

Date Received for Clearance Process (MM/DD/YYYY) 07/15/2015	INFORMATION CLEARANCE FORM																																			
A. Information Category <input type="checkbox"/> Abstract <input type="checkbox"/> Journal Article <input type="checkbox"/> Summary <input type="checkbox"/> Internet <input type="checkbox"/> Visual Aid <input type="checkbox"/> Software <input type="checkbox"/> Full Paper <input checked="" type="checkbox"/> Report <input type="checkbox"/> Other _____	B. Document Number HNF-44238 Revision 6 C. Title Infrastructure and Services Alignment Plan annual report for FY2015																																			
E. Required Information (MANDATORY) 1. Is document potentially Classified? <input checked="" type="radio"/> No <input type="radio"/> Yes Fritz, Lori L Via IDMS Data File Manager Required (Print and Sign) If Yes _____ ADC Required (Print and Sign) <input type="radio"/> No <input type="radio"/> Yes Classified 2. Official Use Only <input checked="" type="radio"/> No <input type="radio"/> Yes Exemption No. _____ 3. Export Controlled Information <input checked="" type="radio"/> No <input type="radio"/> Yes OOU Exemption No. 3 4. UCNi <input checked="" type="radio"/> No <input type="radio"/> Yes 5. Applied Technology <input checked="" type="radio"/> No <input type="radio"/> Yes OOU Exemption No. 5 6. Other (Specify) _____	7. Does Information Contain the Following: a. New or Novel (Patentable) Subject Matter? <input checked="" type="radio"/> No <input type="radio"/> Yes If "Yes", OOU Exemption No. 3 If "Yes", Disclosure No.: _____ b. Commercial Proprietary Information Received in Confidence, Such as Proprietary and/or Inventions? <input checked="" type="radio"/> No <input type="radio"/> Yes If "Yes", OOU Exemption No. 4 c. Corporate Privileged Information? <input checked="" type="radio"/> No <input type="radio"/> Yes If "Yes", OOU Exemption No. 4 d. Government Privileged Information? <input checked="" type="radio"/> No <input type="radio"/> Yes If "Yes", Exemption No. 5 e. Copyrights? <input checked="" type="radio"/> No <input type="radio"/> Yes If "Yes", Attach Permission. f. Trademarks? <input checked="" type="radio"/> No <input type="radio"/> Yes If "Yes", Identify in Document. 8. Is Information requiring submission to OSTI? <input checked="" type="radio"/> No <input type="radio"/> Yes 9. Release Level? <input checked="" type="radio"/> Public <input type="radio"/> Limited																																			
F. Complete for a Journal Article																																				
1. Title of Journal _____																																				
G. Complete for a Presentation																																				
1. Title for Conference or Meeting _____ 2. Group Sponsoring _____ 3. Date of Conference _____ 4. City/State _____ 5. Will Information be Published in Proceedings? <input checked="" type="radio"/> No <input type="radio"/> Yes 6. Will Material be Handed Out? <input checked="" type="radio"/> No <input type="radio"/> Yes																																				
H. Information Owner/Author/Requestor Mathes, Matthew Approved - IDMS Data File (Print and Sign)	Responsible Manager Fritz, Lori L Approved - IDMS Data File (Print and Sign)																																			
Approval by Direct Report to President (Speech/Articles Only) Fritz, Lori L (above) (Print and Sign)																																				
I. Reviewers	<table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:15%;"></th> <th style="width:10%;">Yes</th> <th style="width:35%;">Print</th> <th style="width:30%;">Signature</th> <th style="width:10%;">Public Y/N (If N, complete J)</th> </tr> </thead> <tbody> <tr> <td>General Counsel</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Fowler, Sandra B</td> <td>Y - Public, IDMS Data File</td> <td style="text-align: center;">Y / N</td> </tr> <tr> <td>Office of External Affairs</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Weil, Rae S</td> <td>Y - Public, IDMS Data File</td> <td style="text-align: center;">Y / N</td> </tr> <tr> <td>DOE</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Pressentin, Roger A</td> <td>Y - Public, IDMS Data File</td> <td style="text-align: center;">Y / N</td> </tr> <tr> <td>Other</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Braswell, Chet E</td> <td>Y- Public, IDMS Data File & Email Pg. 2</td> <td style="text-align: center;">Y / N</td> </tr> <tr> <td>Other</td> <td style="text-align: center;"><input type="checkbox"/></td> <td>_____</td> <td>_____</td> <td style="text-align: center;">Y / N</td> </tr> <tr> <td>Other</td> <td style="text-align: center;"><input type="checkbox"/></td> <td>_____</td> <td>_____</td> <td style="text-align: center;">Y / N</td> </tr> </tbody> </table>		Yes	Print	Signature	Public Y/N (If N, complete J)	General Counsel	<input checked="" type="checkbox"/>	Fowler, Sandra B	Y - Public, IDMS Data File	Y / N	Office of External Affairs	<input checked="" type="checkbox"/>	Weil, Rae S	Y - Public, IDMS Data File	Y / N	DOE	<input checked="" type="checkbox"/>	Pressentin, Roger A	Y - Public, IDMS Data File	Y / N	Other	<input checked="" type="checkbox"/>	Braswell, Chet E	Y- Public, IDMS Data File & Email Pg. 2	Y / N	Other	<input type="checkbox"/>	_____	_____	Y / N	Other	<input type="checkbox"/>	_____	_____	Y / N
	Yes	Print	Signature	Public Y/N (If N, complete J)																																
General Counsel	<input checked="" type="checkbox"/>	Fowler, Sandra B	Y - Public, IDMS Data File	Y / N																																
Office of External Affairs	<input checked="" type="checkbox"/>	Weil, Rae S	Y - Public, IDMS Data File	Y / N																																
DOE	<input checked="" type="checkbox"/>	Pressentin, Roger A	Y - Public, IDMS Data File	Y / N																																
Other	<input checked="" type="checkbox"/>	Braswell, Chet E	Y- Public, IDMS Data File & Email Pg. 2	Y / N																																
Other	<input type="checkbox"/>	_____	_____	Y / N																																
Other	<input type="checkbox"/>	_____	_____	Y / N																																
J. Comments <small>During the past 3 years, ISAP annual reports have been released as public documents. The ISAP annual report is a 38-page color brochure prepared annually as contract deliverable CD0003 for DOE-RL. The schedule and content is described in MSC-GD-54665, Revision 0, Planning Process Description and Mission Support Contract, Table J-3. The ISAP brochure a strategic planning document for mission support infrastructure and services supporting the budget for 5 years ahead.</small> <small>Intended primary readers include Department of Energy Richland Office and Office of River Protection as well as the Pacific Northwest Office of Science, the board and staff of Mission Support Alliance, LLC as well as all major contractors plus site user organizations Energy Northwest, LIGO and BPA.</small> <small>Intended secondary readers include federal agencies USFWS and National Parks Service as well as state and local agency staff engaged in discussions and planning influenced by Hanford site activities.</small>	Information Clearance Approval <div style="border: 1px solid green; padding: 5px; display: inline-block; color: green; font-weight: bold;">APPROVED</div> <small>By Janis D. Aardal at 7:51 am, Jul 29, 2015</small> <div style="border: 2px solid blue; padding: 5px; display: inline-block; color: blue; font-weight: bold;">Approved for Public Release; Further Dissemination Unlimited</div>																																			

Infrastructure and Services Alignment Plan annual report for FY2015

Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

Contractor for the U.S. Department of Energy
under Contract DE-AC06-09RL14728



**P.O. Box 650
Richland, Washington 99352**

Infrastructure and Services Alignment Plan annual report for FY2015

Project No: HNF-44238

Document Type: PLAN

Program/Project: MSC

M. S. Mathes
Mission Support Alliance

Date Published
July 2015

Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

Contractor for the U.S. Department of Energy
under Contract DE-AC06-09RL14728



P.O. Box 650
Richland, Washington 99352

APPROVED

By Janis D. Aardal at 7:52 am, Jul 29, 2015

Release Approval

Date

TRADEMARK DISCLAIMER

Reference herein to any specific commercial product, process, or service by tradename, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof or its contractors or subcontractors.

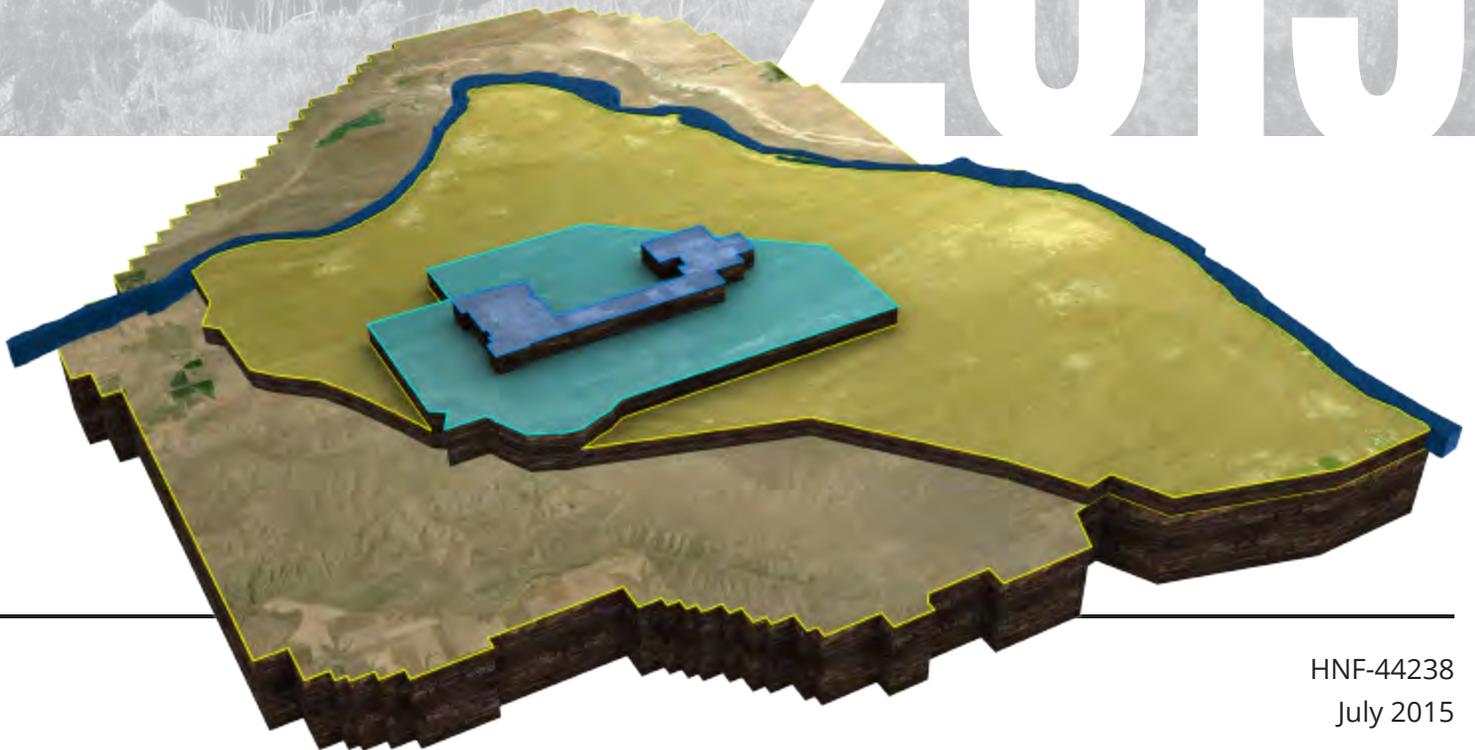
This report has been reproduced from the best available copy.

Printed in the United States of America



Infrastructure & Services Alignment Plan

2015



Infrastructure & Services Alignment Plan



RICHLAND
OPERATIONS OFFICE
United States Department of Energy

OFFICE OF RIVER
PROTECTION
United States Department of Energy



Integrate

All missions needing Hanford Site Services and Infrastructure to Optimize Productivity



Transform

Site Services Infrastructure for Energy Efficient Operations



Protect

The Assets and Employees of the Site



Modernize

The Infrastructure to Ensure Reliable Service to All Projects



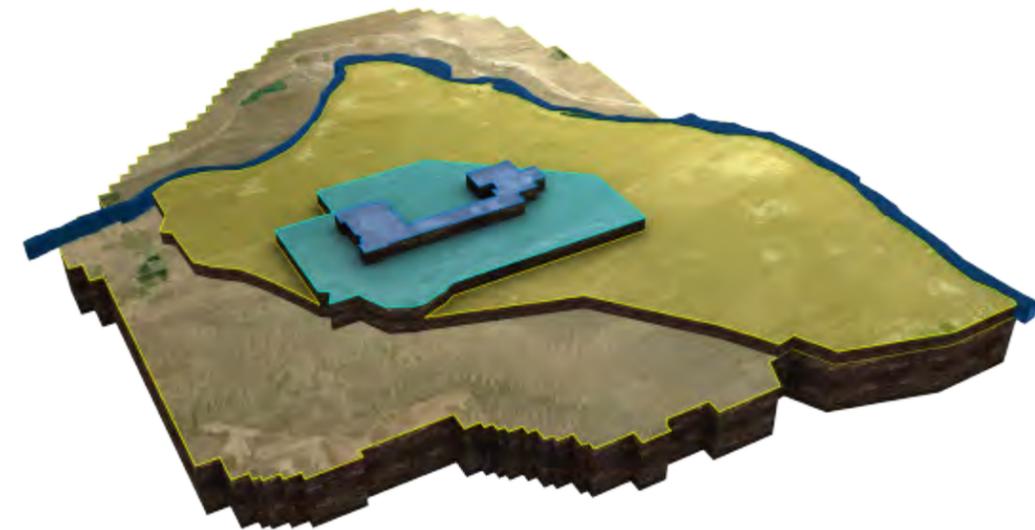
Serve

The Diverse Needs of the Cleanup Mission



Right-Size

The Site Infrastructure



PRESERVE THE HANFORD LEGACY

REDUCE THE FOOTPRINT

ENABLE THE CLEANUP

MANAGE POST-CLEANUP LAND USE

Reliable Service at Needed Capacity
for Reduced Cost at Hanford



Contents

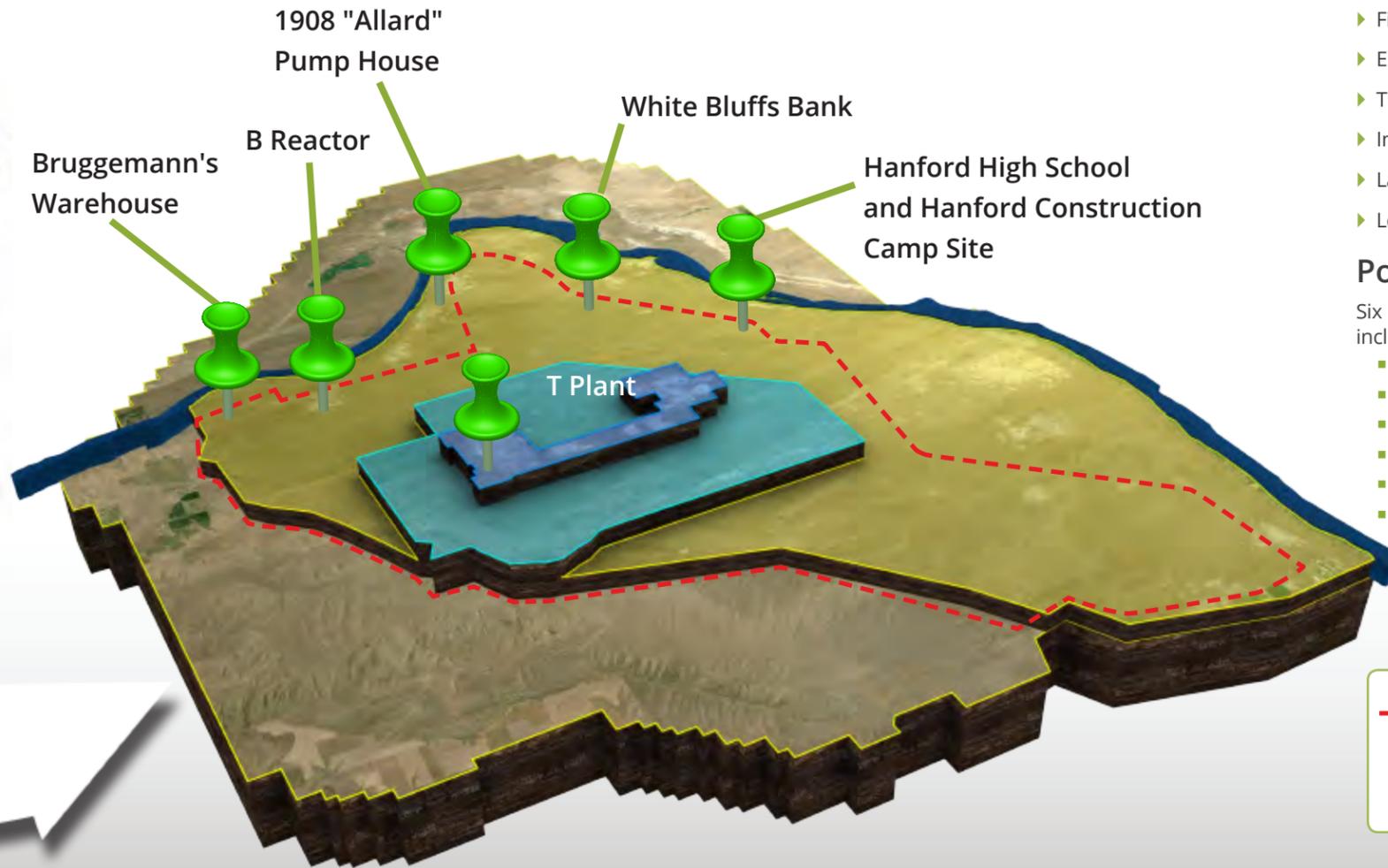
Infrastructure & Services Alignment Plan	1
New Mission: Manhattan Project National Historical Park	4
Hanford's Future: The Mission of Infrastructure, Cleanup and Beyond	6
Reliable Service and Needed Capacity for Reduced Cost at Hanford	8
Safeguards and Security Roadmap	12
Fire Station Roadmap	14
Emergency Management Roadmap	16
Transportation Roadmap	18
Electrical Roadmap	20
Water Roadmap: Export, Raw, and Potable	22
Sanitary Sewer Roadmap	24
Information Technology Roadmap	26
Controls, Planning and Uses	28
Long-Term Stewardship	30
Facilities Roadmap	32
HAMMER Roadmap	34
Mission Forward	36

Hanford's Future: The Manhattan Project National Historical Park



A New National Park

In December 2014, the President signed into law the Manhattan Project National Historical Park Act, which directs the Department of Energy (DOE) and the National Park Service (NPS) to work together to establish a new co-managed National Park in the three original Manhattan Project locations – Oak Ridge, TN, Los Alamos, NM and the Hanford Site in Washington State. The park was established December 19th, 2014.



Manhattan Project National Historic Park and Clean up Mission

Here's how the new National Park is reflected within this report:

- ▶ Safeguards & Security Roadmap
- ▶ Fire Roadmap
- ▶ Emergency Management Roadmap
- ▶ Transportation Roadmap
- ▶ Information Technology Roadmap
- ▶ Land Roadmap
- ▶ Long-Term Stewardship Roadmap

Possible Eligible Sites

Six Hanford facilities are eligible for possible inclusion in the new Park, including:

- B Reactor National Historic Landmark
- Hanford High School
- White Bluffs Bank Building
- Hanford Irrigation District Pump House
- Bruggemann's Warehouse
- T-Plant (221-T Process Building)

- Existing Historic Sites and B Reactor Tour Route
- 📌 Sites Eligible for the new National Park

Integration and Alignment

With the coming of the National Park, DOE will need to reevaluate its long term strategy for roads and services to ensure safety and public access to the historic facilities in the Park. Decisions about which roads are needed, and the condition in which the roads should be kept for the National Park, may be made in 2016, as one example. Other affected systems include utilities, communications and emergency services.

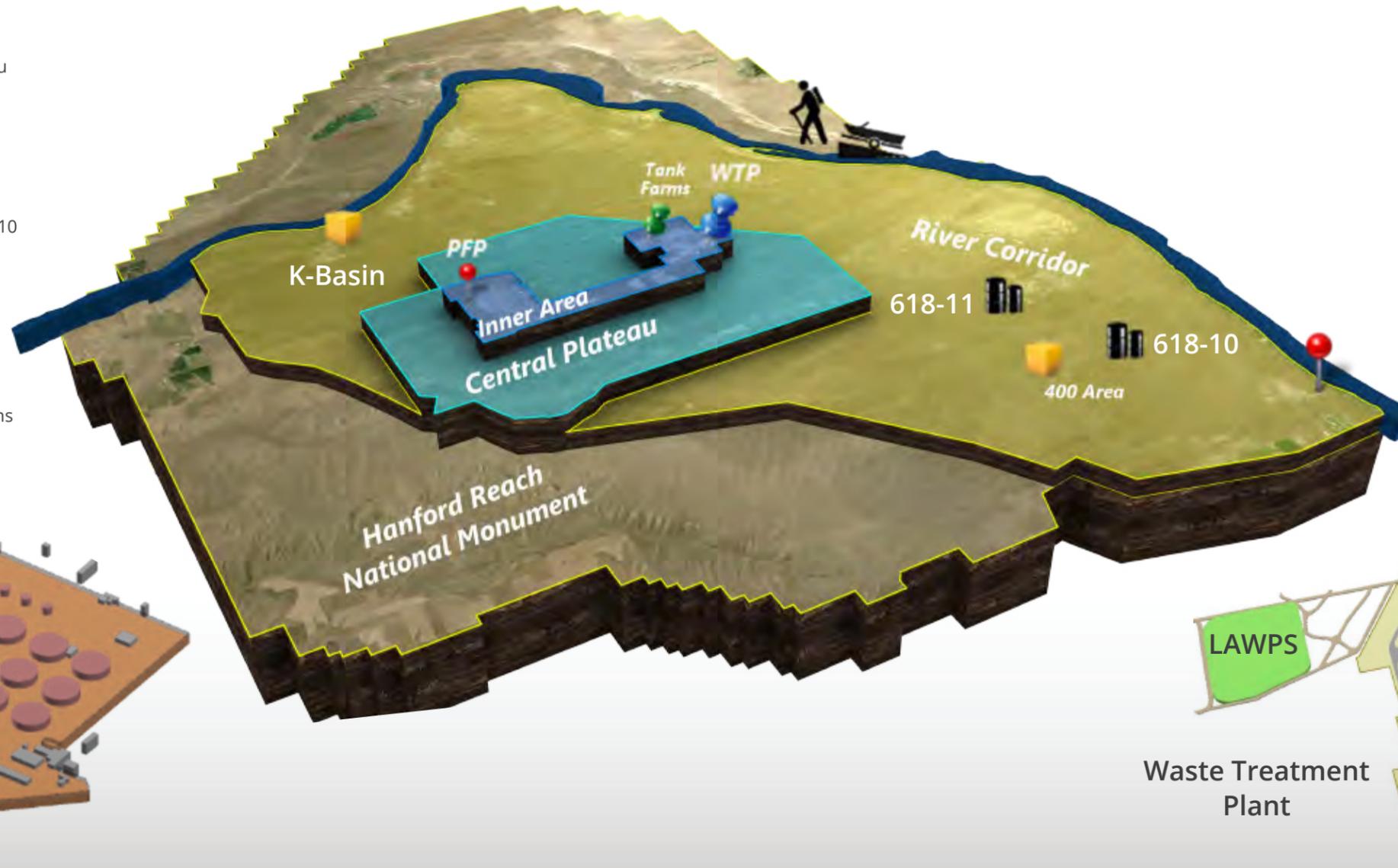
An initial boundary map indicating which eligible facilities will eventually be in the Park will be established by December 2015, along with a Memorandum of Agreement outlining roles and responsibilities for DOE and NPS. The law directs DOE to expand public access to Park facilities and to undertake historic preservation and maintenance work to ensure the longevity of the historic facilities. DOE welcomes and embraces this new mission for the Hanford Site, and is already working closely with NPS to prioritize preservation work and evaluate options for public access to proposed Park facilities.

Hanford's Future: Infrastructure, Cleanup and Beyond



RL GOALS

- ▶ Continue ground water treatment along River Corridor & Central Plateau
- ▶ K-Basin sludge removal
- ▶ 100K reactors in safe storage
- ▶ Complete demolition of Plutonium Finishing Plant (PFP)
- ▶ Remediate Burial Sites 618-11 & 618-10
- ▶ Complete Fast Flux Treatment Facility (FFTF) and 400 Area Demolition and Dismantling
- ▶ Complete demolition of Building 324
- ▶ Preserve historic sites and open broad public access to Manhattan Project National Historic Park locations
- ▶ Open public recreation areas
- ▶ Increase Tribal access



ORP GOALS

- ▶ Complete and operate the Waste Treatment Plant (WTP) in the direct feed (DFLAW) mode as the initial phase of WTP startup
- ▶ Conduct single-shell tank (SST) retrievals to meet commitments
- ▶ Mitigate double-shell tank (DST) AY-102 while safely managing the entire tank waste inventory
- ▶ Provide DST space and infrastructure upgrades to ensure longer-term and SST retrievals
- ▶ Complete the WTP Pretreatment (PT) Facility and High-Level Waste (HLW) Vitrification Facility incorporating tank waste characterization and staging (TCWS) capabilities

Tank Farms

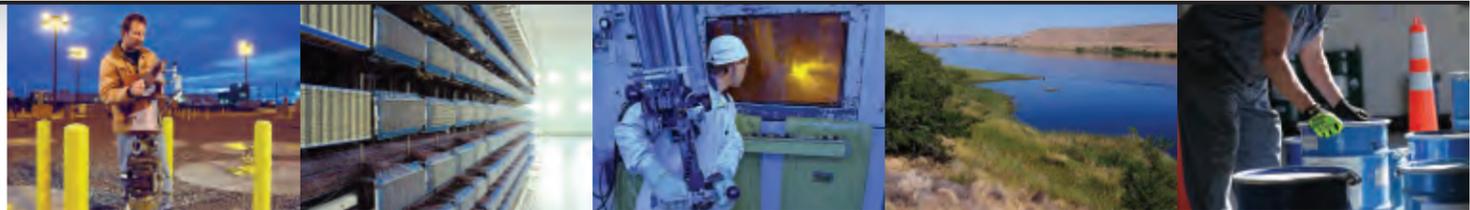
Waste Treatment Plant

Key Infrastructure Projects: The Foundation of Successful Cleanup

- ▶ 200E electrical distribution system capacity upgrades to support waste feed and delivery needs
- ▶ Fire station relocation and consolidation projects to align with the shrinking cleanup footprint and needs of the River Protection Project
- ▶ Export water system piping upgrades to improve reliability of water delivery to critical Central Plateau facilities

- ▶ Roadway refurbishment of primary access roads to the Central Plateau facilities, including Route 4S, 1st Street, and Akron Avenue
- ▶ Electrical power pole replacement for improved reliability of power delivery to Central Plateau facilities, including tank farms, Waste Encapsulation and Storage Facility (WESF), Central Waste Complex (CWC), Effluent Treatment Facility (ETF), and Canister Storage Building (CSB)
- ▶ DFLAW infrastructure projects for electrical, water, sanitary sewer and roads

Reliable Service and Needed Capacity for Reduced Cost at Hanford



Over the past six years, significant progress has been made by Hanford contractors in realizing the 2015 Vision, allowing active cleanup at the Hanford Site to focus on the Central Plateau and the River Protection Project made up of the 200E and 200W Tank Farms and the WTP.

The 2015 Infrastructure and Services Alignment Plan (ISAP) and the 2015 Washington River Protection Solutions (WRPS) Infrastructure Upgrade Plan reflect a changing landscape by outlining future states of infrastructure and the support needed to complete mission requirements. Both identify the scope and timing of the key activities needed to reach those future states.

The ISAP document works in conjunction with baseline operations and maintenance of the infrastructure to assure that reliable, on time, and cost effective services are provided at the required capacities for the Hanford stakeholders.



SEWER: Protect

System modifications are predominately influenced by population changes on the Central Plateau coupled with degraded conditions of several drain fields needed for long term mission requirements. While short-term mitigation strategies are in place to pump the failing drain fields, as needed, long term projects have been defined to eliminate the workarounds:

- ▶ Install pumping systems to route septage from the failing W-1 and W-16 drain fields to the 200W sewer lagoon and abandon the drain fields
- ▶ Replace the failing E-12 drain field in 200E to support long-term tank farm needs
- ▶ Sewer capability to support LAWPS



ROADS: Right-size

Transformation of the Hanford road system is characterized by completion of the River Corridor cleanup and the focus of resources on the arterial and core roads serving the Central Plateau. This strategy will eliminate maintenance costs associated with a significant portion of the 100 Area roads while establishing restricted access. Key activities include:

- ▶ Apply asphalt overlays of arterial access roads to the Central Plateau (Rte 3, Rte 4S, and Rte 11A west of 200 East)
- ▶ Chip seal repairs to Central Plateau core roads
- ▶ 1st St/Canton Ave upgrade to support DFLAW
- ▶ Establish restricted access program for non-maintained roads
- ▶ Pavement condition assessment including 300 Area
- ▶ Widening and overlay of several Central Plateau core roads for safety improvements (Dayton Ave, Akron Ave, 12th Street, and 23rd Street)
- ▶ Evaluate which existing roads will be needed to support the Manhattan Project National Historical Park as well as whether any upgrades are needed.



HAMMER: Serve

While HAMMER's future remains rooted in its mission to serve the training needs of Hanford personnel, it is also being driven by business development opportunities with other stakeholders and the need to improve and modernize the training environment to sustain high quality training. Key areas of focus over the next 5-10 years include:

- ▶ Establish long-term business partnerships with other federal agencies and support existing agency agreements with federal and non-federal customers
- ▶ Invest in upgrades to curriculum, facilities and technology to improve quality of training
- ▶ Maintain core business of training the Hanford Site workers
- ▶ Develop strategies for supporting future training needs of the WTP



SAFEGUARDS & SECURITY/PATROL: Protect

The posture of the site security program will continue to be driven by the need to protect against theft of special nuclear material and unauthorized access to facilities and classified information. While those requirements will remain effectively unchanged over the planning period, land transfers and aging facilities at the Patrol Training Academy (PTA) need to be addressed.

- ▶ Replace the weapons cleaning trailer
- ▶ Upgrade Buildings 662 and 662A (PTA classrooms)
- ▶ New Live Fire Shoot House
- ▶ Evaluate potential scenarios for broad public access to the Manhattan Project National Historical Park as well as associated upgrades or changes.



WATER: Modernize

Raw/Export

Modifications and maintenance to the site export and raw water distribution systems are strongly influenced by the need for reliable raw water delivery to the Central Plateau for fire protection and process cooling water to the River Protection Project facilities (e.g., 242-A Evaporator; LAW). Long-term projects are also defined for right-sizing the export water system while taking advantage of variable speed pumping technology for energy savings.

- ▶ Refurbish/replace aging export water supply lines to maintain high reliability of export water to the Central Plateau
- ▶ Eliminate the 100D and 100B export water reservoirs and upgrade the pumping system to the Central Plateau
- ▶ Water loop and connection to serve LAWPS
- ▶ Refurbish/replace aging raw water supply lines at A Tank Farm, T-Plant, and ETF
- ▶ Implement improvements to the preventative and predictive maintenance program that focuses resources on critical system components needed for continuity of water delivery

Potable

While capacity of the potable water system on the Central Plateau appears to be adequate to support the future mission needs of the WTP, the safety and reliability requirements of the drinking water supply are driving several key projects:

- ▶ Install a redundant filter backwash pump at the 200W Water Treatment Plant to eliminate a single point vulnerability, and prevent a shutdown
- ▶ Install 200W Water Treatment Plant improvements to include system control valves, monitoring instrumentation, Programmable Logic Controller software, and the alum mixing system
- ▶ Replace the existing chlorine gas injection system with a liquid sodium hypochlorite injection system to eliminate the risks and associated costs with storing and handling chlorine gas
- ▶ Refurbish/replace aging potable water supply lines at 222-S Lab, B Plant, Waste Receiving and Processing (WRAP), 2101M warehouse, and the 200E/W cross-tie

Reliable Service and Needed Capacity for Reduced Cost at Hanford



NATURAL GAS PIPELINE: Transform

In 2012, DOE issued a Notice of Intent in the Federal Register to prepare an Environmental Impact Statement for the Acquisition of a Natural Gas Pipeline and Natural Gas Utility Service at the Hanford Site, Richland, Washington (NGP EIS) under the National Environmental Policy Act (NEPA). In the Notice of Intent, DOE proposed to make natural gas utility service available to the DOE's Waste Treatment Plant (WTP), currently under construction, and the 242-A Evaporator in the Central Plateau 200-East Area of the Hanford Site. The proposed action would involve entering into a contract with a licensed natural gas supplier to construct, operate, and maintain a natural gas pipeline, approximately 30 miles long, running from an interconnect near Pasco, Washington, westerly across non-DOE lands beneath the Columbia River to the Hanford Site, and terminating in the 200 East Area of the Central Plateau. The Department remains supportive of completing the analyses necessary to consider bringing natural gas onto the Hanford Site. However, given current cleanup priorities and schedules, DOE intends to better align the completion of the Natural Gas Pipeline EIS and the decision to enter into a supplier agreement with planned future operations of facilities on Hanford's Central Plateau. DOE intends to resume work and complete the EIS in the future and will continue to work closely with the community and other key stakeholders regarding the proposal for bringing natural gas onto the Hanford Site.



FIRE/EMERGENCY SERVICES: Protect

The fire/emergency services planning horizon is driven by changes in site demographics and aging facilities and systems.

- ▶ Replace the Radio Fire Alert and Reporting (RFAR) system to address aging and obsolescence
- ▶ Upgrade the Hanford emergency siren system
- ▶ Upgrade Station 92 (between 200E and 200W)
- ▶ Construct new vehicle storage building to consolidate personnel and equipment from the 100 Area and 300 Area stations
- ▶ Close 100 Area and 300 Area Stations
- ▶ Migrate to a Central Dispatching emergency response system
- ▶ Construct new fire station in 200E to support WTP operations and eliminate the 400 Area fire station
- ▶ Evaluate appropriate coverage aligned with planning for the Manhattan Project National Historical Park as well as associated upgrades or changes



FACILITIES: Modernize

The transformation of facilities across the site is being driven by multiple factors, including demographic shifts, energy savings initiatives, facility aging, and consolidation. With facilities aging, routine building maintenance will be supplemented to address significant roof and heating, ventilation, and air conditioning (HVAC) replacements. Other key projects include:

- ▶ Installation of electric vehicle charging stations in 200E to support electric vehicle fleet expansion
- ▶ Renovation and expansion of the 200E Vehicle Fleet Maintenance Shop
- ▶ Consolidation of warehousing activities
- ▶ Relocation of fire systems maintenance into new or repurposed facilities
- ▶ Upgrade and reconfigure existing A/AX/AY Tank Farm facilities west of Buffalo, south of 7th and north of 4th



INFORMATION TECHNOLOGY (IT): Integrate

IT infrastructure continues to be fueled by technology advances and the need for more accessibility of electronic information across organizations supporting the Hanford missions. Cyber security threats and capacity are also driving changes in the IT arena over the next decade. Key activities include:

- ▶ Upgrades to network hardware to address cyber security requirements and new internet protocols
- ▶ Consolidation from 29 to 11 IT facilities to shrink the footprint, improve services delivery, and reduce operating costs
- ▶ Leveraging Hanford Federal Cloud hosted applications for Other Hanford Contractors (OHCs) as well as across the Emergency Management (EM) Complex to maximize use of DOE investments
- ▶ Continue to deploy Thin Client workstations to lower life cycle costs, reduce power consumption, advance solutions delivery and strengthen cyber security posture
- ▶ Continue expansion and commercialization of broadband wireless services to support mobilization of workforce leveraging tablet/iPad platforms
- ▶ Develop strategies for supporting future WTP IT needs
- ▶ Work with National Park Service agency to ensure capabilities are with the National Park Service interpretation best practices as well as associated upgrades or changes



ELECTRICAL: Transform

The Hanford electrical distribution system will continue to shrink in response to cleanup completion, while customer requirements on the Central Plateau will drive system upgrades for capacity and reliability. Projects and programs to support these changes include:

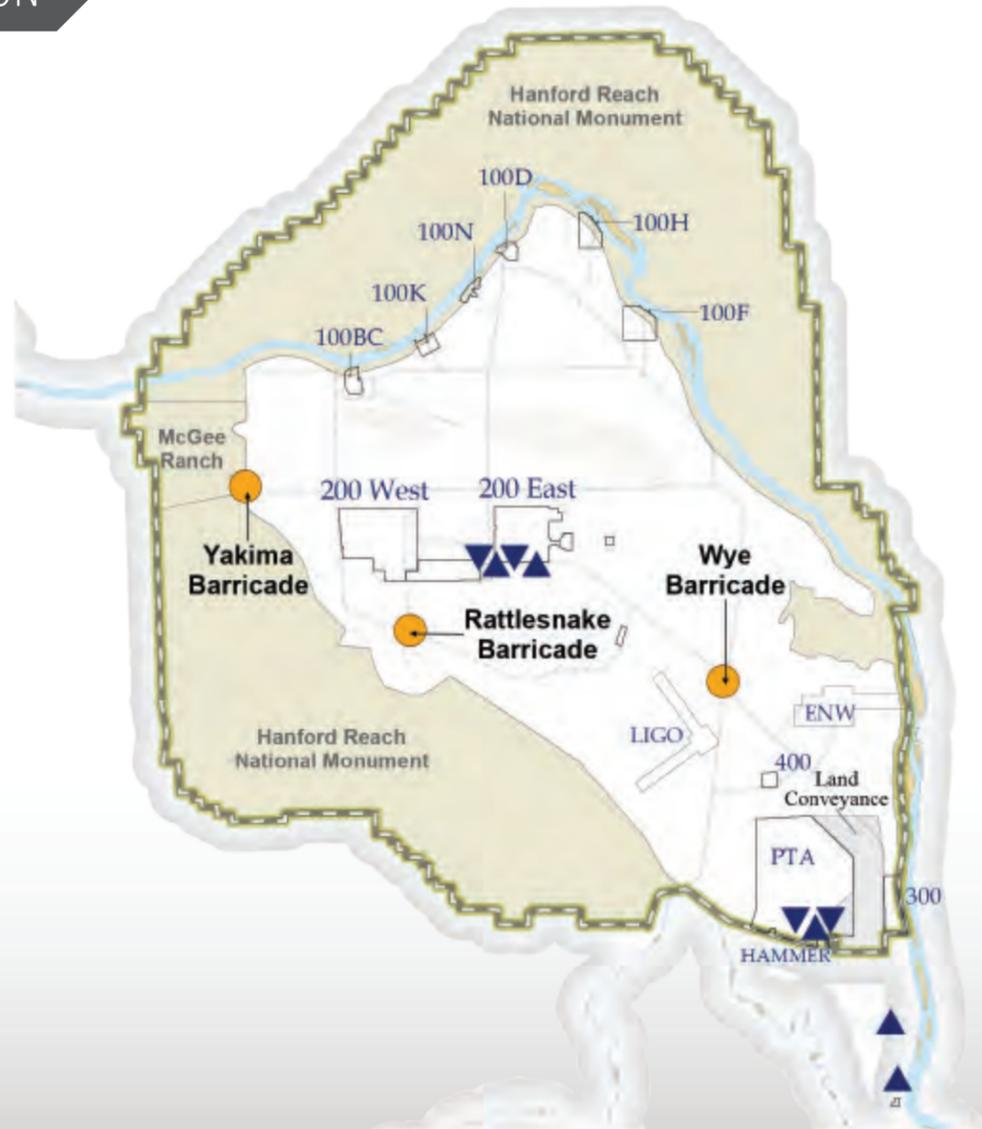
- ▶ Upgrade the current capacity of the 200 Area substation to support forecasted infrastructure loads at the Tank Farms and LAWPS
- ▶ Increase capacity and balance loads on 200E 13.8kV distribution lines to support new loads within the Tank Farms and LAWPS
- ▶ Start-up the A6 substation and electrical supply to WTP
- ▶ Address 230kV line vulnerabilities in order to assure service to LAWPS
- ▶ Eliminate one of the two southern area substations as loads continue to decrease from cleanup efforts
- ▶ Execute a prioritized program to replace the site's aging power poles to assure continued high availability of power to operating facilities
- ▶ Deactivate the A9 substation as 100K Area cleanup is completed
- ▶ Evaluate current and future needs for hosting broad public access to the Manhattan Project National Historical Park as well as associated upgrades or changes

Safeguards and Security Roadmap



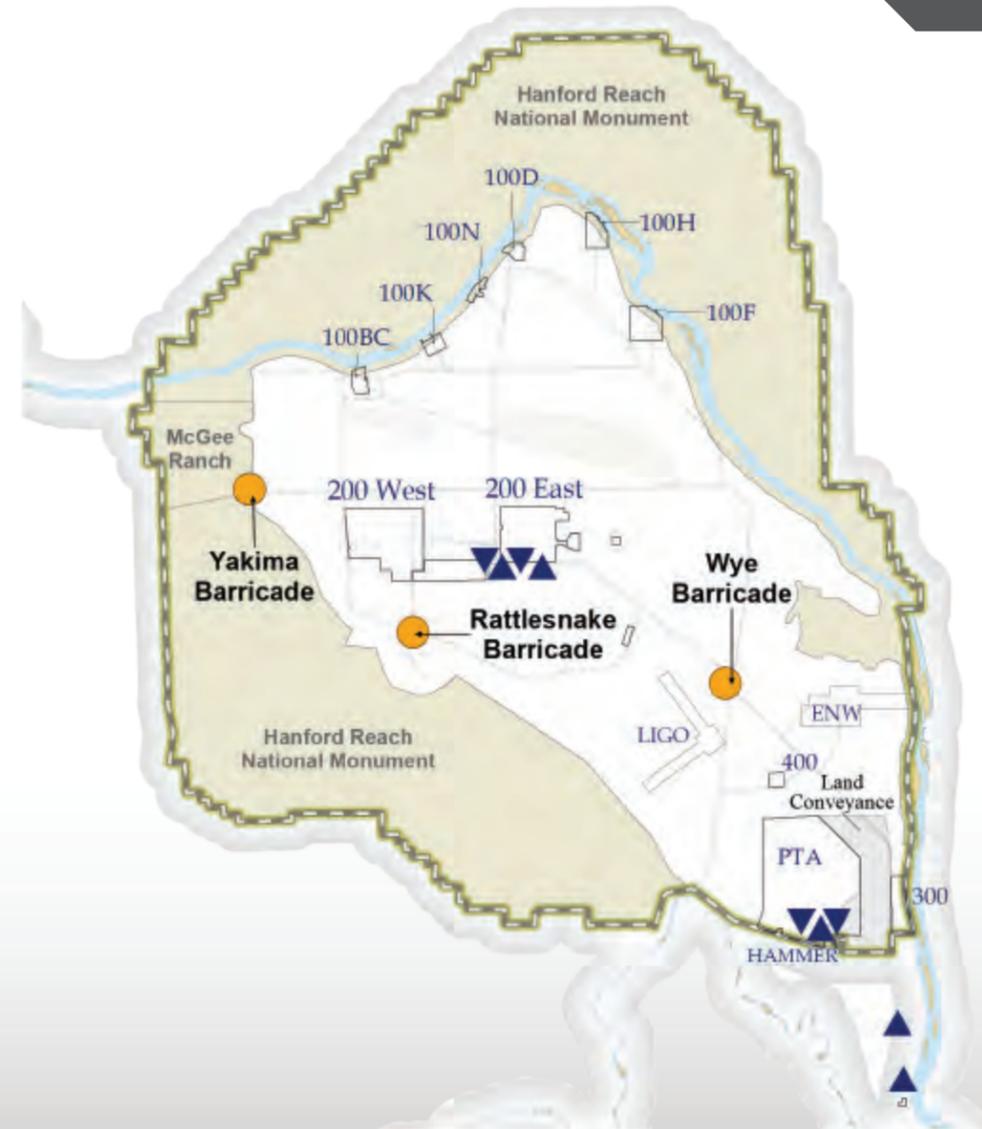
2015 CURRENT CONDITION

- ▶ Continue to maintain emphasis on protection of special nuclear materials.
- ▶ Ensure appropriate levels of security for unauthorized access, acts of sabotage, theft or loss of classified matter and government property
- ▶ Address Patrol Training Academy (PTA) general facility concerns including: the lunchroom, classrooms 662 and 662A, live fire shoot house, and need to relocate Range 10
- ▶ Operate Rattlesnake Barricade at reduced hours



END STATES 2020

- ▶ Continued protection of special nuclear material
- ▶ Patrol Barricades and Patrol Operations Center will remain in service
- ▶ New Live Fire Shoot House to applicable standards and in use
- ▶ PTA Range 10 will be relocated to support land conveyance
- ▶ New weapons cleaning trailer in use
- ▶ Security approaches are customized to enable broad public access to the Manhattan Project National Historical Park and any other approved public access



Project Descriptions

	2015	2016	2017	2018	2019	2020	Beyond 2020
S-245, New Live Fire Shoot House	*						
S-216, Provide Access Control Barriers to the Firing Range Complex	*						
S-243, Relocate Range 10	*						
S-244, PTA Replace weapons cleaning trailer (MO 222)	*						
S-242, PTA Range 9 Mock-up	*						
S-239, PTA Range 9 Elevated Platform	*						
S-241, 662 and 662A Building Modifications	*						
HSPD-12	*						

*Project needed - currently NOT funded

Major Actions/Decisions

	2015	2016	2017	2018	2019	2020	Beyond 2020
Develop Emergency Services Strategic Plan (ESSP) document	◆◆◆◆						
Implementation of the recommendations from ESSP document	*						
Develop approach for broad public access to the Manhattan Project National Historical Park, including private vehicle access to some facilities as appropriate	*						

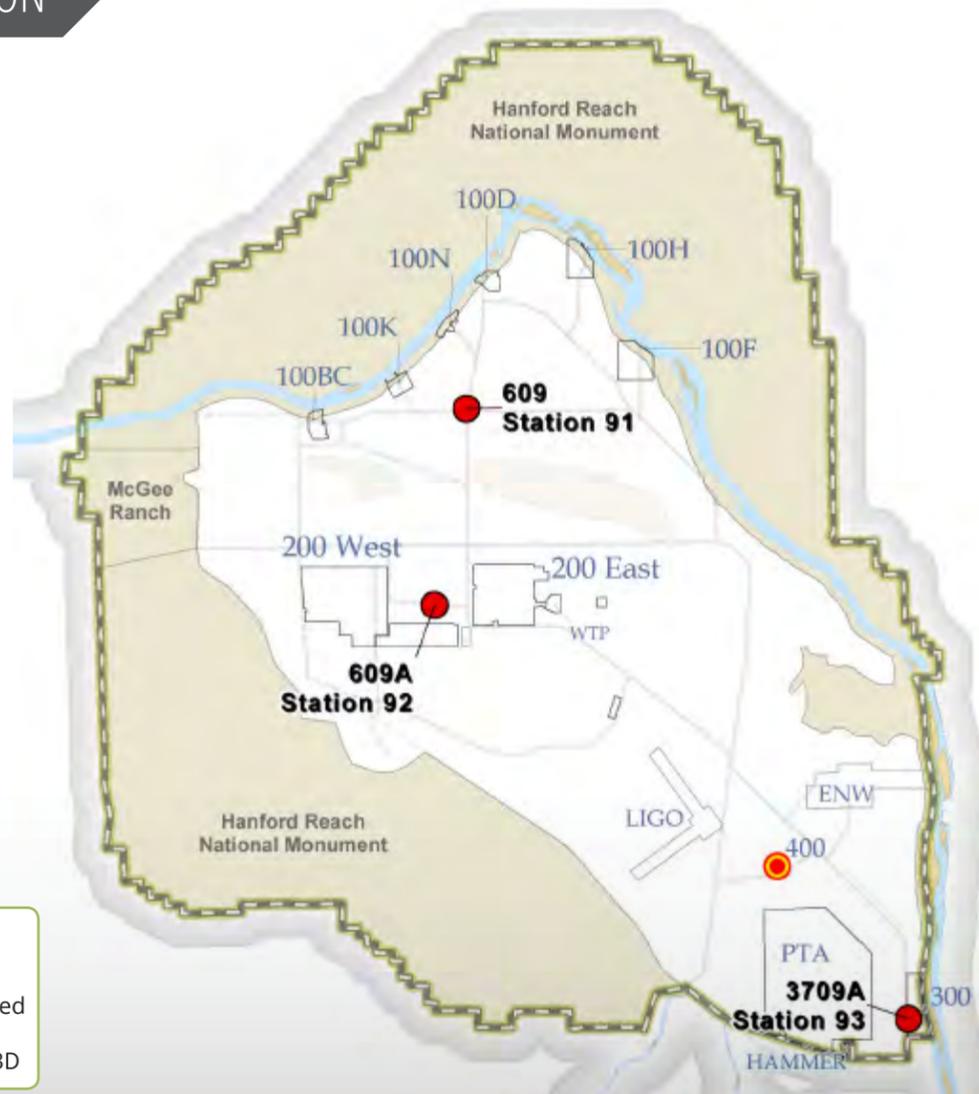
*No specific year established

Fire Station Roadmap



2015 CURRENT CONDITION

- ▶ Site population has moved from the outer areas to the Central Plateau
- ▶ HNF-51581, Fire Station Infrastructure and Deployment Evaluation Study recommendations completed, including these topics:
 - Design and construction of a new Central Plateau Fire Station
 - Closure of 100 Area Fire Station
 - Upgrade of 200 Area Fire Station
- ▶ Fire and emergency response equipment in good to excellent condition excluding ambulances 91, 92, and 93; past National Fire Protection Association (NFPA) lifespan guidance
- ▶ Radio Fire Alert Reporting (RFAR) system obsolete, replacement parts are no longer manufactured



- Hanford Site Fire Stations
- Station ready but unstaffed/closed
- ▨ Future Station Zone, Location TBD

END STATES 2020

- ▶ Construct and Implement Consolidated Operations Fire Station on the Central Plateau
- ▶ 300 Area Fire Station Closure beyond 2020
- ▶ 100 Area Fire Station Closure
- ▶ Upgrade Station 92 for additional staff and build new equipment storage building
- ▶ RFAR system replaced (transmitters)



Project Description

Project Description	2015	2016	2017	2018	2019	2020	Beyond 2020
L-761, Replace RFAR (Phase II)	◆◆◆◆		◆◆◆◆				
L-794, Upgrades to HFD Station 92 (Bldg 609A)						◆◆◆◆	
L-771, New Equipment Storage Building at HFD Station 92	*					◆◆◆◆	
L-783, Consolidated Operations - Central Plateau East Fire Station - Conceptual Design Report/Definitive Design/Construction	*						◆
EF32, Replace Hazmat 92, (Re-chassis only), HO 68D-3892 (1990) HO 68D-3892 (1990)	*						◆
L-326, 300 Area Fire Service Relocation	*						◆
EF29, Replace Fire Engine Pumper Truck E-92 HO 68D-3894 (2001) (Back up)	*						◆
EF28, Replace Fire Engine Pumper Truck - E-94 (First Run) HO 68D-3890 (2000)	*						◆
EF33, Replace Mobile Incident Command Post - HO 68N-1989 (1998)	*						◆
EF30, Replace 65-ft Aerial Telesquirt With a 75-ft E-93, HO 68D-3865 (1998)	*						◆
EF26, Replace 65-ft Aerial Telesquirt with a 75-ft E-932, HO 68D-3893 (1994) HO 68D-3893 (1994) (First Run)	*						◆

Major Actions/Decisions

Major Actions/Decisions	2015	2016	2017	2018	2019	2020	Beyond 2020
Develop Emergency Services Strategic Plan for document	◆◆◆◆						
Close 300 Area Station 93 - Building 3709A							◆
Close 100 Area Station 91 - Building 609				◆			

14 *Project needed - currently NOT funded

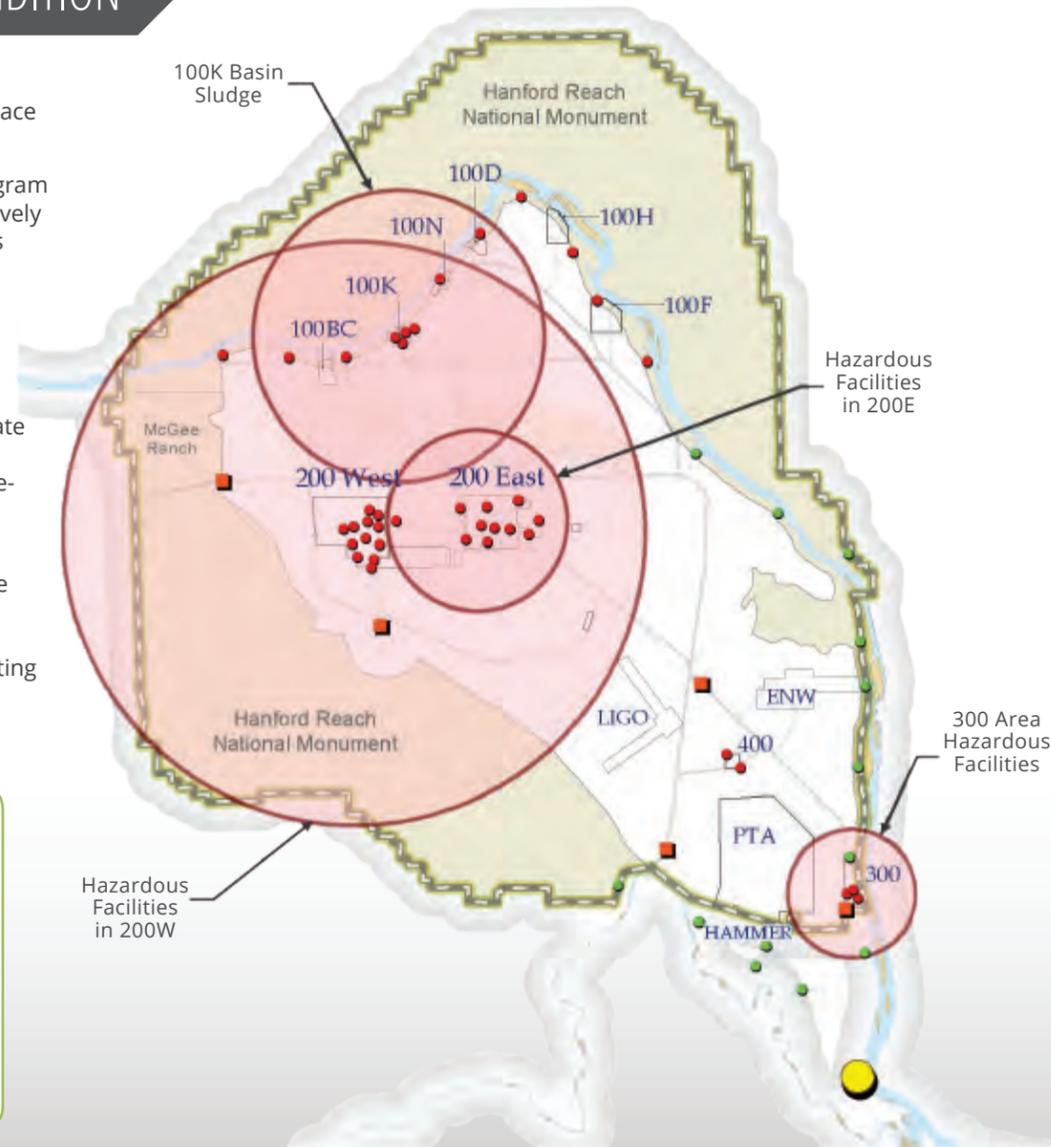
Emergency Management Roadmap



2015 CURRENT CONDITION

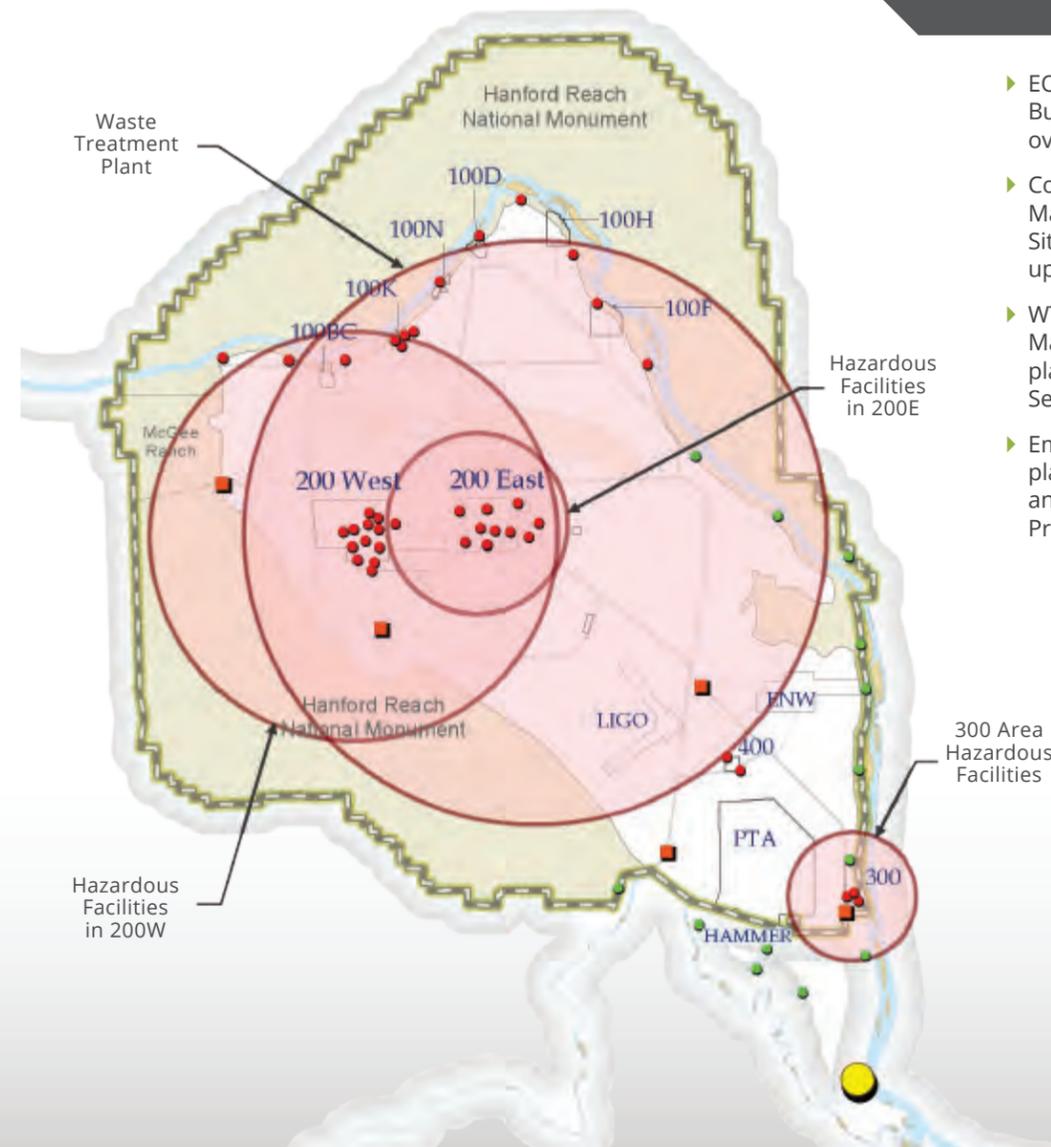
- ▶ Emergency Management Program and capabilities in place to support cleanup mission
- ▶ Emergency Management Program maintained to respond effectively and efficiently to emergencies so appropriate measures are taken to protect workers, the public, and the environment
- ▶ 24/7 Hanford Emergency Operations Center (EOC) and shift office maintained in a state of readiness for emergency operations and to support site-wide occurrence reporting
- ▶ Coordination with other Hanford contractors to ensure emergencies are promptly recognized, categorized, and classified with required reporting and notifications made

- Hanford Sirens
- Columbia Generating Station Sirens
- Emergency Signs
- Emergency Operations Center
- Emergency Planning Zones



END STATES 2020

- ▶ EOC remains at the Federal Building and in operation for overall Hanford response
- ▶ Continued work with Information Management on the Hanford Site Emergency Alerting System upgrades and footprint
- ▶ WTP incorporated into Emergency Management facility/program plans per the Emergency Services Strategic Plan
- ▶ Emergency Management planning includes provisions and coverage for the Manhattan Project National Historical Park



Project Descriptions

ET56, EP, HFD, & Patrol Zetron Console Upgrade

2015	2016	2017	2018	2019	2020	Beyond 2020
						◆

Major Actions/Decisions

Assumption made that Energy Northwest will maintain sirens for Columbia Generating Station through FY2020

Prepare Strategic Plan for Emergency Services

Determine whether any changes to support implementation of broad public access as part of Manhattan Project National Historical Park

*No specific year established

2015	2016	2017	2018	2019	2020	Beyond 2020
◆◆◆◆◆◆◆◆◆◆						
◆◆◆◆						
*						

Transportation Roadmap

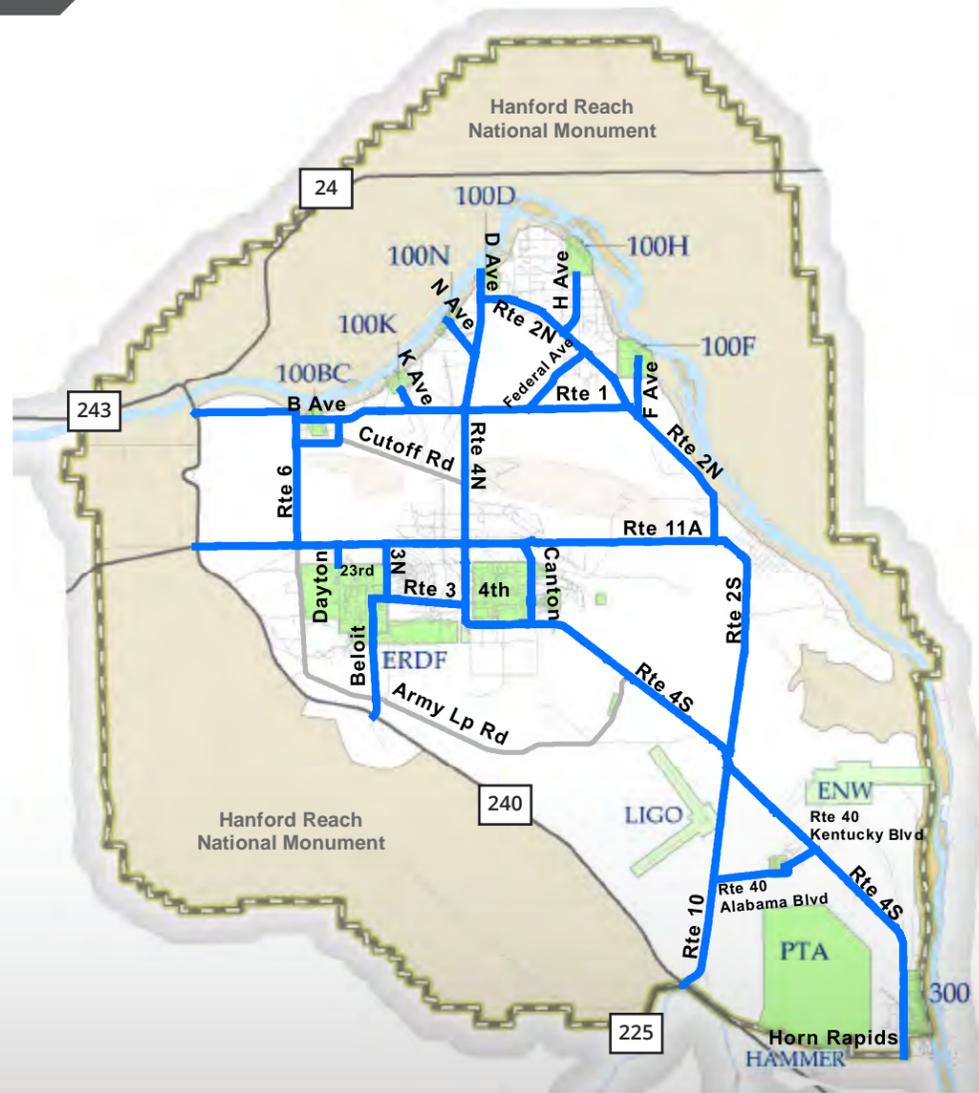


2015 CURRENT CONDITION

- ▶ Average daily traffic trips = 5,700
- ▶ Total roads = 397 lane miles
- ▶ Open roads = 354 lane miles
- ▶ Restricted roads = 43 lane miles ("restricted" = roads open and paved but not maintained)
- ▶ 88.3% single occupancy vehicle trips
- ▶ 100 annual public buses visiting B Reactor National Historic Landmark and the Manhattan Project National Historical Park sites
- ▶ 10,000 visitors per year touring the B Reactor National Historic Landmark
- ▶ 1,400 public visitors touring cleanup program sites annually
- ▶ 1,000 public visitors to Pre-Manhattan Project historic sites in 2015

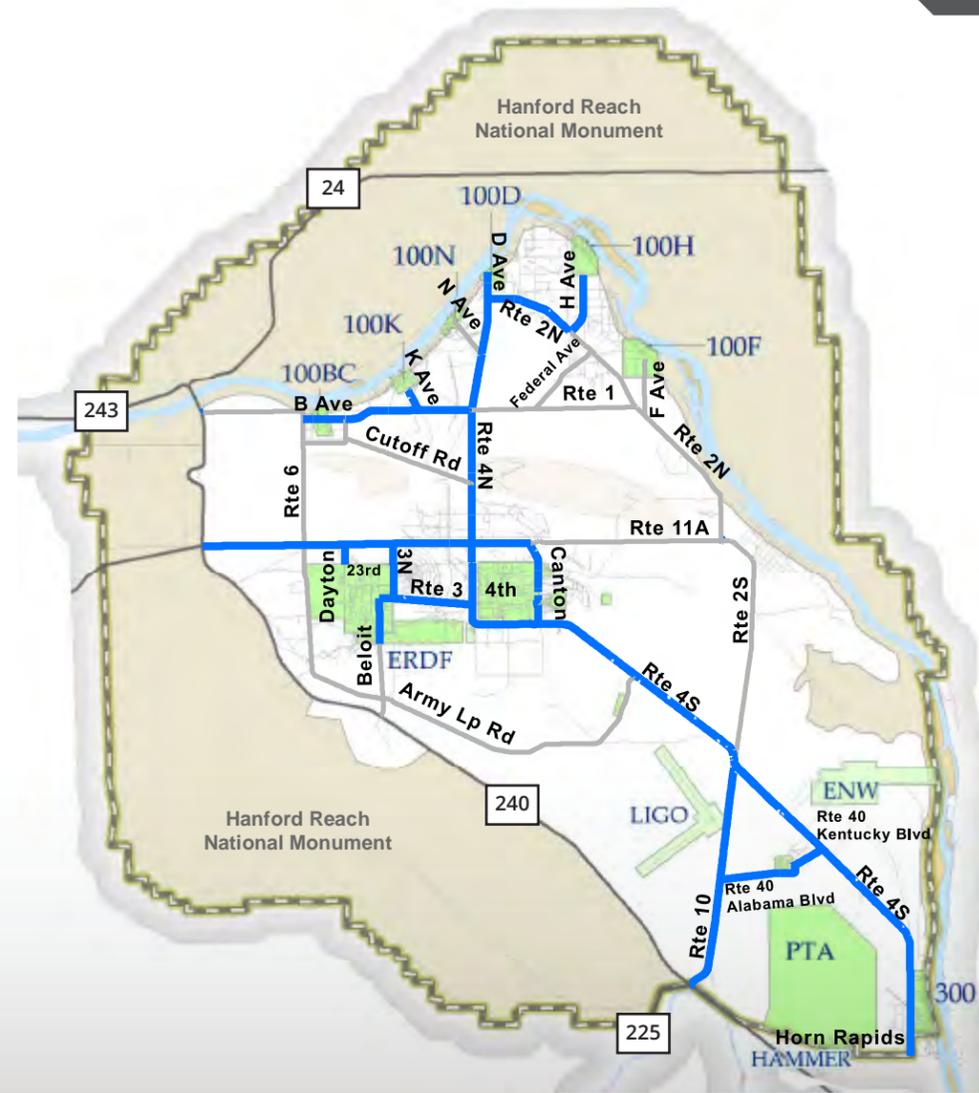
Road Categories

- Local Routes
- State Routes
- Open and Paved Routes
- Restricted Routes



END STATES 2020

- ▶ Average daily traffic trips = 4,000
- ▶ Total roads = 397 lane miles
- ▶ Open roads = 284 lane miles
- ▶ Restricted roads = 113 lane miles
- ▶ 80% single occupancy vehicle trips
- ▶ Several 100 Area roads eligible for restricted status
- ▶ ILAW container transporter route from WTP LAW to IDF completed via 1st St.



Project Descriptions

Project Description	2015	2016	2017	2018	2019	2020	Beyond 2020
L-759, Akron Avenue (12th to 2704HV)	♦						
L-856, Route 4N Rutting Repair, RT 11A to MP 2	♦						
L-777, Overlay Route 4S, 618-10 Waste Site to Horn Rapids Road - DESIGN	♦			♦♦♦♦			
L-775, Overlay Route 4S, Canton Avenue to Wye Barricade - DESIGN	♦			♦♦♦♦			
L-859, 1st St/Canton Ave Upgrade - DESIGN	♦			♦♦♦♦			
L-777, Overlay Route 4S, 618-10 Waste Site to Horn Rapids Road - CONSTRUCTION			♦♦♦♦	♦♦♦♦			
L-775, Overlay Route 4S, Canton Avenue to Wye Barricade - CONSTRUCTION			♦♦♦♦	♦♦♦♦			
L-859, 1st ST/Canton Ave Upgrade - CONSTRUCTION			♦♦♦♦	♦♦♦♦			
L-776, Overlay Route 4S, Wye Barricade to 618 Waste Site entrance				♦♦♦♦	♦♦♦♦		
L-517, Overlay Route 3 & 20th Street (Route 4S to Beloit Ave.)					♦♦♦♦		♦
L-519, Overlay Interior 200 West Roads							♦
L-523, Chip Seal 200 West Interior Roads							♦
L-533, Chip Seal Interior 200 East Roads							♦
L-534, Overlay Interior 200 East Roads							♦

Project Descriptions (Continued)

Project Description	2015	2016	2017	2018	2019	2020	Beyond 2020
L-600, Rebuild Route 11A Rt 2S to MP 5.14							♦
L-603, Overlay Route 3N (Route 11A to Route 3)							♦
L-690, Chip Seal Route 11A (Route 4N/4S to Route 3N)							♦
L-760, Dayton Avenue (16th St. to 19th St and Gate 609 to 19th St) and 23rd Street (Beloit to Dayton)							♦

Major Actions/Decisions

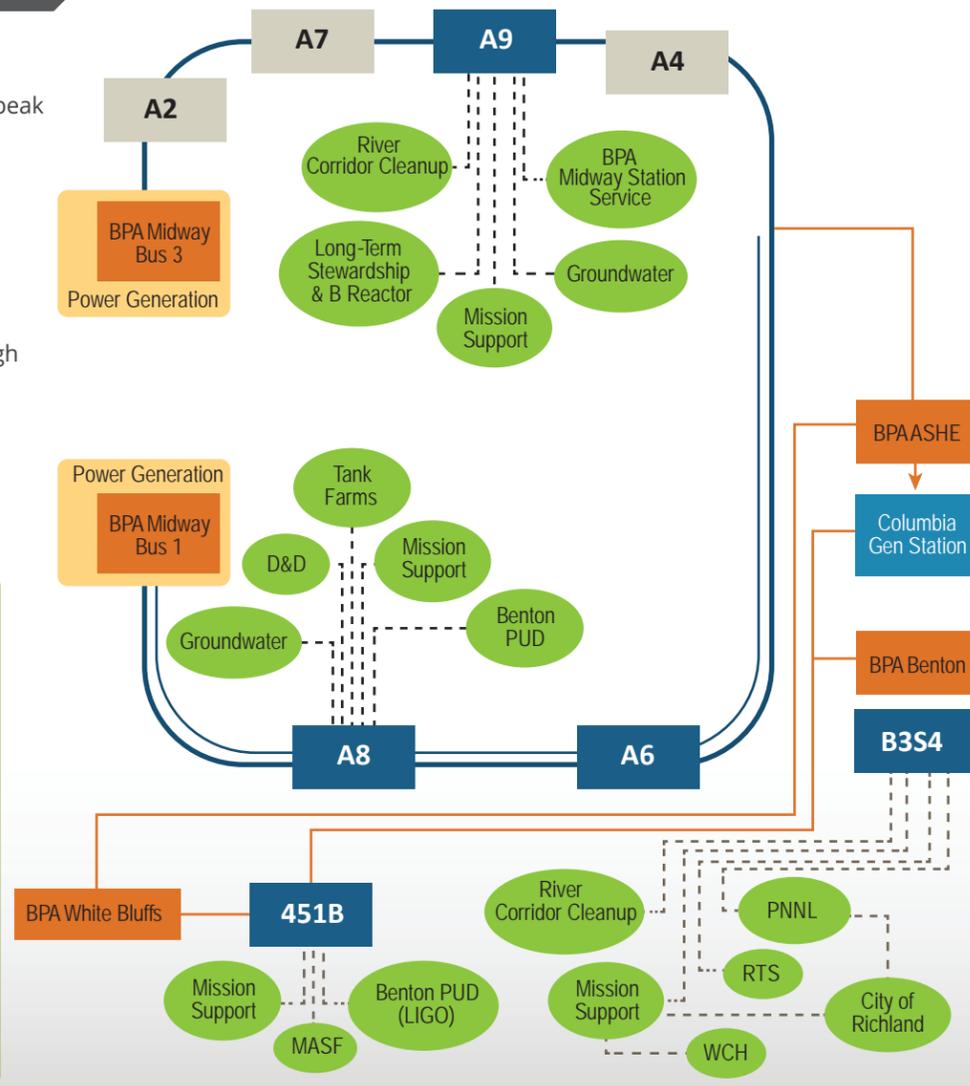
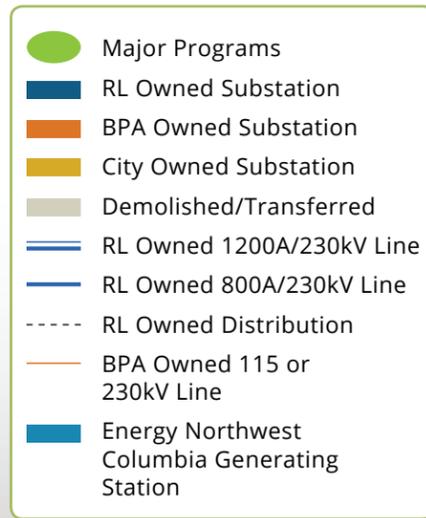
Action/Decision	2015	2016	2017	2018	2019	2020	Beyond 2020
Develop Roads Master Plan Document	♦♦♦♦						
Core Road Condition Assessment		♦♦♦					
300 Area Road Condition Assessment and Response		♦♦	♦♦				
ILAW Container transporter route from WTP LAW to IDF				♦♦♦♦			
Evaluate which existing roads will be needed to support the Manhattan Project National Historical Park as well as whether any upgrades are needed	*						

*No specific year established

Electrical Roadmap

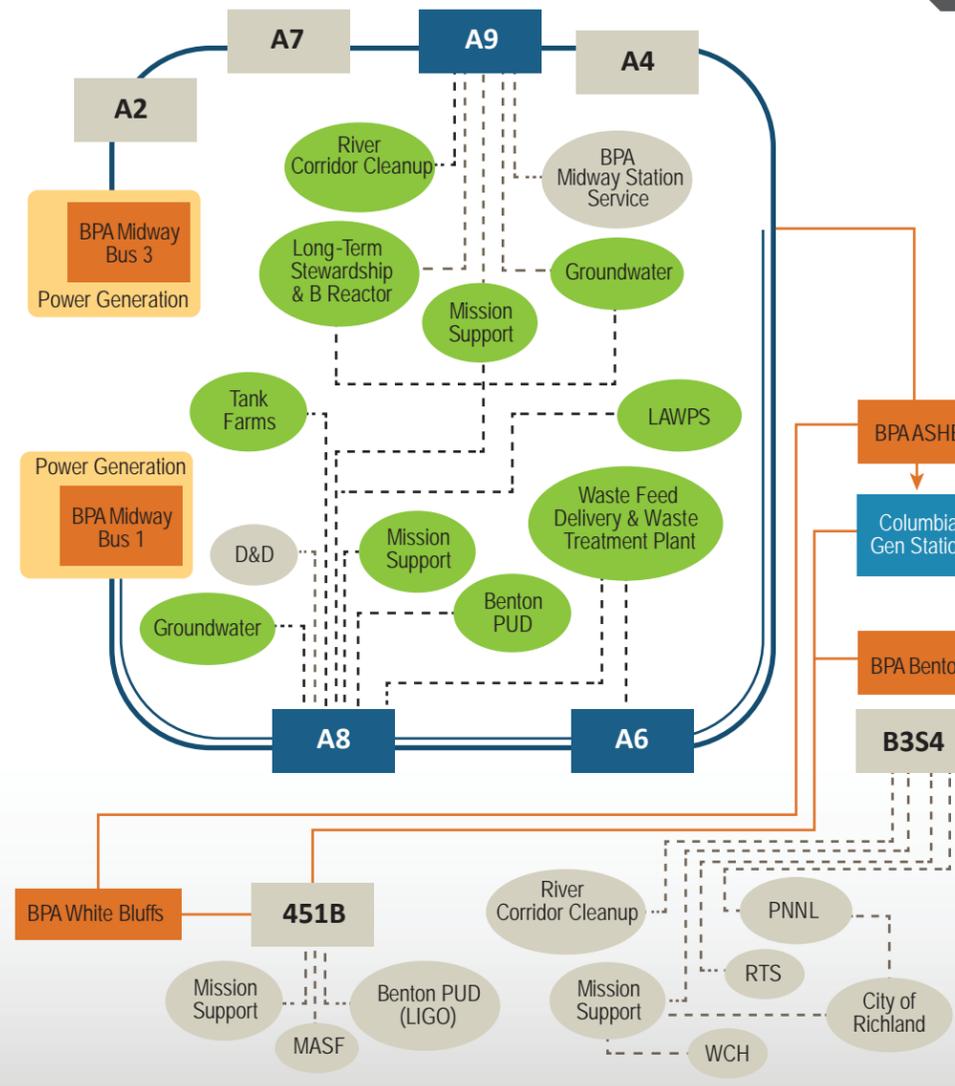
2015 CURRENT CONDITION

- ▶ Core system demand: 39MW peak
- ▶ Core system capacity: 38MW / 41MW peak
- ▶ Extend 200E 13.8KV line ~ 8Mi
- ▶ Completed in FY2013, 200E electrical distribution system, install switched capacitor banks in 200E
- ▶ Completed in FY2013, 251W (Substation A8) designs and initiate construction to upgrade ratings of High Voltage Transformer and Load Tap Changer supporting FY2014 Waste Feed Delivery (17MW average need)



END STATES 2020

- ▶ 100 & 200 Areas served from 251E (A6) & 251W (A8) substations:
 - Peak Demand: 76MW
 - Capacity: 110MW
- ▶ 100 Area served from 151KE (A9) substation:
 - Downsize 100 Area or eliminate 151-KE (A-9) substation
- ▶ 300 Area served from 351B Substation (B3S4):
 - Remaining 300 Area load served from 451B after removal of 351B
- ▶ 400 Area served from 451B substation:
 - 400 Area loads removed, transferred to alternative off-grid power, or operation of substation transferred to an off-site utility
- ▶ Downsize other areas—isolate distribution as loads are no longer needed



Project Descriptions

Project Description	2015	2016	2017	2018	2019	2020	Beyond 2020
L-780, 200E Area 13.8kV Electrical Distribution System WFD Modifications and Upgrades	*	♦♦♦♦					
L-612, 230kV North Loop Maintenance Access Road & Armor Rods		♦♦					
L-867, North Loop Transmission Road Access		♦♦					
L-858, 200E 13.8 ED Design and Base Service Load Reconfiguration		♦♦					
L-789, Prioritized T&D System Wood Power Poles Testing		♦					
L-815, Upgrade Transmission/Distribution Access Routes		♦♦♦♦					
L-789, Prioritized T&D System Wood Power Poles Testing and Replacement		♦♦♦♦♦♦♦♦					
L-612, 230kV Transmission System Reconditioning and Sustainability Upgrades			♦♦♦♦				
L-860, Transmission and Single Circuit Distribution Pole Replacement					♦♦♦♦		
L-720, Outdoor Lighting							♦

*Project Supports LAWPS

Project Descriptions

Project Description	2015	2016	2017	2018	2019	2020	Beyond 2020
L-707, Advanced Electrical Metering							♦
L-767, 2104 Storage Shed Replacement							♦
L-790, 200 West 4th Wire Installation							♦
L-791, RFL Transfer Trip Upgrade							♦
L-801, Upgrade SCADA							♦
L-805, 451B Radial Feed							♦
L-861, Single Circuit Distribution Pole							♦
L-792 2400V to 13.8kV Electrical Conversion							♦

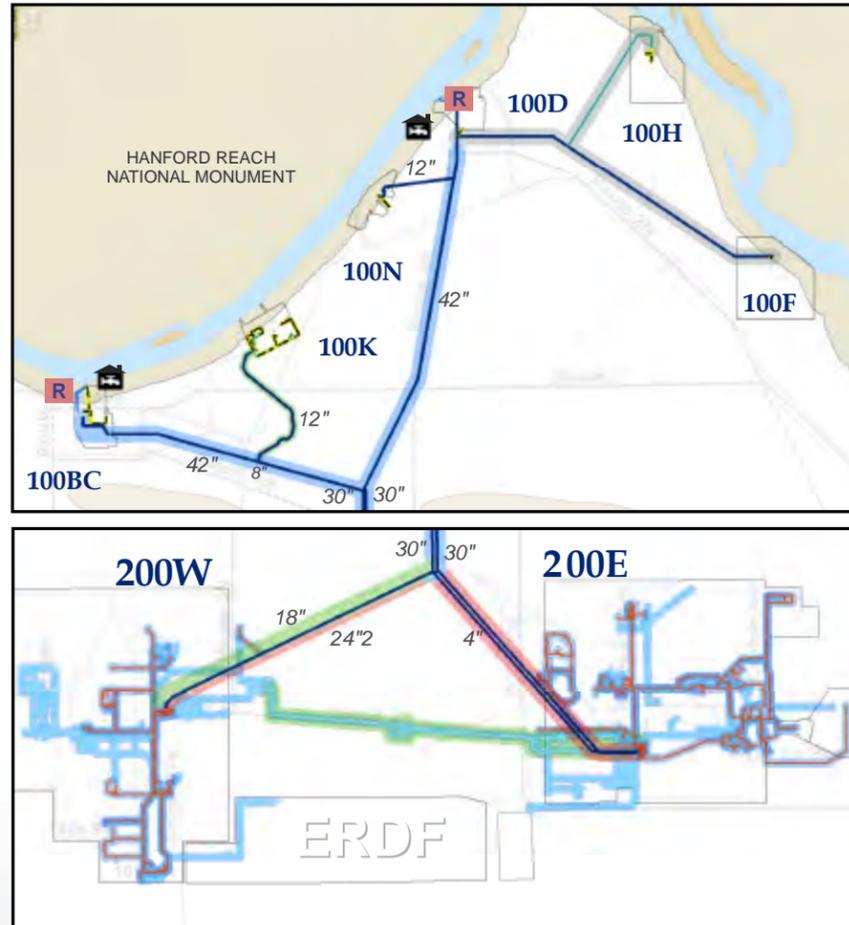
Major Actions/Decisions

Major Action/Decision	2015	2016	2017	2018	2019	2020	Beyond 2020
Complete Electrical Master Plan Update	♦♦♦♦		♦♦♦		♦♦♦		
Startup A6 electrical supply to WTP		♦♦♦♦					
Electrical Supply to LAWPS		♦♦♦♦♦♦♦♦					
100 Area, Remove from service substation A9				♦			
100 Area, Remove from service substation A9						♦	

Water Roadmap: Export, Raw, and Potable

2015 CURRENT CONDITION

- ▶ Deferred Tracer Study to increase 283W water filter plant capacity to 1950 gal/min
- ▶ Completed 242A cooling tower feasibility report
- ▶ Completed plateau improvements to 200E and 200W Raw Water operations
- ▶ 100 B/C Areas being transferred from Washington Closure Hanford to MSA
- ▶ 300 Area transferred in FY2015 from WCH to MSA
- ▶ Population served: 5,988



Water Systems

- Raw (Orange line)
- Potable (Blue line)
- Export (Dark Blue line)
- Fire (Dashed line)

Conditions

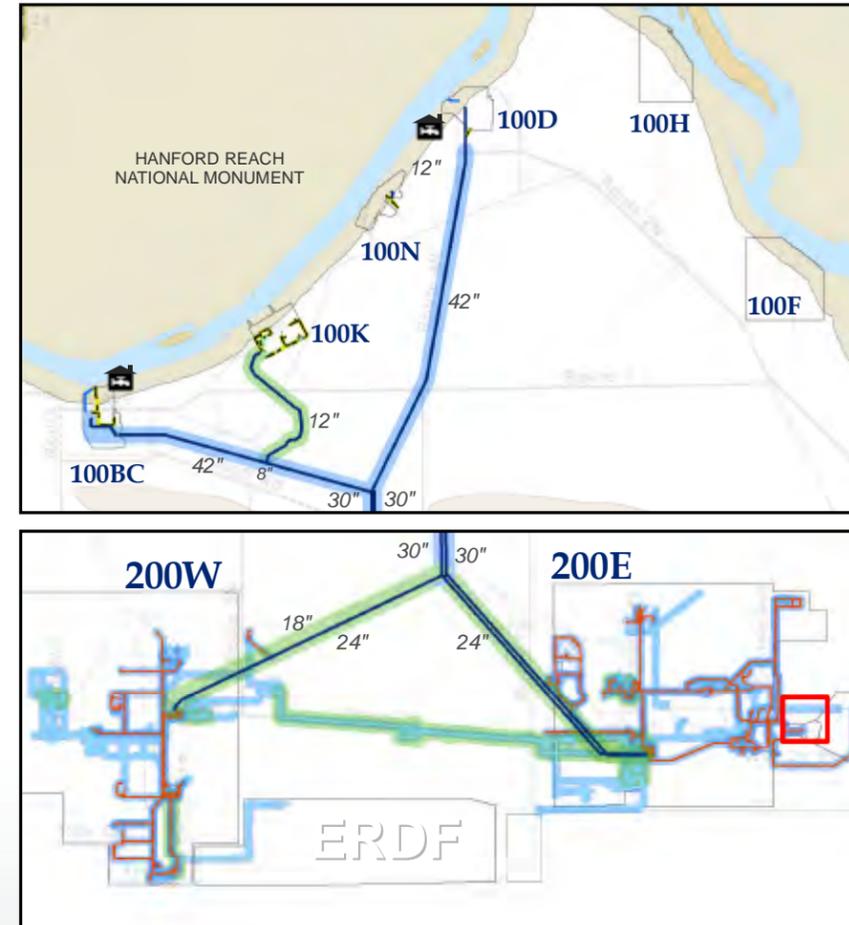
- Good (Green)
- Fair (Blue)
- Poor (Red)
- Unknown (Grey)

Other Symbols

- Pump Station (House icon)
- U.S. Fish and Wildlife Services Managed (Yellow area)
- Phasing out Reservoir (R in red box)

END STATES 2020

- ▶ Eliminate 182D reservoir
- ▶ Variable speed drives for export water pumps for energy savings
- ▶ Support WTP operations tank waste reduction
- ▶ Operate 283W on alternative disinfection process
- ▶ Continue to provide water service to 300 Area
- ▶ Population served: 3,954



Project Descriptions

Project Description	2015	2016	2017	2018	2019	2020	Beyond 2020
L-840, (East Side), 24" Water Line Renovation/Replacement from 2901Y to 200W	◆◆◆◆◆						
L-525, 24" Water Line (west side - 1944) from 2901Y to 200E	◆◆◆◆◆						
L-830, Filter Plant Filter Control System Upgrade	◆◆						
L-834, Filter Plant Flocculator System Upgrade	◆◆						
L-865, Feasibility Study for Water Treatment Plant	◆◆						
L-868, Raw Water Loop Line to LAWPS		◆◆◆◆◆◆◆					
L-419, 24" Water Line (East Side - 1967) from 2901Y to 200E	◆◆		◆◆◆◆				
L-850, Repair 200W 1.1M gallon Potable Water Tanks	◆◆		◆◆◆◆				
L-849, Repair 200E 1.1M gallon Potable Water Tanks	◆◆			◆◆◆◆			
L-846, 242A Cooling Tower Design & Installation	◆◆			◆◆◆◆			
L-679, 200 West Area Water Treatment Chlorine Disinfection Improvements					◆◆◆◆		
L-336, 200 East & West Areas Potable Water Clear Well Modifications					◆◆◆◆◆◆◆		
L-828, L-829, L-833 & L-835 Filter Plant Upgrades				◆◆◆◆◆◆◆			
L-781, 181D Vertical Turbine Pumps, Header, Instrumentation, Commission (Design/Procurement) & (Const.)						◆◆◆◆	
L-342, Mortar Line 24" 1310 Meters (Old PUREX Feed Raw - 1952)							◆
L-352, Refurbish 20" Raw Water Line Near A Tank Farm							◆
L-355, 14" Raw Water Supply Line to 242-S							◆

Project Descriptions (Continued)

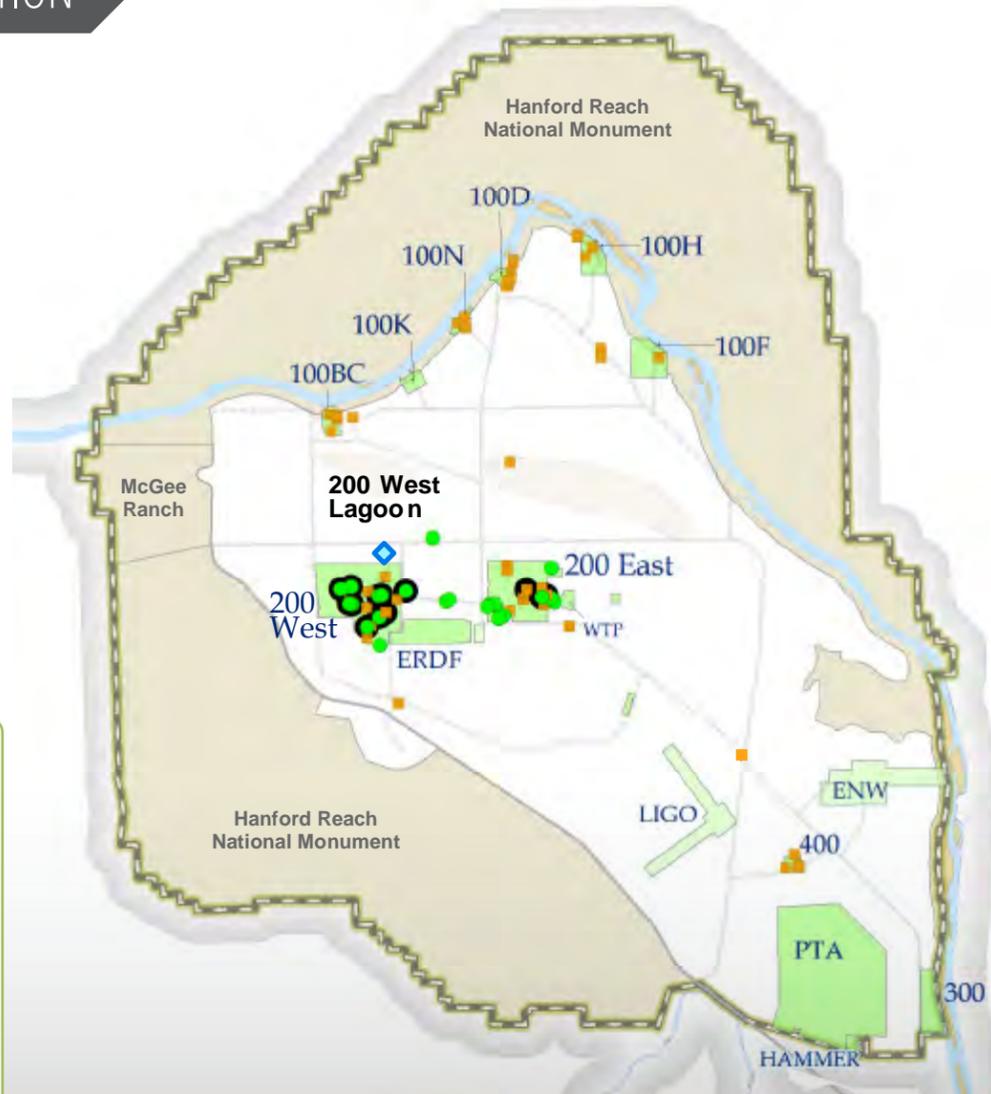
Project Description	2015	2016	2017	2018	2019	2020	Beyond 2020
L-357, Replace 12" Potable Water Line to 222-S Lab							◆
L-398, 10" B Plant Potable Water Lines							◆
L-420, Mortar Line 8/10" Potable Water WRAP Loop - Cap - 1960							◆
L-423, Mortar Line 8-in. Raw Water Line on SE Side of T-Plant for Fire Protection - 1958							◆
L-430, 8-in. Water Line (2101M) Loop							◆
L-431, Mortar Line 8-in. Potable Water Line Along 20th Street to Water Plant Main - 1950							◆
L-825, Modify T-Plant Fire Water Supply							◆
L-826, 181 B Vertical Turbine Pumps, Header, Instrumentation, Commission (Design/Procurement) & (Const.)							◆
L-838, Water Feeds to 6608 Facility and Reservoirs							◆
L-839, 12" Potable Water Loop-Line to WTP							◆
L-847, L-848, Design and install 200E & 200W Raw Variable Speed Pump							◆
L-851, L-852, Design and Install 24" Pipe to Replace 42" Export Water Pipe in 100D / 100B						◆◆◆◆	◆

Major Actions/Decisions	2015	2016	2017	2018	2019	2020	Beyond 2020
Tracer Study to Increase 283W filter plant output to 1950 gal/min		◆◆◆◆◆◆◆◆◆◆					
Water System Master Plan Update		◆		◆			◆

Sanitary Sewer Roadmap

2015 CURRENT CONDITION

- ▶ 200W evaporative lagoon in operation
 - Capacity: 55,000 gallons/day
- ▶ All wastewater received at 200W evaporative Lagoon is pumped from holding tanks and hauled by trucks
 - Approximately 30,000 gallons/day
- ▶ Continued operations of existing septic systems
 - Drain fields = 28
 - Holding tanks = 18
- ▶ Population served: 5,988

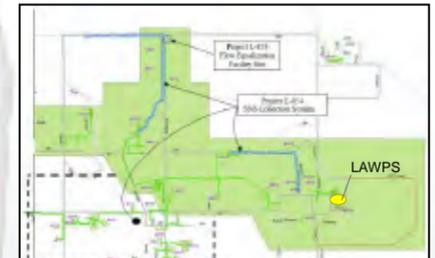
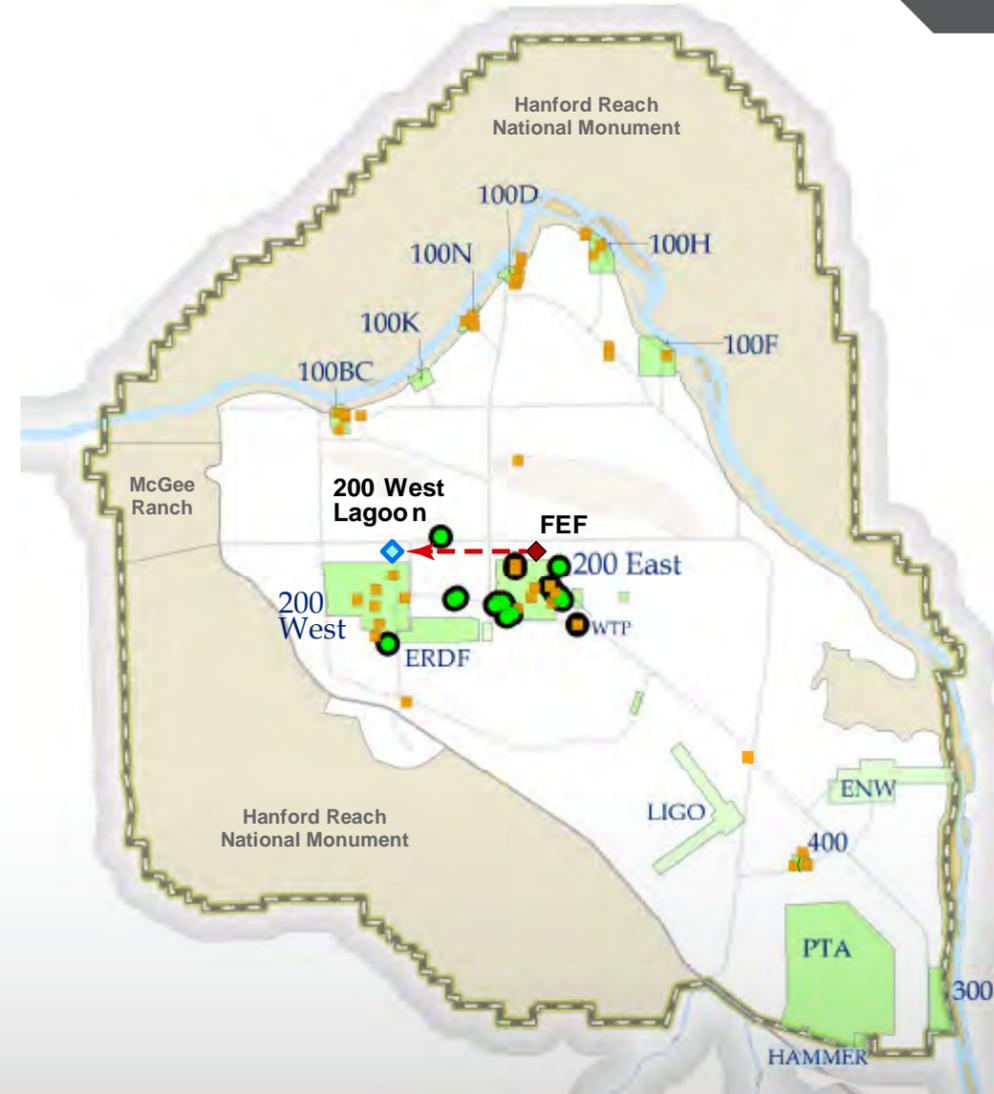


Septic Tank and Drain Fields

- Active
- Inactive
- Planned Removal and Phasing Out
- ◆ 200 West 6608 Lagoon
- ◆ Flow Equalization Facility (FEF)
- ← Piped Connection (FEF to Lagoon)

END STATES 2020

- ▶ 200E Area waste water to be handled by:
 - 200W Lagoon (trucked or pumped via pipe)
 - Possible 200E flow equalizer facility (FEF) to consolidate flows from adjacent facilities
- ▶ Target number of building connections: 300
- ▶ Demand in FY2020: 83,000 gal/day met by ground and central system
- ▶ Population served: 3,954



200 East Sanitary Sewer Consolidation Project L-854

Project Descriptions

	2015	2016	2017	2018	2019	2020	Beyond 2020
L-853, 200E Sewer Flow Equalization Facility	*	◆◆		◆◆◆◆			
L-854, 200E Sewer Consolidation	*					◆◆◆◆	

* TBD for year of completion, pending outcome of FY2015 study results

Major Actions/Decisions

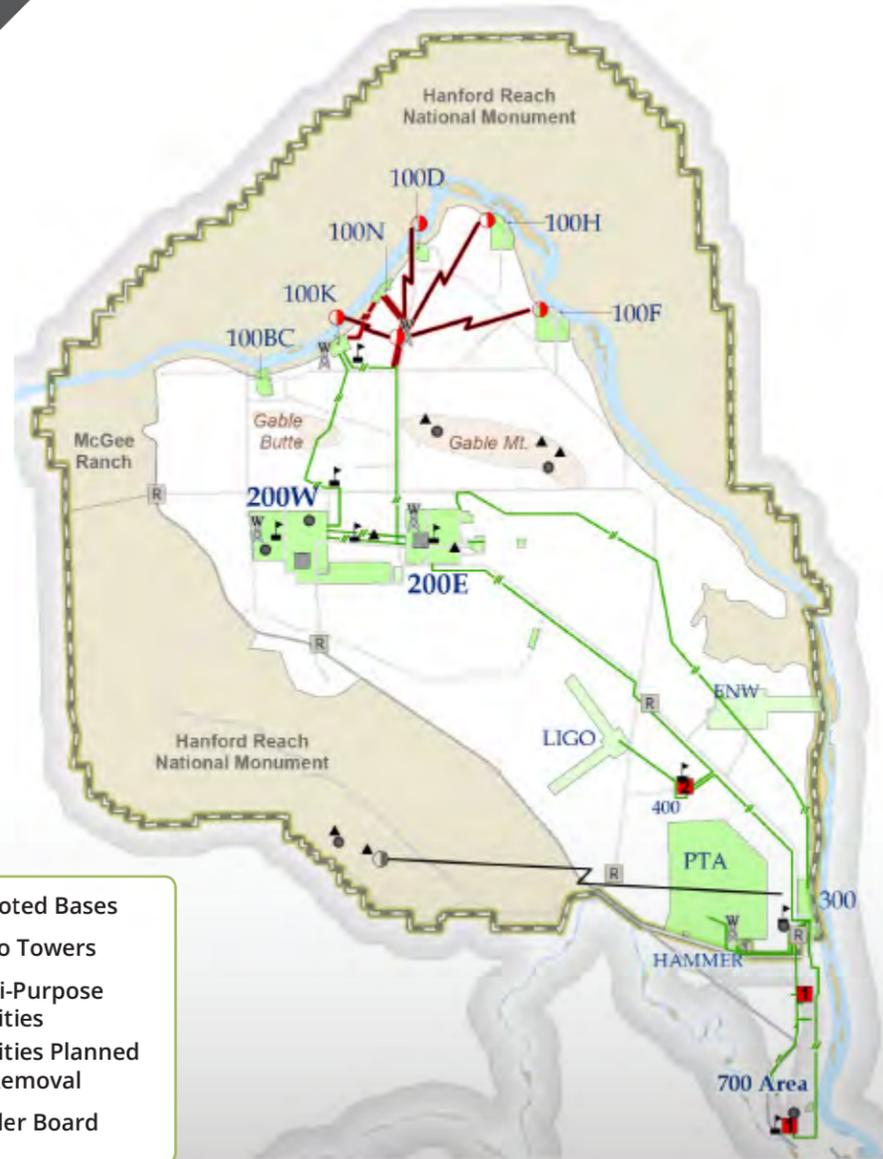
	2015	2016	2017	2018	2019	2020	Beyond 2020
300 Area Utilities Agreement Revision	◆						
Prepare Sanitary Sewer Master Plan Update Document		◆		◆			◆
Sewer Service to LAWPS				◆◆◆◆			

Information Technology Roadmap



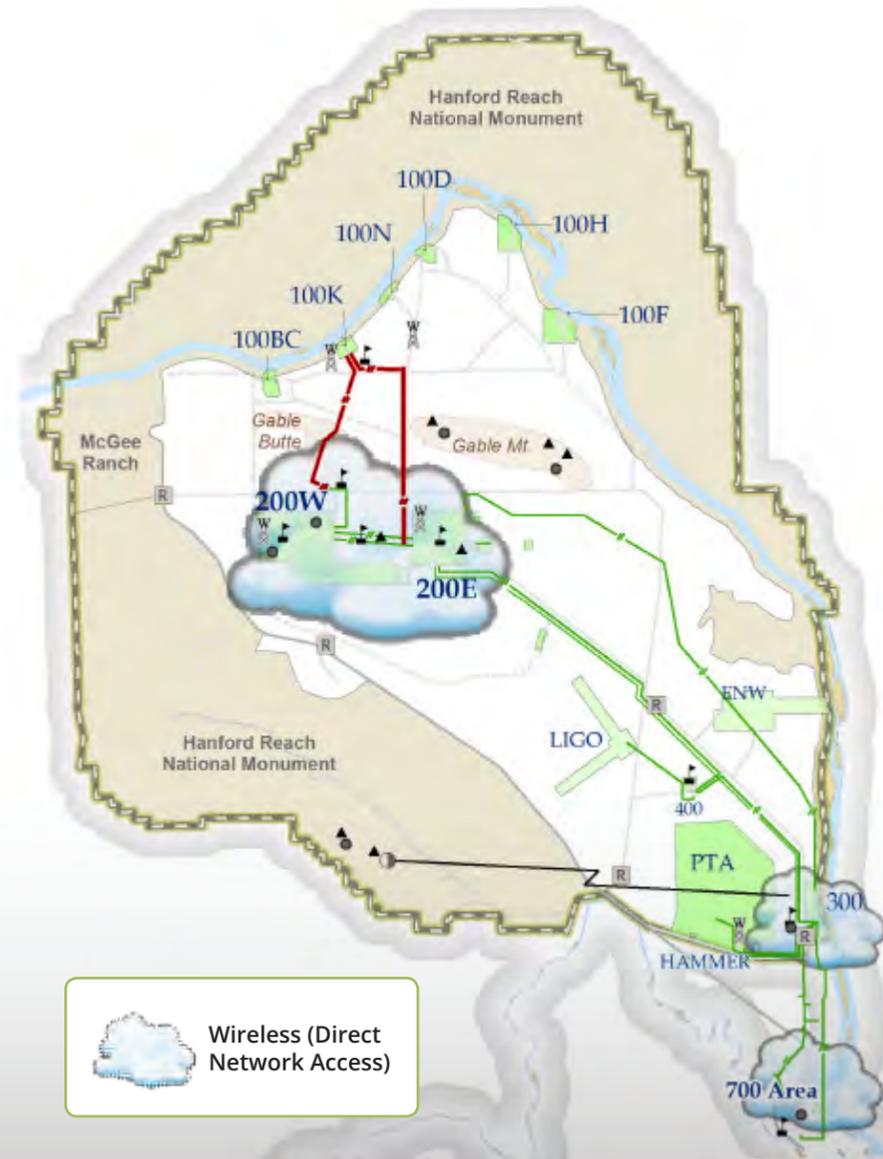
2015 CURRENT CONDITION

- ▶ Telecommunication buildings under utilized because legacy telephone system is not removed
- ▶ Not all site contractors are leveraging the Hanford Federal Cloud government asset
- ▶ End user organization will continue to migrate to hosted desktop as technology matures
- ▶ Emergency notification sirens need to be modernized and scaled to current requirements
- ▶ The demand for wireless technology in the field is growing faster than the cyber solutions and the infrastructure can be deployed
- ▶ End user demands for data storage, collaboration, and video service will soon exceed the fiber bandwidth capacity between the Central Plateau and City of Richland



END STATES 2020

- ▶ Increase "Record Material" automation with business processes and stored electronically
- ▶ Plateau and Richland approaches 95% of IT's physical Active infrastructure serving the cleanup mission, plus new needs to support Manhattan Project National Historical Park
- ▶ Hanford end user can move anywhere, anytime and to anyplace without moving IT desktop equipment
- ▶ Field forces access applications to receive, process, and document completed work at the job site
- ▶ Field forces have outdoor access to wireless service from anywhere on the Plateau
- ▶ IT Services are acquired through service catalog across site contractors at predefined rates
- ▶ Hanford Site maintains 95% minimum of procured electronic assets to meet Electronic Product Environmental Assessment Tool (EPEAT) Gold requirements
- ▶ Site IT governance and investments are managed across contractors
- ▶ Minimal impact to business processes when major network transport or data center applications fail
- ▶ 30% of site IT assets are owned by the government, 30% are owned by end users through a Stipend/BYOD policy, and 40% purchased as cloud services
- ▶ Legacy application are modernized to site standard
- ▶ 90% of Hanford desktops don't require patching
- ▶ Preventative Maintenance (PM) is current to manufacturer & regulated requirements



Project Descriptions

Project Description	2015	2016	2017	2018	2019	2020	Beyond 2020
ET50, HLAN Network Upgrade Phase I (Refresh)		◆					
Increase wireless coverage in Central Plateau		◆◆◆◆		◆◆◆◆			
ET51, (Access Layer), HLAN Network Upgrade Phase II (Refresh FY 2015)						◆◆◆◆	
ET71, Modernize Legacy Enterprise Applications						◆◆◆◆	
L-821, Emergency Siren System Upgrade						◆◆◆◆	
L-817, HSEAS Upgrades							◆
L-764, New Data Center Upgrade from G4 to 7220							◆
L-819, High Capacity Fiber Optic (300 Area - Central Plateau)							◆
ET66, Next Generation Wireless (Including Wireless/Mobile Coverage Study)							◆
ET57B, HLAN Network Upgrade - IPv6OMB Compliance Ph2 - Internal (OMB Mandate)							◆
L-818, Records Facilities Reconfiguration							◆

Major Actions/Decisions

Major Action/Decision	2015	2016	2017	2018	2019	2020	Beyond 2020
Modernize Enterprise Resource Planning (aka: Business Management System)				◆◆◆◆◆◆◆◆			
Decision on IT ready for WTP, LAWPS and DFLAW				◆◆◆◆◆◆◆◆			
Modernize wireless infrastructure to support mobile workforce (predecessor to ET66, Next Generation Wireless)	◆◆◆◆◆◆◆◆						

Land Roadmap: Long-Term Stewardship



2015 CURRENT CONDITION

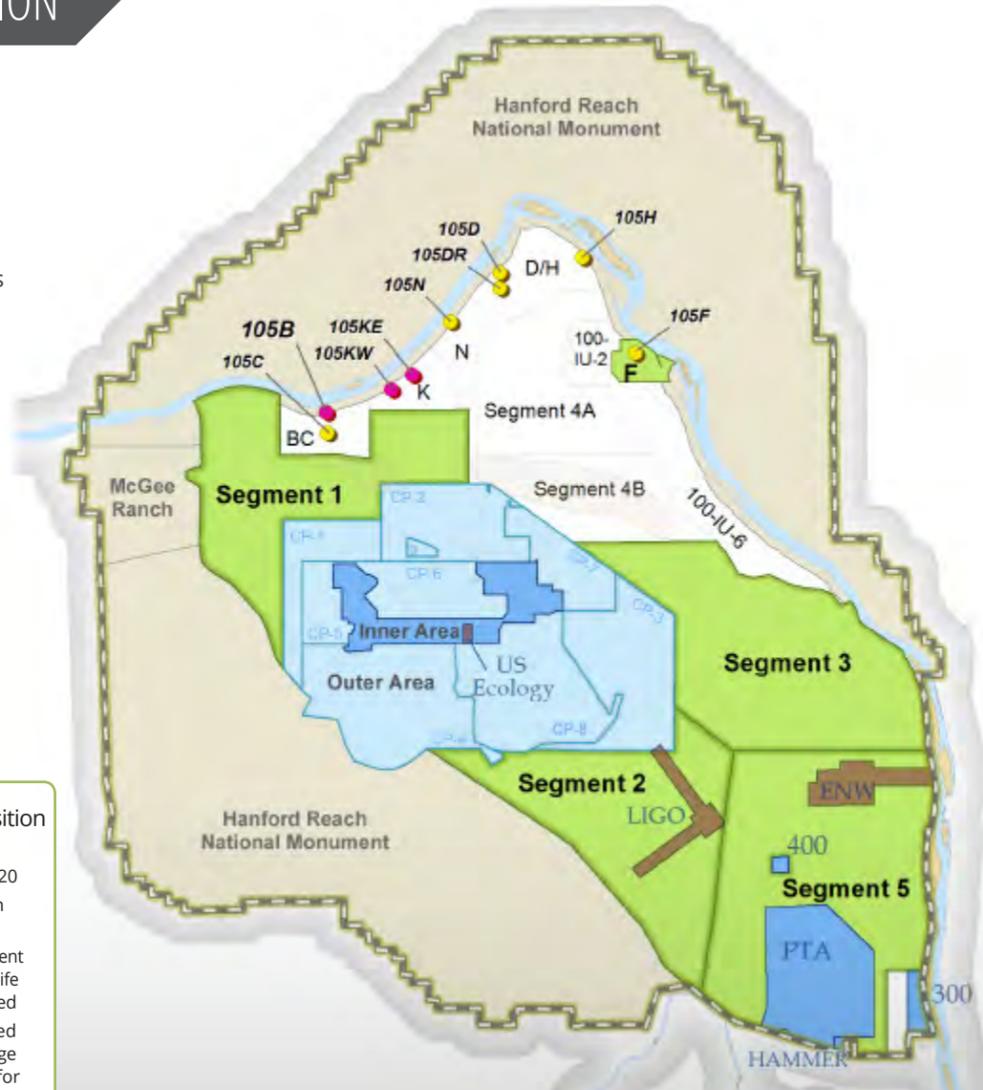
- ▶ Long-Term Stewardship (LTS) transition in FY2015 included the IU2/Segment 4A and 100B/C geographical areas. Work will start on the remaining areas (100D/H, 100N and IU6/Segment 4B).
- ▶ Continue with scheduled transitions through FY2020.
- ▶ 6 of the 9 Reactors (all but KE, KW, and B) are cocooned in interim safe storage. KE and KW Reactors are scheduled for LTS transition by FY2021.
- ▶ B Reactor is being preserved for public access and is managed under a separate process.
- ▶ Initiate required surveillance and maintenance (S&M) activities at appropriate waste sites and maintain institutional controls to protect human health and the environment

Long Term Stewardship Segment Transition

Transition to MSA Complete	Transitioning to MSA Beyond 2020
Transitioning to MSA for LTS	Final Disposition
Not Transitioning	Hanford Reach National Monument US Fish and Wildlife Services Managed

9 Reactors

3 Reactors NOT Cocooned	Reactors will be placed in Interim Safe Storage and remain in place for approximately 75 years.
6 Cocooned Reactors	



END STATES 2020

- ▶ LTS transitions completed by FY2020 reflected scheduled LTS program progress toward FY2061
- ▶ Continued periodic 5 year inspections of 6 cocooned reactors
- ▶ Continue CERCLA review every 5 years
- ▶ Maintain 6 ISS reactors
- ▶ Perform required IC assessments
- ▶ Perform required surveillance and maintenance activities on waste sites in LTS program
- ▶ Right size power supply to 100 Area reactors and other mission work as appropriate



The Hanford Site footprint will be reduced by 1,641 acres from land conveyed to TRIDEC by Sept. 30, 2015

Project Descriptions

	2015	2016	2017	2018	2019	2020	Beyond 2020
None Identified							

Major Actions/Decisions

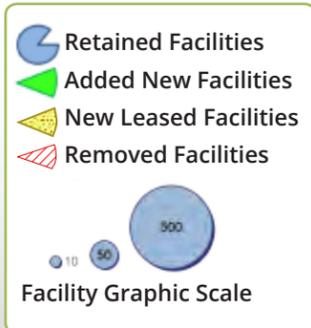
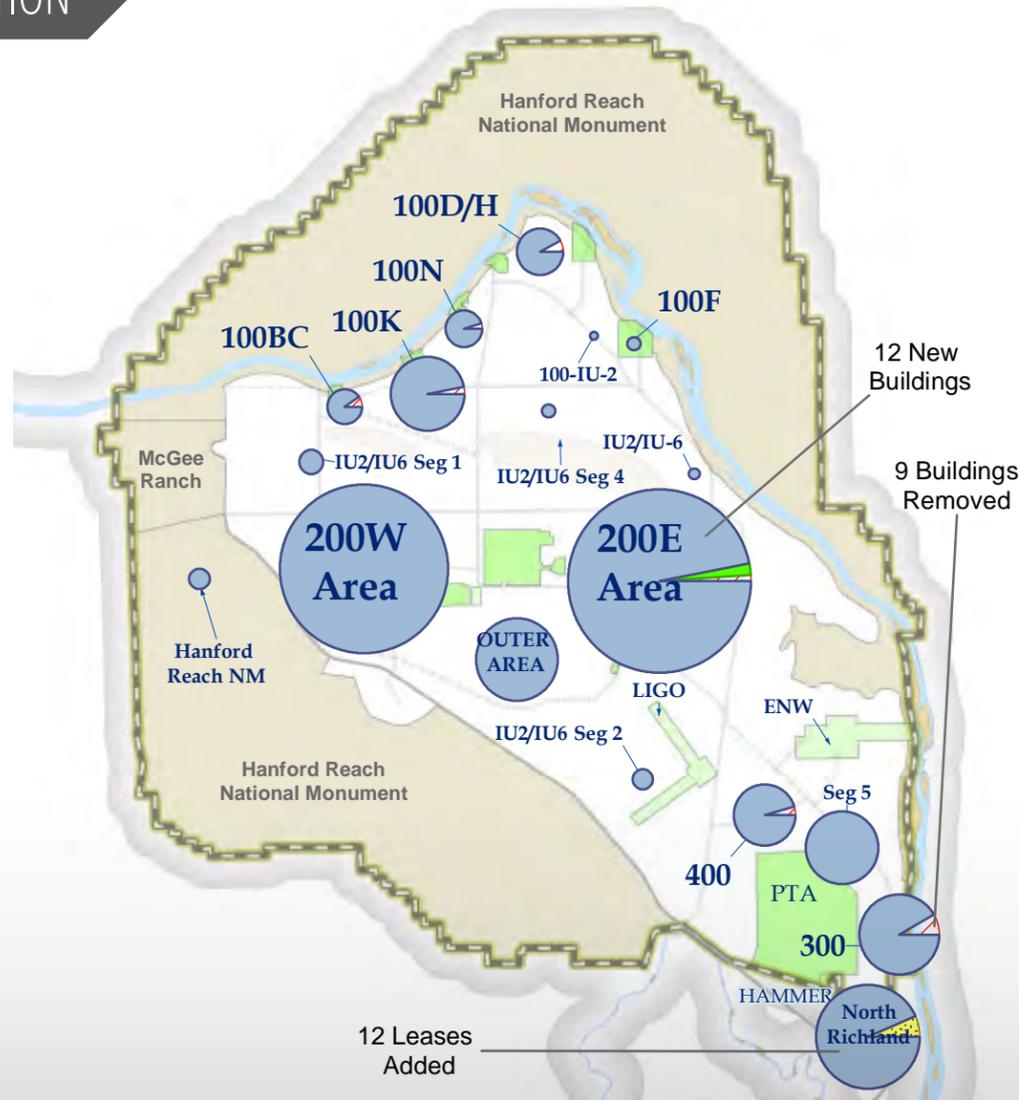
	2015	2016	2017	2018	2019	2020	Beyond 2020
Transition 100D, 100N and 100H Areas	*						
Transition Segment 4, 100B/C, IU2 and IU	*						
Transition 300 Area	*						
5-Year CERCLA Review	*						
5-Year Inspection of ISS reactors	*						

* Scheduled milestones by transition area are available at LTS webpage this link: http://www.hanford.gov/page.cfm/LTSTransition#Panel_4

Facilities Roadmap

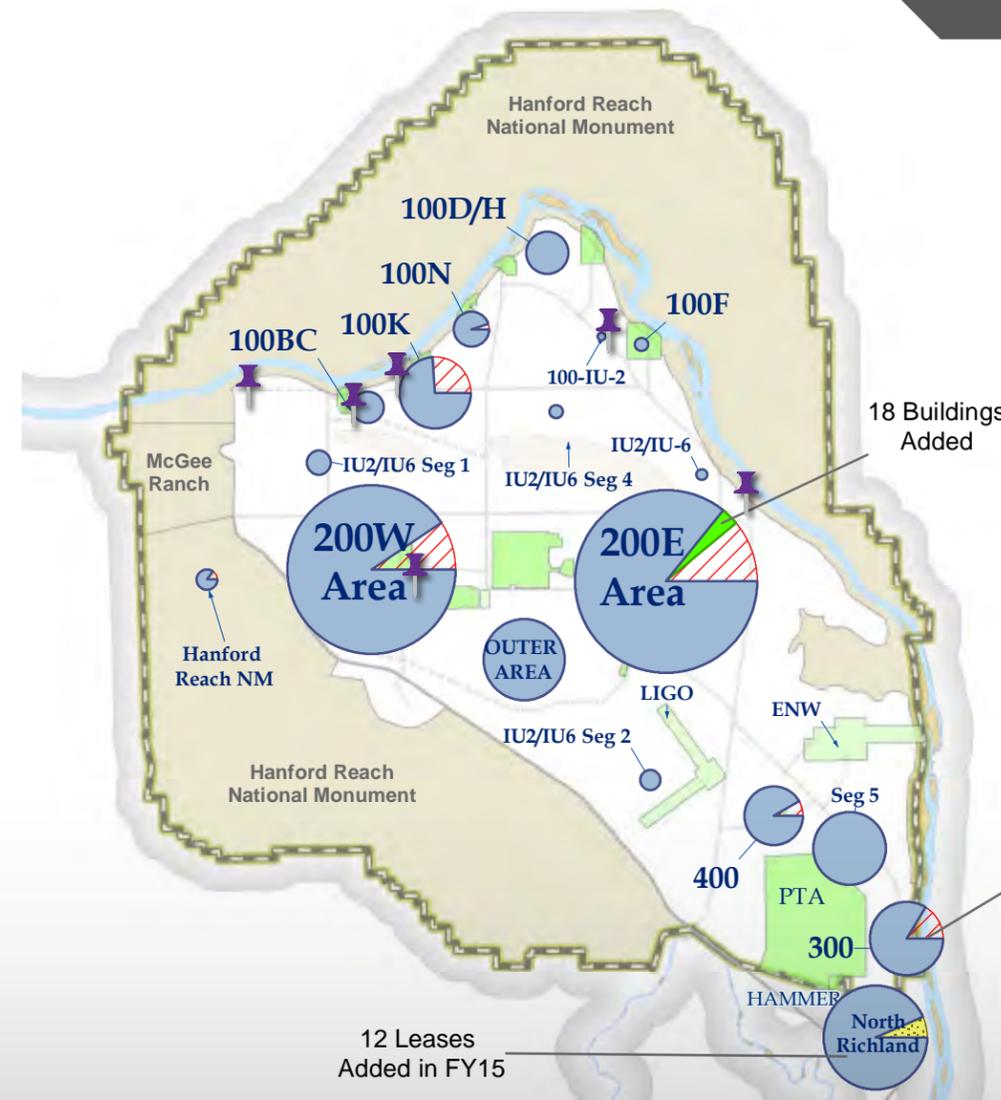
2015 CURRENT CONDITION

- ▶ Facility Master Plan Update Completed (1,002 Active Facilities)
- ▶ 156 existing buildings scheduled for D&D through FY2020
- ▶ Continued operations and maintenance of existing buildings
- ▶ Planning for a target of 846 existing buildings beyond FY2020
- ▶ Contractor office population served 2,614
- ▶ Hanford workforce (including tenants and subcontractors) is approximately 15,982



END STATES 2020

- ▶ Facility Master Plan Update Commissioned (846 Active Facilities)
- ▶ Major facilities completed in 200E:
 - New office for tank waste remediation support
 - WTP Laboratory, Balance of Facilities, and Low Activity Waste Facility
- ▶ Achieve and maintain occupancy rate of 90% in office facilities
- ▶ Contractor office population served 2,850
- ▶ Hanford workforce (including tenants) is approximately 12,900



Selected Facilities Eligible for the Manhattan Project National Historical Park

Project Descriptions

Project Descriptions	2015	2016	2017	2018	2019	2020	Beyond 2020
L-845, New Fleet Maintenance Building							◆
L-XXX, 200 East Area Office Facility(s) Support New Administration Building	*			◆◆◆◆◆◆◆◆◆◆			
L-798, 2101M HVAC Replacement							◆
L-696, 2101M Facility Renovations							◆
L-572, Fire Systems Maintenance Consolidation							◆
L-649, MO414 Equipment Parking and Staging Area							◆
L-756, Upgrade Barricade Standby Generators (Emergency Generators) (Yakima-604A, WYE-6701, WYE-K9-6701E, Rattlesnake-6701C)							◆
L-772, Electrical Vehicle Charging Station for 2266E Facility							◆
L-773, Electrical Vehicle Charging Station for 2750E Facility							◆
L-864, Construct Biological Controls Facility							◆
A-018, Repair/Replace 6062 Roof							◆

Project Descriptions (Continued)

Project Descriptions (Continued)	2015	2016	2017	2018	2019	2020	Beyond 2020
L-863, Replace Obsolete FACPs for General Use Facilities							◆
L-797, Key Facilities HVAC Replacements							◆
L-813, Concrete Pads-211ED and 212ED Tents							◆
L-796, Key Facilities Roof Replacements							◆
L-810, Install Paint Booth in New Facility (formerly - Autobody Paint Booth Replacement)							◆
L-811, 2711EA & 273E Fire Barrier Welding Areas							◆
L-814, 2711EA Insulation Repairs							◆
Major Actions/Decisions	2015	2016	2017	2018	2019	2020	Beyond 2020
A/AX/AY Tank Farm Complex Facilities	◆◆◆						
200 East Area Office Facility(s) Planning Support		◆◆◆◆◆◆◆◆◆◆					
Develop Facility Master Plan update document					◆		
Evaluate whether any additional facilities are required to support MPNHP	*						

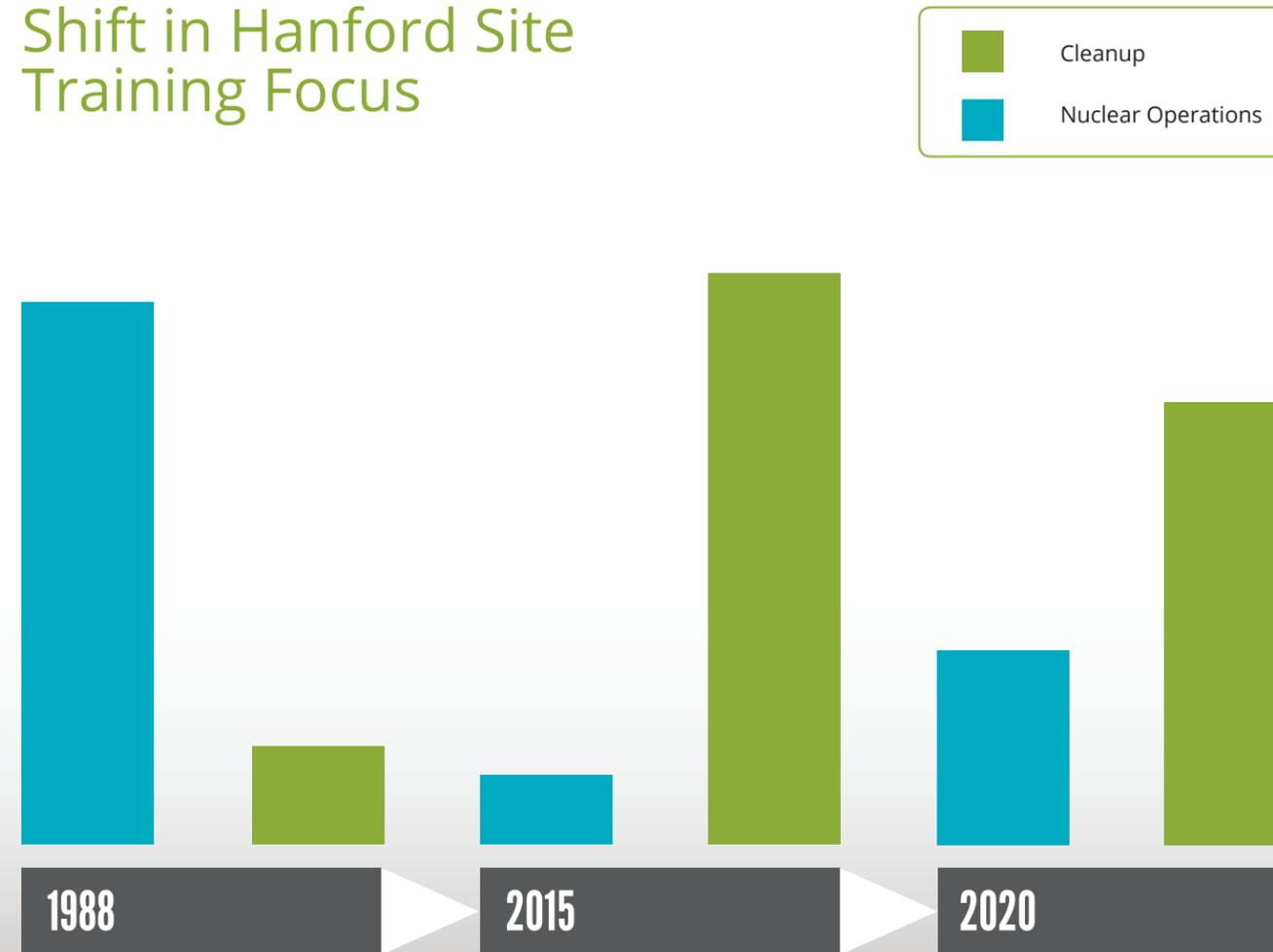
HAMMER Roadmap



2015 CURRENT CONDITION

- ▶ In 2002, the HAMMER Federal Training Center achieved the Department of Energy Voluntary Protection Program (DOE-VPP) Star Status for its strong commitment to safety and health in its operations and training activities. HAMMER has proudly maintained Star Status to date
- ▶ HAMMER is recognized for its staff, partnerships, and safety training, as real as it gets for workers and emergency responders who protect and safeguard the public and environment. HAMMER provides training facilities, curriculum, and training delivery services to the federal, contractor, and sub-contractor employees in support of Hanford Site missions
- ▶ HAMMER actively assists the DOE and site contractors to address Hanford Site issues and safety concerns
- ▶ HAMMER is also a national and regional training asset that serves other DOE, federal, state, and regional needs including disaster recovery, emergency response, transportation, fire protection, law enforcement, and military readiness
- ▶ HAMMER has introduced new instructional tools into the classrooms, such as interactive smart boards and tablets
- ▶ HAMMER student numbers have sharply increased over 2014
- ▶ HAMMER has leveraged its expertise and experience to help off-site customers and HAMMER's national partnerships:
 - HAMMER is partnering with the National Training Center (NTC) and the National Building and Construction Trades (BCTD) Council to establish training reciprocity/equivalency across the DOE complex
 - HAMMER and the Pacific Northwest National Laboratory (PNNL) are working together to deliver domestic & international border security training sponsored or funded by the Department of State and Homeland Security
 - HAMMER and the Department of Transportation (DOT) are collaborating to develop and deliver training for first responders dealing with rail incidents involving hazardous materials
 - HAMMER and the DOE Office of Infrastructure Security & Energy Restoration are working to train and deploy personnel for natural disaster responses
- ▶ HAMMER is in preliminary discussions with WTP to identify training needs in support of readiness and start-up activities

Shift in Hanford Site Training Focus



END STATES 2020

- ▶ Continue to support evolving Hanford Site cleanup training requirements
- ▶ Shift facility/training resources from cleanup workers to nuclear operations as necessary in support of WTP operations and maintenance
- ▶ Maintain agile posture to support continued student days fluctuation between 2015 and 2020 as the Hanford Site cleanup projects evolve as well as the anticipated start-up of the Waste Treatment Plant
- ▶ Site Size: 88 acres plus 60 acres for future development
- ▶ Expand and strengthen HAMMER's national programs and relationships:
 - Extend HAMMER's role with NTC for DOE complex support
 - Further solidify HAMMER's role as a key asset in our nation's ability to respond to incidents affecting the energy infrastructure
 - Work with the DOT to foster development and delivery of major DOT safety courses
 - Align HAMMER resources to support PNNL as they grow their domestic & international programs
 - Posture capabilities to cultivate support with NTC & BCTD as reciprocity/equivalency expand across the DOE Complex

Project Description*

Project Description*	2015	2016	2017	2018	2019	2020	Beyond 2020
T-226, RadCon Practical Training Building	*						
T-224, Enclose Hoisting and Rigging Props	*						
T-225, Tactical Maze Building Modifications	*						
T-234, HAMMER Admin Bldg 6091 Building Natural Gas Conversion	*						
T-236, Fence RadCon Property Adjacent to HAMMER	*						
T-237, Fully Enclose HAMMER, Fence Remaining Two Sections	*						

*Projects needed - currently NOT funded

Major Actions/Decisions

Major Actions/Decisions	2015	2016	2017	2018	2019	2020	Beyond 2020
Support WTP startup training				◆◆◆◆◆◆◆◆			

Hanford is nationally recognized for:

- ▶ Its culture of safe and secure conduct of operations
- ▶ Clean energy and environmental compliance
- ▶ Leadership and management excellence
- ▶ Changing the course of world history by helping to usher in the atomic age

Infrastructure and site-wide services are:

- ▶ Provided at significantly reduced cost and with improved customer service
- ▶ Satisfaction aligned with contractor requirements, with no shortage or excess
- ▶ Modernized to support the world's largest radioactive waste treatment plant

The Hanford Site "end state" demonstrates:

- ▶ A mutual vision among Stakeholders, regulators, Community, Indian Tribes and Department of Energy
- ▶ Strategic progress in Tri-Party Agreement milestones and cleanup projects
- ▶ Post-cleanup land use and economic diversification consistent with the comprehensive land use plan