



OFFICE OF
RIVER PROTECTION
United States Department of Energy

Low Activity Waste Pretreatment System

RCRA Notice of Intent Public Meeting

Presented by: Sahid Smith, Tank Farms Program, LAWPS Project

November 14, 2016



Overview

- The U.S. Department of Energy (DOE) is planning to design and build a Low-Activity Waste Pretreatment System (LAWPS) to remove radioactive cesium and solids from some Hanford tank waste. The facility is needed to support a DOE initiative to begin vitrifying low-activity waste as early as 2022.
- LAWPS will require a permit from the state of Washington before construction activities can begin. The facility will be permitted as a dangerous waste management unit subject to state regulations (WAC 173-303).
- In April 2016, DOE submitted a “Notice of Intent” to apply for a permit with the Washington Department of Ecology.

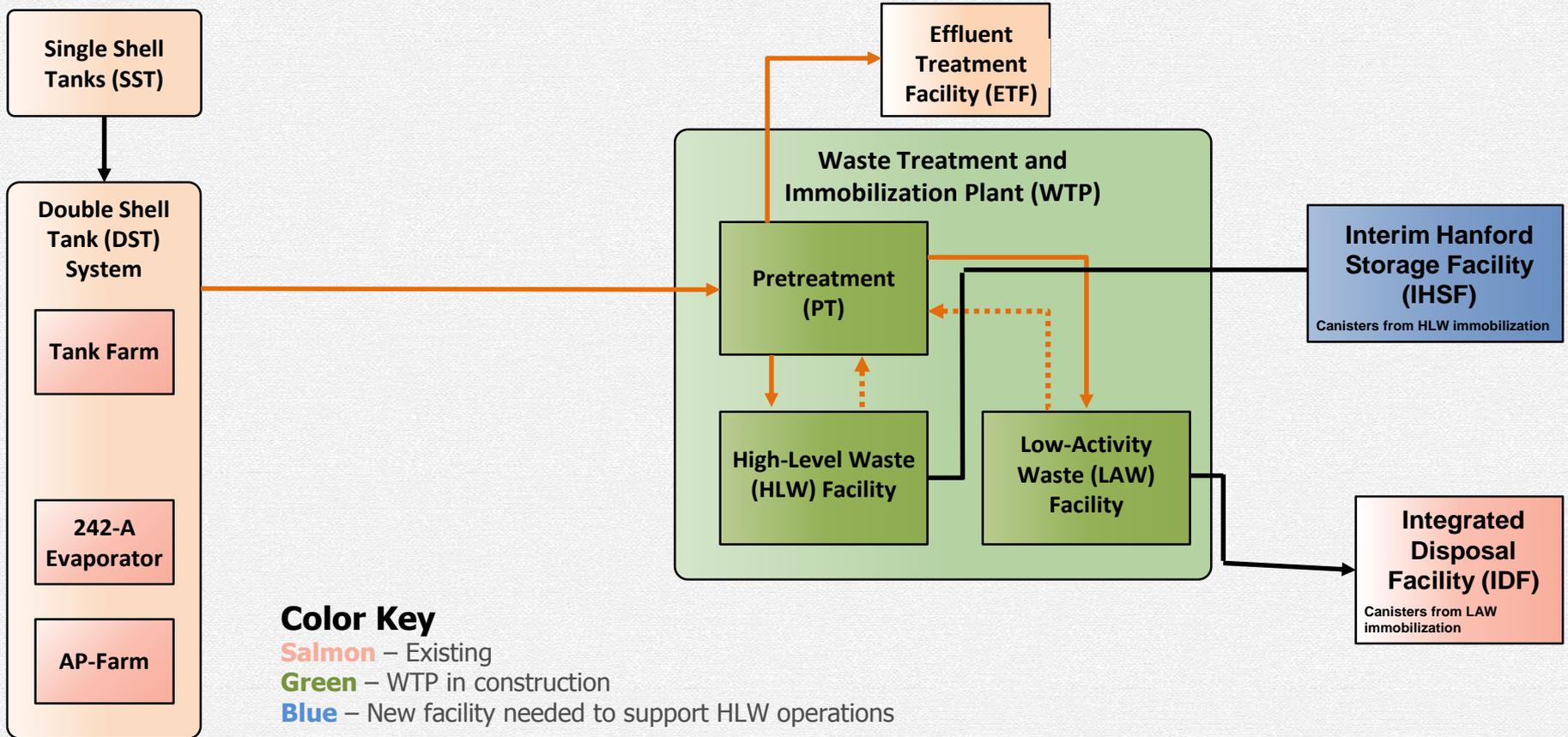
Purpose of tonight’s meeting

- Before submitting the permit application to Ecology, DOE is required to provide notification to the state, local communities, and the public that the siting of a dangerous waste management facility is being considered.
- This meeting is designed to provide information and answer questions about the LAWPS facility.



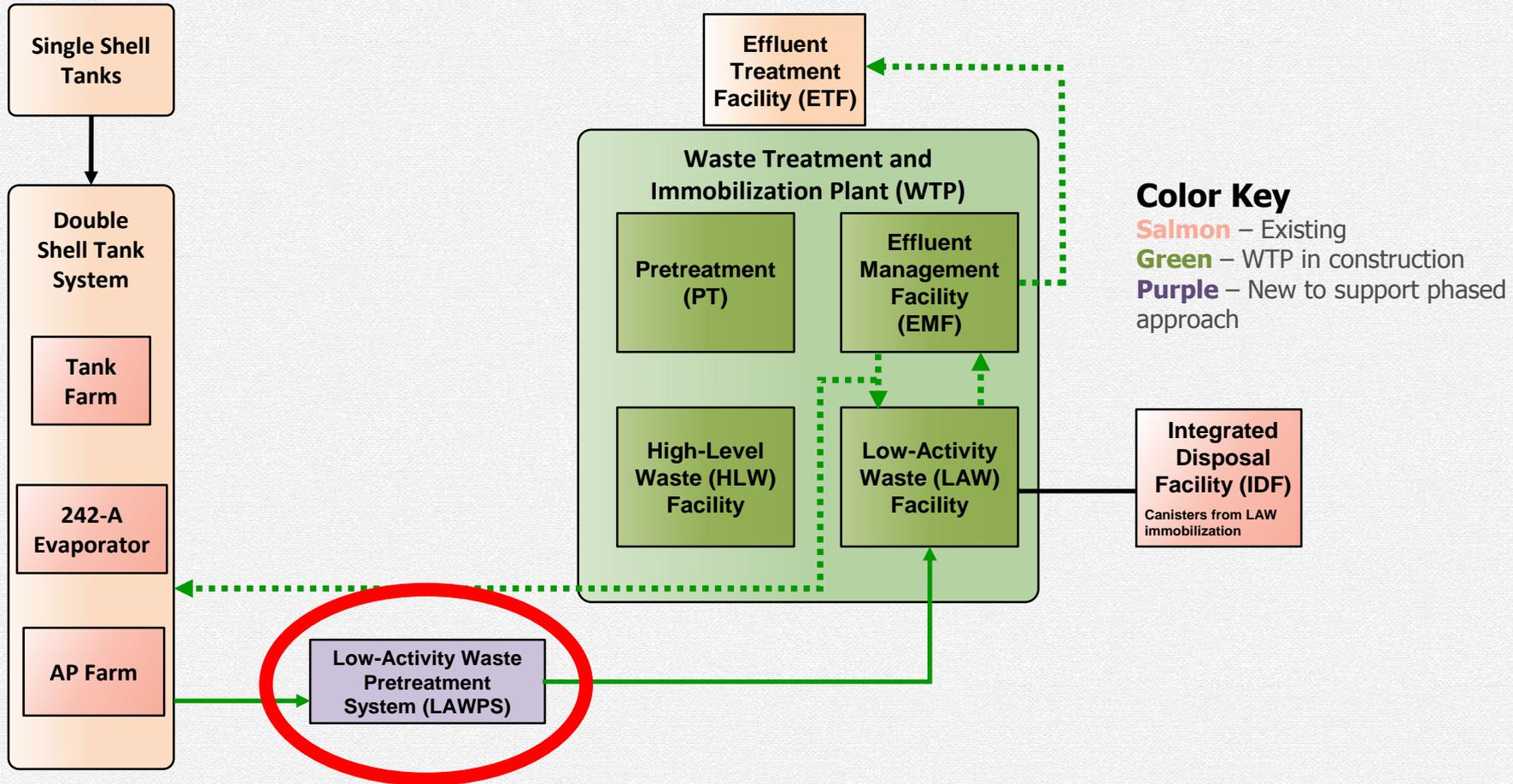


Baseline treatment approach



Original waste treatment approach sent all tank waste through the WTP Pretreatment Facility first, producing feed for high-level and low-activity waste facilities.

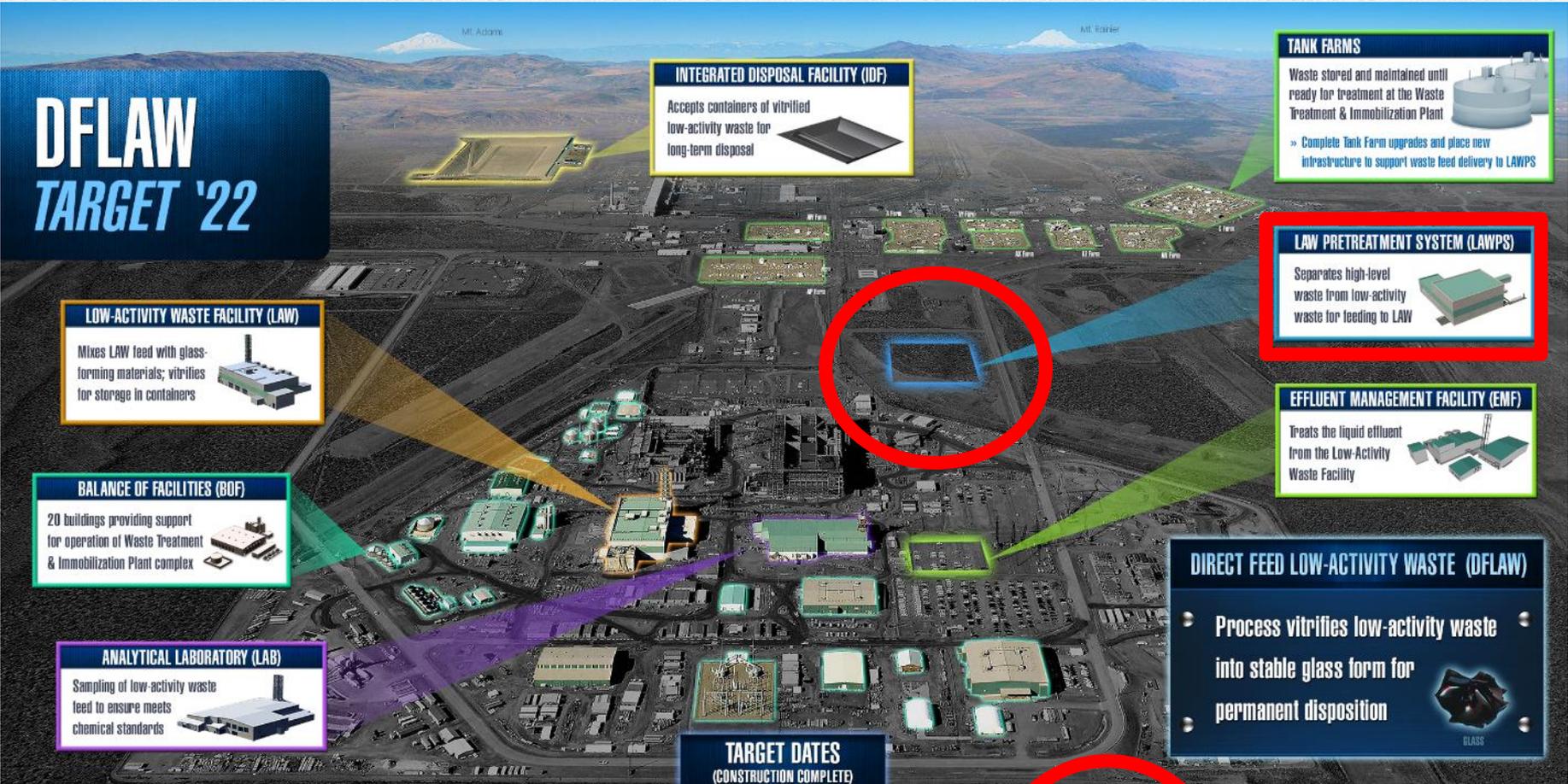




The DFLAW approach sends pretreated tank liquids directly to the Low-Activity Waste (LAW) Facility, enabling treatment operations as early as 2022.
The LAWPS facility is needed to support this approach.



DFLAW TARGET '22



TARGET DATES
(CONSTRUCTION COMPLETE)



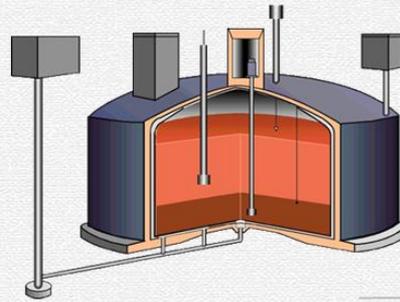
This graphic display is not to scale





20 Proposed waste feed
delivery campaigns

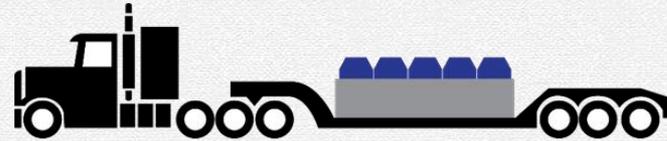
1,000,000
Gallons per campaign



6.3 Million gallons of
tank space generated*

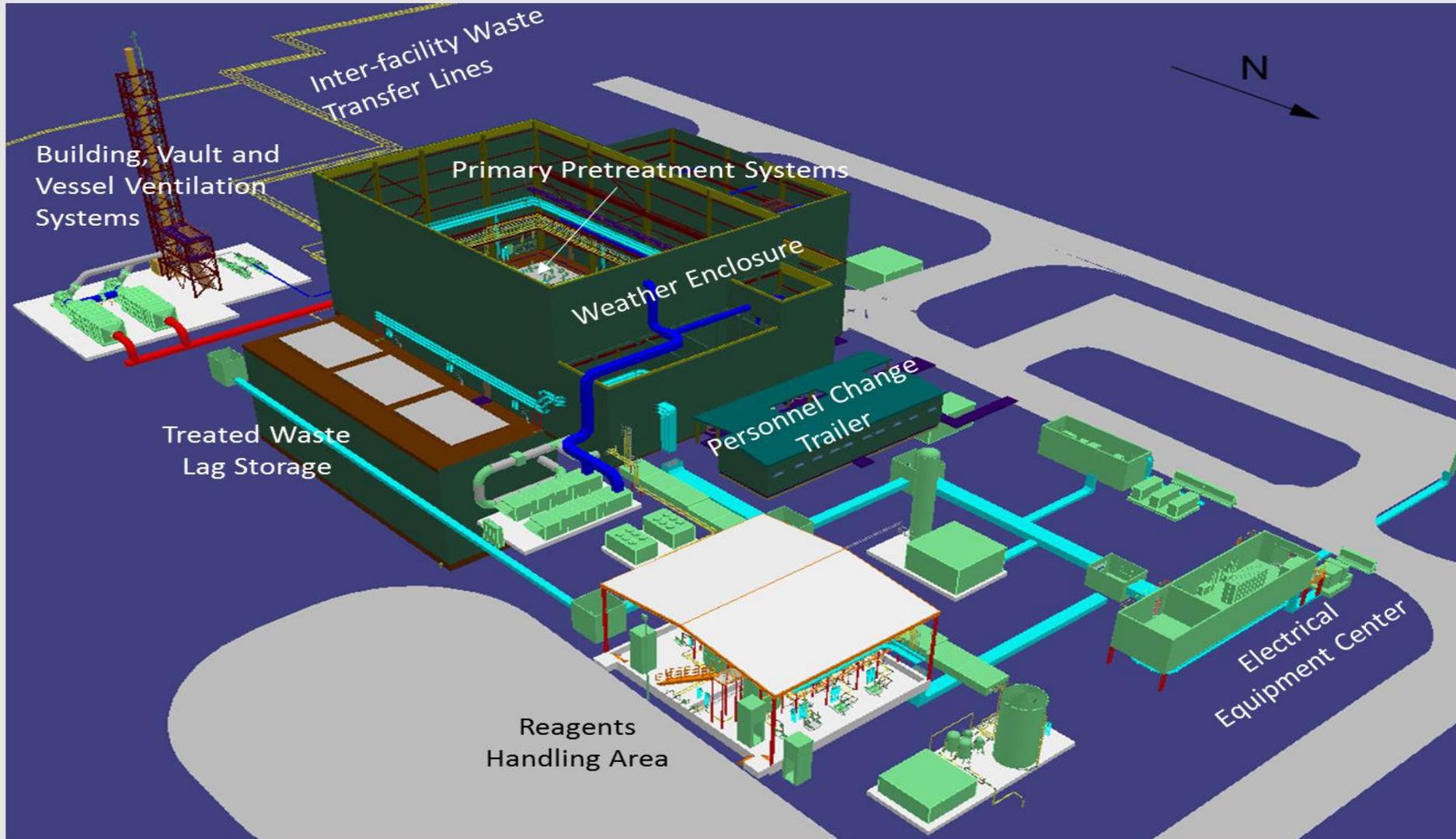
9,600 Metric tons of
sodium processed

15% of Tank Farm
sodium inventory



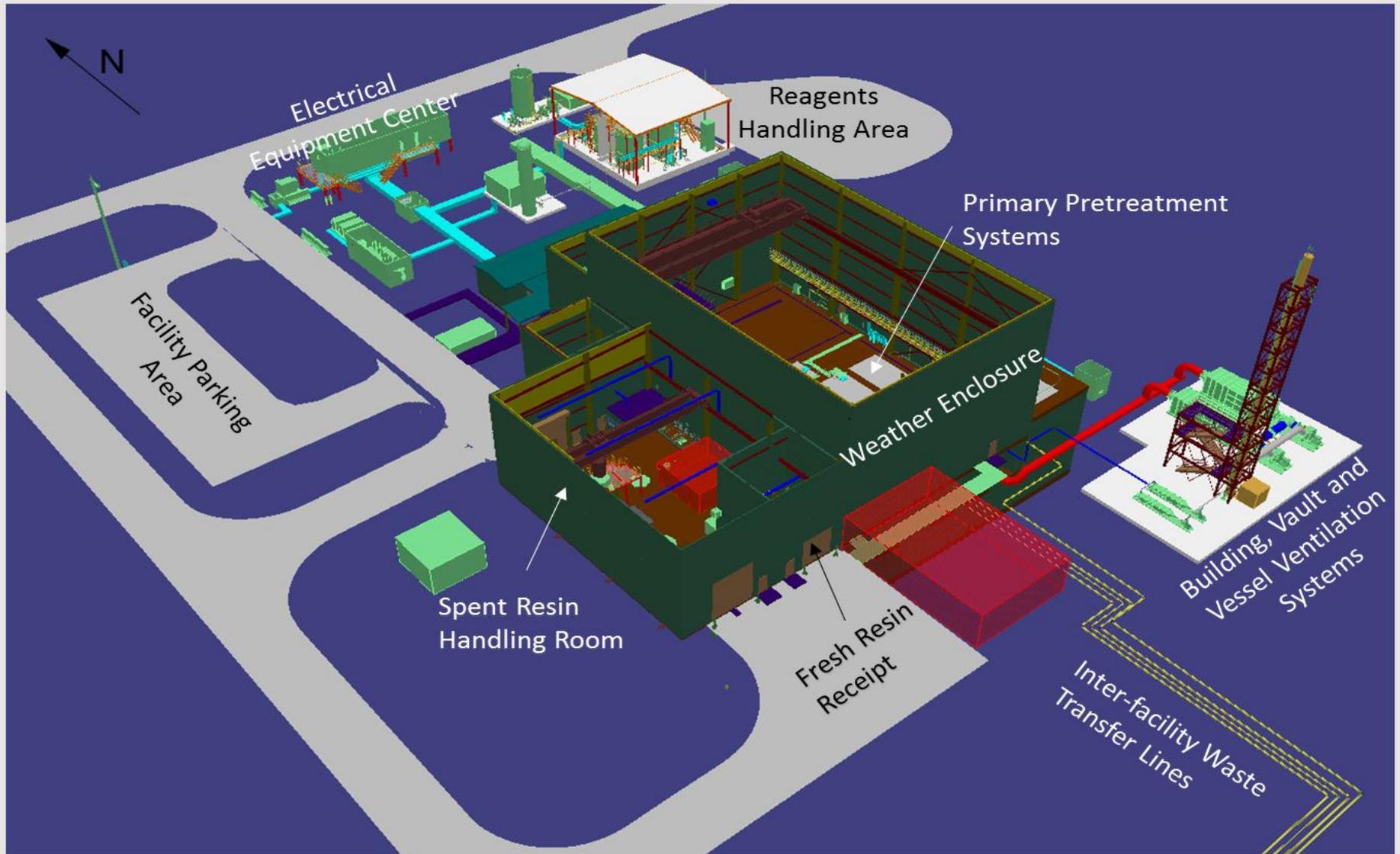
12,000 Immobilized LAW
containers produced

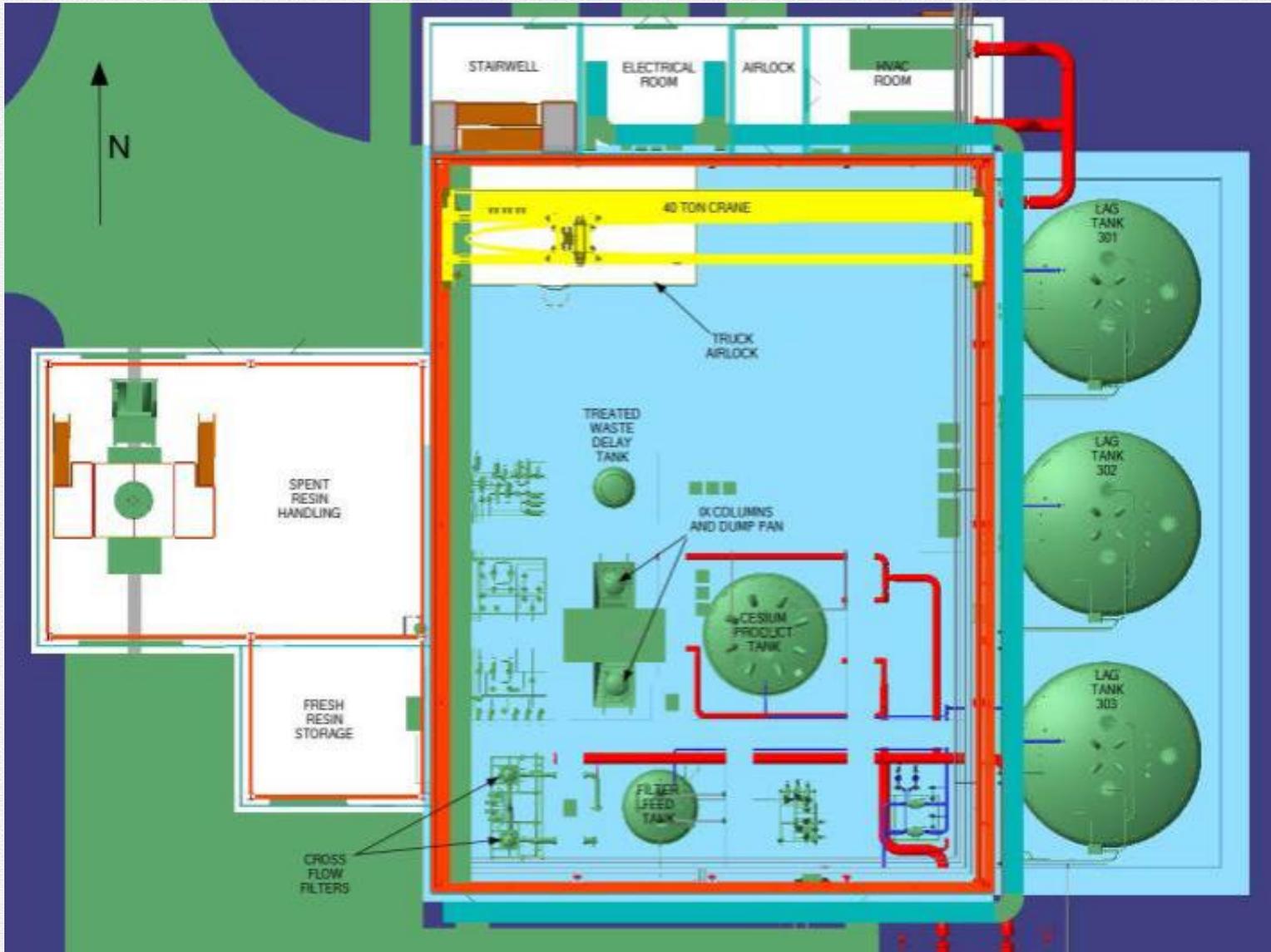






LAWPS Facility Concept







- **Critical Decision (CD)-1 approved: May 2015**
 - Initiated Preliminary Design phase; currently between 30% and 60% checkpoints
 - Full scale column test and 1/9th scale integrated testing supporting design
- **Planned submittal of environmental permit applications June/July 2017**
- **Anticipate CD-3A approval late 2017/early 2018**
 - Long lead procurement and site prep activities
- **Anticipate CD-2/3 approval August 2018**
 - Completion of 90% design phase; results of integrated engineering scale testing
 - Initiate final design and begin construction activities
- **Construction targeted to begin late 2018**
- **Target date for construction complete by 2021**





Dangerous Waste Permitting Process

- DOE anticipates submitting the permit application for the LAWPS Facility to Ecology in June/July 2017 timeframe
- Class 3 permit change will require the following:
 - Minimum 60-day public comment period on the permit application, including a public meeting (led by DOE)
 - Minimum 45-day public comment period on the permitting decision (led by Ecology)
- Public will be informed of upcoming comment periods through the Hanford email and postal lists; newspaper ads; websites; social media; Hanford Advisory Board; and more





WRPS, tank operations contractor

- Tank farm operations
- LAWPS
- Waste feed delivery
- Effluent retention and treatment

The Office of River Protection

- Mission integration and accomplishment
- Delivering the DFLAW program

BNI, WTP contractor

- Design, construction, startup and commissioning
 - LAW vitrification facility
 - WTP Analytical Laboratory
 - WTP Balance of Facilities

National laboratories

- Technical expertise
- Process improvements and issue resolution



WAI, 222-S laboratory contractor

- Analytical services in support of DFLAW

Richland Operations Office

- Hanford Site cleanup
- Waste disposition

MSA, Hanford sitewide services contractor

- Infrastructure and utilities services

CHPRC, environmental cleanup contractor

- ILAW container disposal services
- IDF operations

One System
integrating the
Direct Feed
Low-Activity Waste
(DFLAW) program





Questions?

The Hanford Reach
White Bluffs Overlooking the Columbia River

