Facility
- Provide Base Operations
 - T plant
 - Waste Receiving and Processing Facility
 - Canister Storage Building and Interim Fuel Storage Area
 - Integrated Disposal Facility
 - Storage of cesium and strontium capsules at the Waste Encapsulation and Storage Facility
 - Low-Level Burial Grounds



Note: Map does not include 300 Area Facilities.



Central Plateau Inner Zone (~10 sq. mi.)

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Safeguards and Security (RL-0020)

- Maintain protection of special nuclear materials
- Maintain site-wide security

Community and Regulatory Support (RL-0100)

- Funding for the Natural Resource Trustee Council operations
- Continuation of grants to Emergency Preparedness, Self Reliance Foundation, Ecology, Department of Health, and Oregon Department of Energy
- Continue funding Payment-in-Lieu of Taxes (PILT)
- Support to permits and fees including RCRA Mixed Waste and Air Emissions
- Hanford Advisory Board