THE HANFORD SITE

Hanford Site 5-Year Plan

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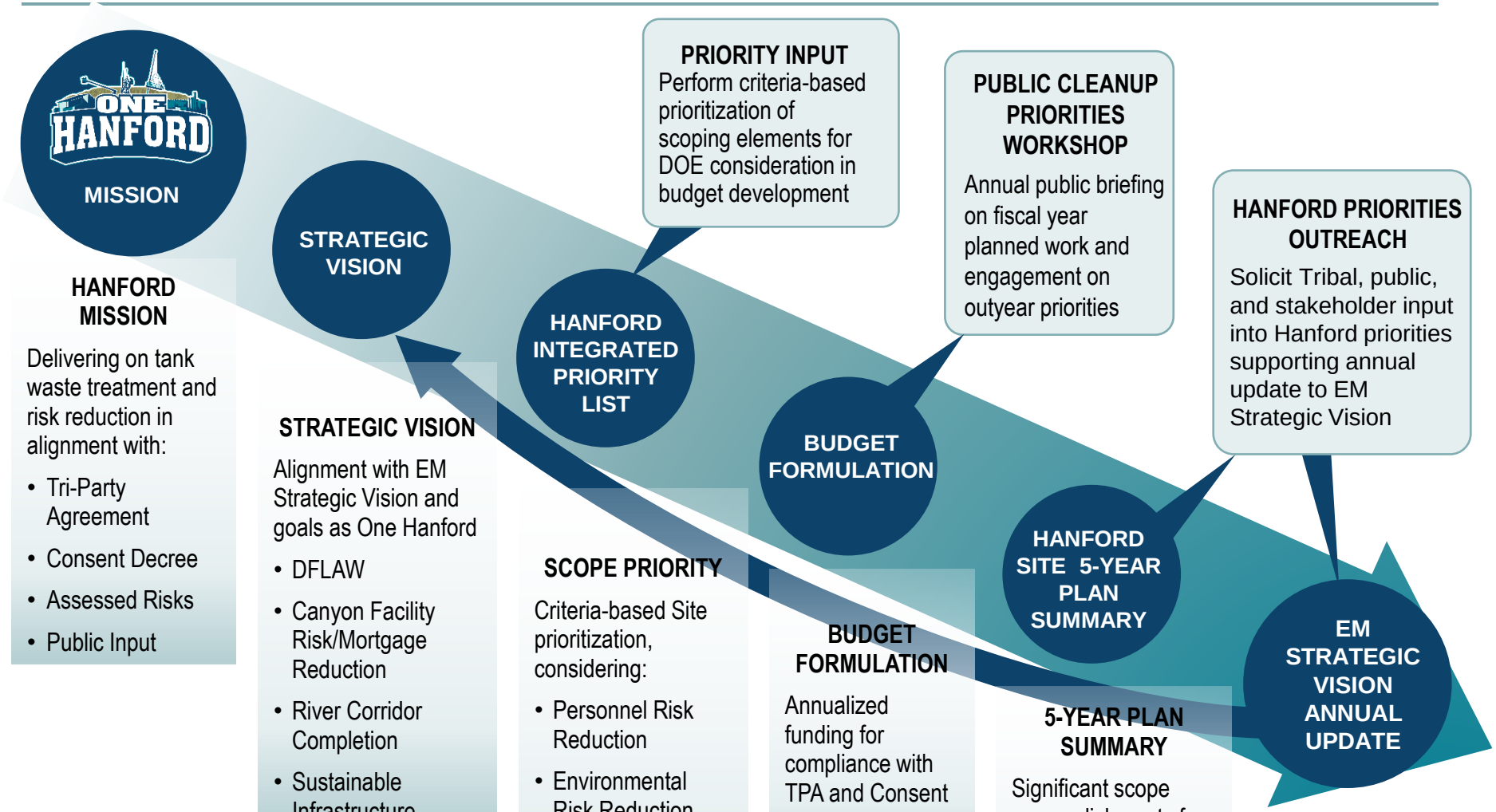
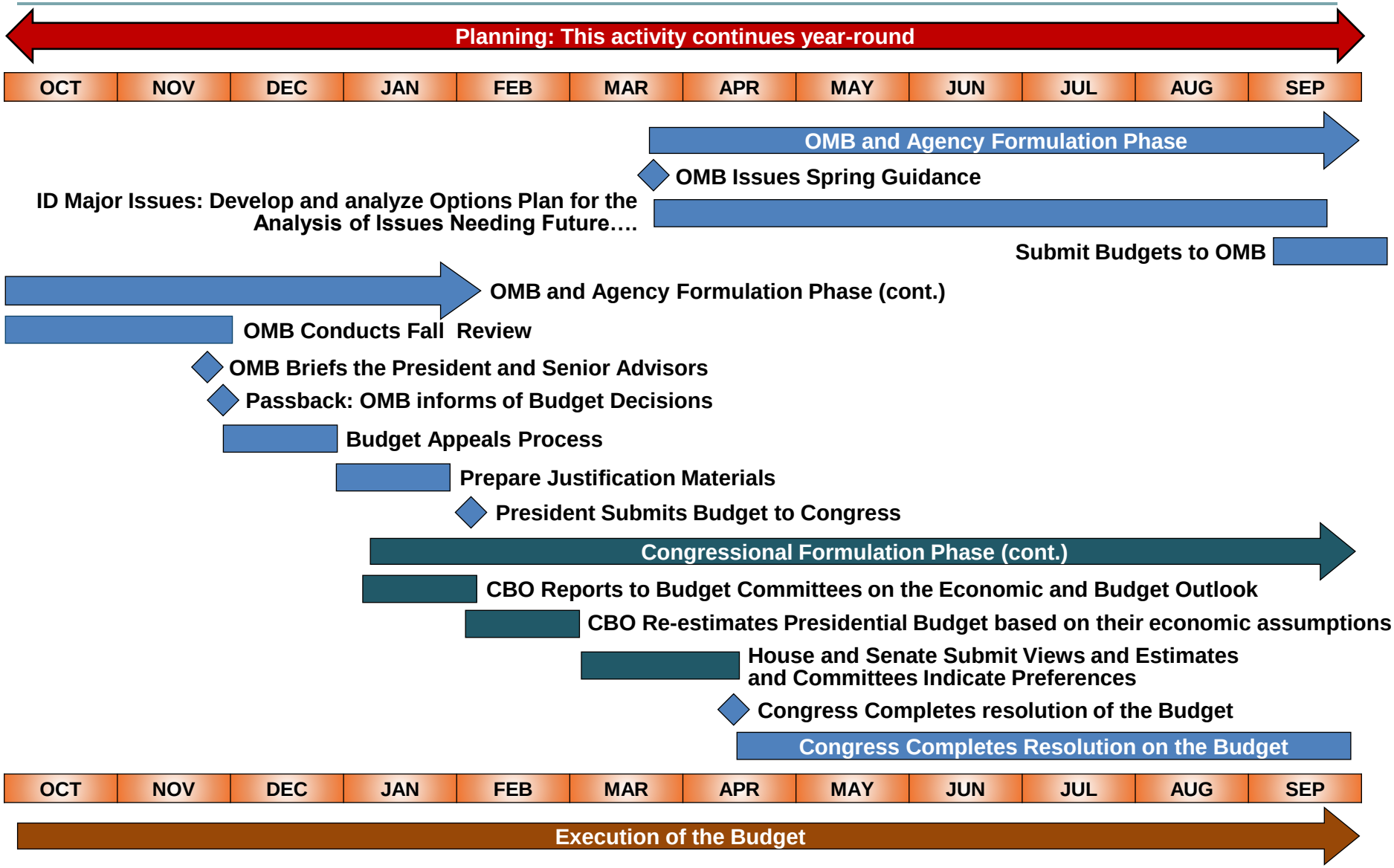
Hanford 5-Year Plan Overview

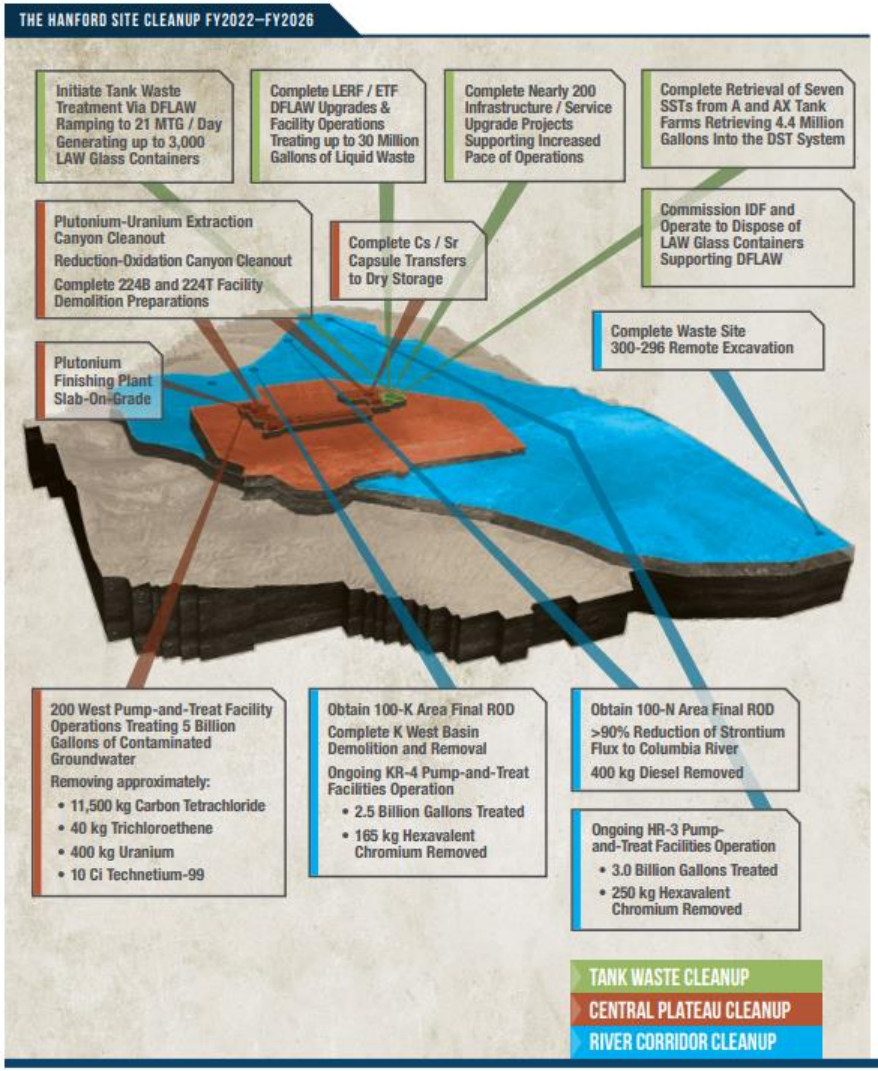
- Reflects current Hanford Site goals and objectives relative to the three major cleanup components:
  - Tank Waste Cleanup
  - Central Plateau Cleanup
  - River Corridor Cleanup
- Outlines the cleanup work planned to be completed or initiated during fiscal years 2022 to 2026
- Provides performance status for prior fiscal year
- Aligns major accomplishment milestones for current and upcoming fiscal years based on previously submitted budget requests
- Projects major accomplishment milestones for out-years in alignment with budget targets
- Summarizes operational achievements for the next 5 years


ONE HANFORD
MISSION
STRATEGIC VISION
HANFORD INTEGRATED PRIORITY LIST
BUDGET FORMULATION
HANFORD SITE 5-YEAR PLAN SUMMARY
EM STRATEGIC VISION ANNUAL UPDATE
PRIORITY INPUT
Perform criteria-based prioritization of scoping elements for DOE consideration in budget development
PUBLIC CLEANUP PRIORITIES WORKSHOP
Annual public briefing on fiscal year planned work and engagement on outyear priorities
HANFORD PRIORITIES OUTREACH
Solicit Tribal, public, and stakeholder input into Hanford priorities supporting annual update to EM Strategic Vision
HANFORD MISSION
Delivering on tank waste treatment and risk reduction in alignment with:
• Tri-Party Agreement
• Consent Decree
• Assessed Risks
• Public Input
STRATEGIC VISION
Alignment with EM Strategic Vision and goals as One Hanford
• DFLAW
• Canyon Facility Risk/Mortgage Reduction
• River Corridor Completion
• Sustainable Infrastructure
SCOPE PRIORITY
Criteria-based Site prioritization, considering:
• Personnel Risk Reduction
• Environmental Risk Reduction
• Life Cycle Effects
• Technical Complexity
BUDGET FORMULATION
Annualized funding for compliance with TPA and Consent Decree milestones informed by HIPL
5-YEAR PLAN SUMMARY
Significant scope accomplishments for the upcoming 5 years aligned with legal requirements, assessed risks, public priorities



*During OMB's Agency Formulation Phase, Budget Allocations are Embargoed and NOT Releasable Outside of the Administration

Hanford 5-Year Plan Placemat



U.S. DEPARTMENT OF ENERGY

ONE HANFORD

Hanford 5-Year Plan Placemat (cont.)

THE HANFORD SITE

Timeframes and accomplishments assume ~ $2.6 billion annual funding profile

FY2021

CRITICAL ACTIVITIES:

TANK WASTE
- ✓ Transition All WTP Lab, Low-Activity Waste (LAW) and Balance of Facilities Systems to Commissioning (Excluding EMF)
- ✓ Complete Tank-Side Cesium Removal (TSCR) Readiness to Operate
- ✓ Complete Effluent Management Facility (EMF) Construction
- ✓ Complete Scheduled Liquid Effluent Retention Facility (LERF) / Effluent Treatment Facility (ETF) DFLAW Upgrades
- ✓ Complete Construction on TX Farm Surface Barrier

CENTRAL PLATEAU
- ✓ Complete Capsule Storage Area Construction
- ✓ Complete Plutonium-Uranium Extraction (PUREX) Facility Removal Action Work Plan
- ✓ Complete 200 East Area Sewer Consolidations
- ✓ Complete Overlay of Interior 200 East Area Roads
- › Complete Fire Protection Infrastructure for Central Plateau Raw Water
- ✓ Install Mobile Office Trailers 200 East Area (Emergent COVID Work)

RIVER CORRIDOR
- ✓ Complete K West Basin Garnet and Sand Filter Removal
- › Submit 100-BC Area Remedial Design Report / Remedial Action Work Plan for Regulatory Review

✓ COMPLETE
› CARRYOVER

FY2022

CRITICAL ACTIVITIES:

TANK WASTE
- Complete AX-102 and AX-104 SST Retrievals (Consent Decree Milestone B-3)

- Initiate TSCR Operations [PICTURED]
- Complete WTP Loss of Power Testing
- Complete WTP Water Run
- Complete First LAW Facility Melter Heat-Up
- Initiate LAW Facility Cold Commissioning with Simulated Tank Waste
- Initiate Second LAW Facility Melter Heat-Up
- Complete 12-inch Potable Water Line Loop to WTP

CENTRAL PLATEAU
- Complete PUREX North Facility Complex Demolition
- Implement 200-BP-5 / 200-PO-1 Interim Record of Decision (ROD)

RIVER CORRIDOR
- Complete Garnet Filter / Sand Filter Media Transfer to T Plant
- Complete Installation of 7 Micropiles at 324 Building to Support Waste Site 300-296 Remote Excavation

FY2023

CRITICAL ACTIVITIES:

TANK WASTE
- Complete LAW Facility Operational Readiness Review to Authorize Hot Commissioning
- Initiate IDF Operations
- Commence Hot Commissioning of WTP LAW Facility and EMF [PICTURED]
- Resume 242-A Evaporator Operations
- Complete LERF Basin 41 Construction

CENTRAL PLATEAU
- Complete IDF Upgrades & Readiness Reviews Required for Operations
- Complete 224B Facility Demolition Preparation
- Complete PUREX North Facility RCRA Tank Closures
- Complete 400 Area Fire Station
- Complete Raw Water Cross Connection Isolations

RIVER CORRIDOR
- Complete 105KE Reactor ISS
- Complete Installation of 324 Building Micropiles to Support Waste Site 300-296 Remote Excavation
- Complete 100 Area Mission Critical Distribution Feeders
- Complete 300 Area Lighting Along Route 4S

FY2024

CRITICAL ACTIVITIES:

TANK WASTE
- Initiate LAW Waste Treatment Operations
- Central Plateau Water Treatment Facility Operational
- Implement West Area Risk Management
- Complete AX Farm Retrievals
- Initiate A Farm Retrieval
- Complete Construction on U Farm Surface Barrier

CENTRAL PLATEAU
- Complete Waste Encapsulation Storage Facility Modifications Construction
- Replace 200 West Area 1.1 Million Gallon Potable Water Tank
- Complete 231Z Facility Demolition Preparation
- Complete REDOX Annex Demolition
- Eliminate All IT Services from Gable Mountain - West
- Complete Upgrade of the Site Business Management System

RIVER CORRIDOR
- Complete K West Basin Characterization and Dewatering
- Initiate K West Basin Demolition [PICTURED]
- Obtain 100-K Area ROD

FY2025

CRITICAL ACTIVITIES:

TANK WASTE
- DFLAW Operations Ramp Up Treatment Throughput
- Initiate Activation of Cross-Site Transfer System
- Complete 230kV Transmission System Reconditioning
- Resume WTP High-Level Waste Facility Construction [PICTURED]

CENTRAL PLATEAU
- Initiate Transfer of Cs / Sr Capsules to Capsule Storage Area
- Initiate 224B & 231Z Facility Demolition
- Initiate PUREX Removal Actions
- Complete Closure of 276S Hexone Tanks
- Expand Route 4S and Rebuild Routes 2S & 11A
- Complete Construction of Fleet Maintenance Complex

RIVER CORRIDOR
- Complete Waste Site 300-296 Remote Excavation
- Obtain 100-N Area ROD

FY2026

CRITICAL ACTIVITIES:

TANK WASTE
- Continue DFLAW Operations
- Initiate Infrastructure Upgrades for Next Tank Farm Retrievals
- Initiate Tank Farm Upgrades for HLW Processing

CENTRAL PLATEAU
- Complete Cs / Sr Capsule Transfers to Dry Storage [PICTURED]
- Complete Removal of All Mixed Waste Containers from Outside Storage Areas A & B
- Initiate 224T Facility Deactivation
- Complete Construction of ERDF Supercell 11
- Complete Sanitary Water Cross-Tie Between 200E & 200W
- Replace 200 East Area 1.1 Million Gallon Potable Water Tank
- Replace 2101M Warehouse

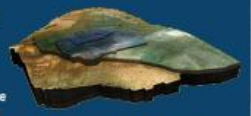
RIVER CORRIDOR
- Complete K West Basin Demolition
- Replace 181D Vertical Turbine Pumps
- Initiate Waste Site Remediation Per Final RODs

PACE OF OPERATIONS

DFLAW OPERATIONAL

[AS EARLY AS FY2023] — [AS LATE AS FY2024]

ONE HANFORD TRANSITION



As cleanup progresses, the Site will transition to an integrated "One Hanford" approach to operations. The pace of the mission will increase and expand to 24 / 7 operations to support tank waste treatment. Coordinated planning and execution will define success.

DIRECT FEED LOW-ACTIVITY WASTE

The WTP's new DFLAW program is the first of many long-term cleanup activities that will be employed at Hanford. Hot commissioning will begin in 2023, initiating an exciting new phase of the Hanford cleanup mission.

ESSENTIAL SERVICES

The Hanford Site will transition to decades of 24 / 7 operations. This will affect how essential services will continue to be safely and flexibly delivered with the right level of rigor and robustness. Today, nearly 200 infrastructure / service upgrade projects are prioritized and are being planned through FY2026 to support the pace of operations. Currently, WTP utilizes 42 site services and will progress up to 76 services with 27 required during 24 / 7 operations.

THE FUTURE OF CLEANUP

By FY2026, Tank Waste treatment will ramp up toward producing 21 metric tons of glass (MTG) / day for disposal at IDF, retrieve six additional SSTs and resume construction on the HLW Vitrification Facility.

Central Plateau cleanup will have completed the transfer of Cs / Sr capsules to dry storage, reduced risk / mortgage cost for several aging facilities, and treated approximately 5 billion gallons of groundwater.

River Corridor cleanup will have obtained final 100-BC, 100-N and 100-K RODs, completed remedial actions in 100-K, and treated approximately 5 billion gallons of groundwater. This scope safely, efficiently and effectively reduces risk and progresses the Hanford Site cleanup mission.

FY 2021 Critical Activities

TANK WASTE

- ✓ Transition All WTP Lab, Low-Activity Waste (LAW) and Balance of Facilities Systems to Commissioning (Excluding EMF)
- ✓ Complete Tank-Side Cesium Removal (TSCR) Readiness to Operate
- ✓ Complete Effluent Management Facility (EMF) Construction
- ✓ Complete Scheduled Liquid Effluent Retention Facility (LERF) / Effluent Treatment Facility (ETF) DFLAW Upgrades
- ✓ Complete Construction on TX Farm Surface Barrier

CENTRAL PLATEAU

- ✓ Complete Capsule Storage Area Construction
- ✓ Complete Plutonium-Uranium Extraction (PUREX) Facility Removal Action Work Plan
- ✓ Complete 200 East Area Sewer Consolidations
- ✓ Complete Overlay of Interior 200 East Area Roads
- > Complete Fire Protection Infrastructure for Central Plateau Raw Water
- ✓ Install Mobile Office Trailers 200 East Area (Emergent COVID Work)

RIVER CORRIDOR

- ✓ Complete K West Basin Garnet and Sand Filter Removal
- > Submit 100-BC Area Remedial Design Report / Remedial Action Work Plan for Regulatory Review

✓ **Complete**

> **Carryover**

FY 2022 Critical Activities

TANK WASTE

- Complete AX-102 and AX-104 SST Retrievals (Consent Decree Milestone B-3)
- Initiate TSCR Operations [pictured]
- Complete WTP Loss of Power Testing
- Complete WTP Water Run
- Complete First LAW Facility Melter Heat-Up
- Initiate LAW Facility Cold Commissioning with Simulated Tank Waste
- Initiate Second LAW Facility Melter Heat-Up
- Complete 12-inch Potable Water Line Loop to WTP

CENTRAL PLATEAU

- Complete PUREX North Facility Complex Demolition
- Implement 200-BP-5 / 200-PO-1 Interim Record of Decision (ROD)

RIVER CORRIDOR

- Complete Garnet Filter / Sand Filter Media Transfer to T Plant
- Complete Installation of 7 Micropiles at 324 Building to Support Waste Site 300-296 Remote Excavation

TSCR & Ion-Exchange Storage Pad Near AP Farm

FY 2023 Critical Activities

TANK WASTE

- Complete LAW Facility Operational Readiness Review to Authorize Hot Commissioning
- Initiate IDF Operations
- Commence Hot Commissioning of WTP LAW Facility and EMF [pictured]
- Resume 242-A Evaporator Operations
- Complete LERF Basin 41 Construction

CENTRAL PLATEAU

- Complete IDF Upgrades & Readiness Reviews Required for Operations
- Complete 224B Facility Demolition Preparation
- Complete PUREX North Facility RCRA Tank Closures
- Complete 400 Area Fire Station
- Complete Raw Water Cross Connection Isolations

RIVER CORRIDOR

- Complete 105KE Reactor ISS
- Complete Installation of 324 Building Micropiles to Support Waste Site 300-296 Remote Excavation
- Complete 100 Area Mission Critical Distribution Feeders
- Complete 300 Area Lighting Along Route 4S

DFLAW Hot Commissioning (WTP)

FY 2024 Critical Activities

TANK WASTE

- Initiate LAW Waste Treatment Operations
- Central Plateau Water Treatment Facility Operational
- Implement West Area Risk Management
- Complete AX Farm Retrievals
- Initiate A Farm Retrieval
- Complete Construction on U Farm Surface Barrier

CENTRAL PLATEAU

- Complete Waste Encapsulation Storage Facility Modifications Construction
- Replace 200 West Area 1.1 Million Gallon Potable Water Tank
- Complete 231Z Facility Demolition Preparation
- Complete REDOX Annex Demolition
- Eliminate All IT Services from Gable Mountain - West
- Complete Upgrade of the Site Business Management System

RIVER CORRIDOR

- Complete K West Basin Characterization and Dewatering
- Initiate K West Basin Demolition [pictured]
- Obtain 100-K Area ROD

Remedial Action at 100-K

FY 2025 Critical Activities

TANK WASTE

- DFLAW Operations Ramp Up Treatment Throughput
- Initiate Activation of Cross-Site Transfer System
- Complete 230kV Transmission System Reconditioning
- Resume WTP High-Level Waste Facility Construction [pictured]

Construction of the High-Level Waste facility

CENTRAL PLATEAU

- Initiate Transfer of Cs / Sr Capsules to Capsule Storage Area
- Initiate 224B & 231Z Facility Demolition
- Initiate PUREX Removal Actions
- Complete Closure of 276S Hexone Tanks
- Expand Route 4S and Rebuild Routes 2S & 11A
- Complete Construction of Fleet Maintenance Complex

RIVER CORRIDOR

- Complete Waste Site 300-296 Remote Excavation
- Obtain 100-N Area ROD

FY 2026 Critical Activities

TANK WASTE

- Continue DFLAW Operations
- Initiate Infrastructure Upgrades for Next Tank Farm Retrievals
- Initiate Tank Farm Upgrades for HLW Processing

Cesium/Strontium capsules to dry storage

CENTRAL PLATEAU

- Complete Cs / Sr Capsule Transfers to Dry Storage [pictured]
- Complete Removal of All Mixed Waste Containers from Outside Storage Areas A & B
- Initiate 224T Facility Deactivation
- Complete Construction of ERDF Supercell 11
- Complete Sanitary Water Cross-Tie Between 200E & 200W
- Replace 200 East Area 1.1 Million Gallon Potable Water Tank
- Replace 2101M Warehouse

RIVER CORRIDOR

- Complete K West Basin Demolition
- Replace 181D Vertical Turbine Pumps
- Initiate Waste Site Remediation Per Final RODs

Public Engagement

The Department is soliciting feedback on the 5-Year Plan through a survey that is open through Nov. 22. The Department will share the survey results in the future.

Please complete the survey by Nov. 22 at https://forms.office.com/g/SCzizF5QwJ.

More information, including the Hanford 5-Year Plan, is available on the Hanford at website at https://go.usa.gov/xMHkq.

Questions? Please email 5YearPlan@rl.gov.

Questions?
The Hanford Reach
White Bluffs Overlooking the Columbia River