



UNITED STATES DEPARTMENT OF ENERGY

# OFFICE OF RIVER PROTECTION

## Low-Activity Waste Pretreatment System

### Hanford Advisory Board Tank Waste Committee

Presented by: **Steve Pfaff** – Federal Project Director

November 13, 2014



## **2008 History**

- **Interim Pretreatment System (IPS) alternatives analysis resulted in selection of cross-flow filtration and ion exchange – validated by an expert panel**

## **2011 History**

- **Critical Decision 1 Package, was submitted by Washington River Protection Solution in September 2011**
- **Conceptual design was developed for both an in-tank and near-tank pretreatment system**
- **U.S. Department of Energy, Office of River Protection (ORP) suspended the Supplemental Treatment Project in September 2011**

## **2014 Present Effort**

- **Critical Decision 0, Approval of Mission Need, was granted March 17, 2014, and the project was named the Low-Activity Waste Pretreatment System (LAWPS)**
- **Conceptual design of LAWPS is in progress – delivery to ORP expected by December 2014**

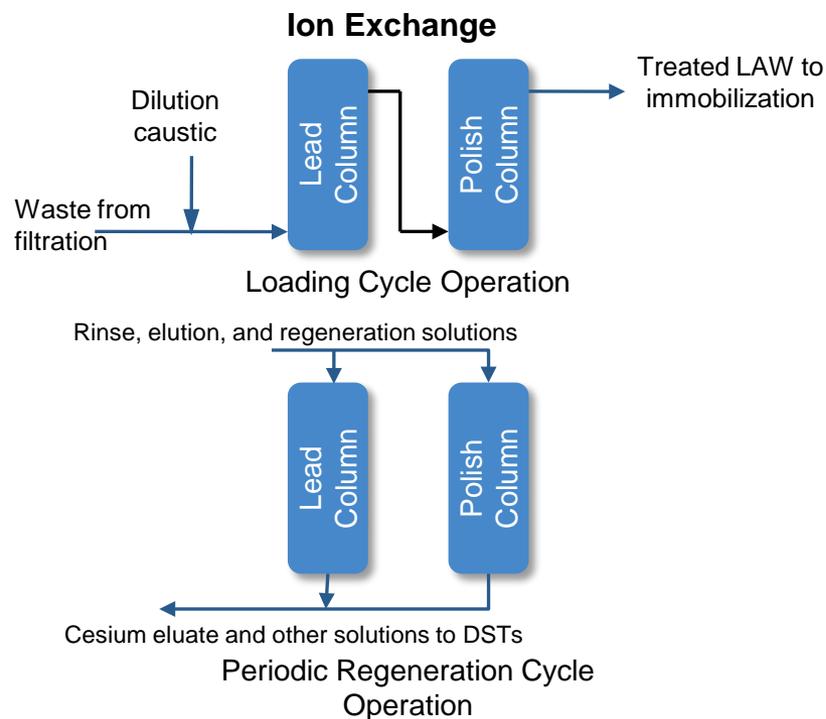


# LAWPS Project Scope

LAWPS will remove suspended solids and cesium from double-shell tank (DST) liquids to provide low-activity waste (LAW) feed to the LAW Facility.



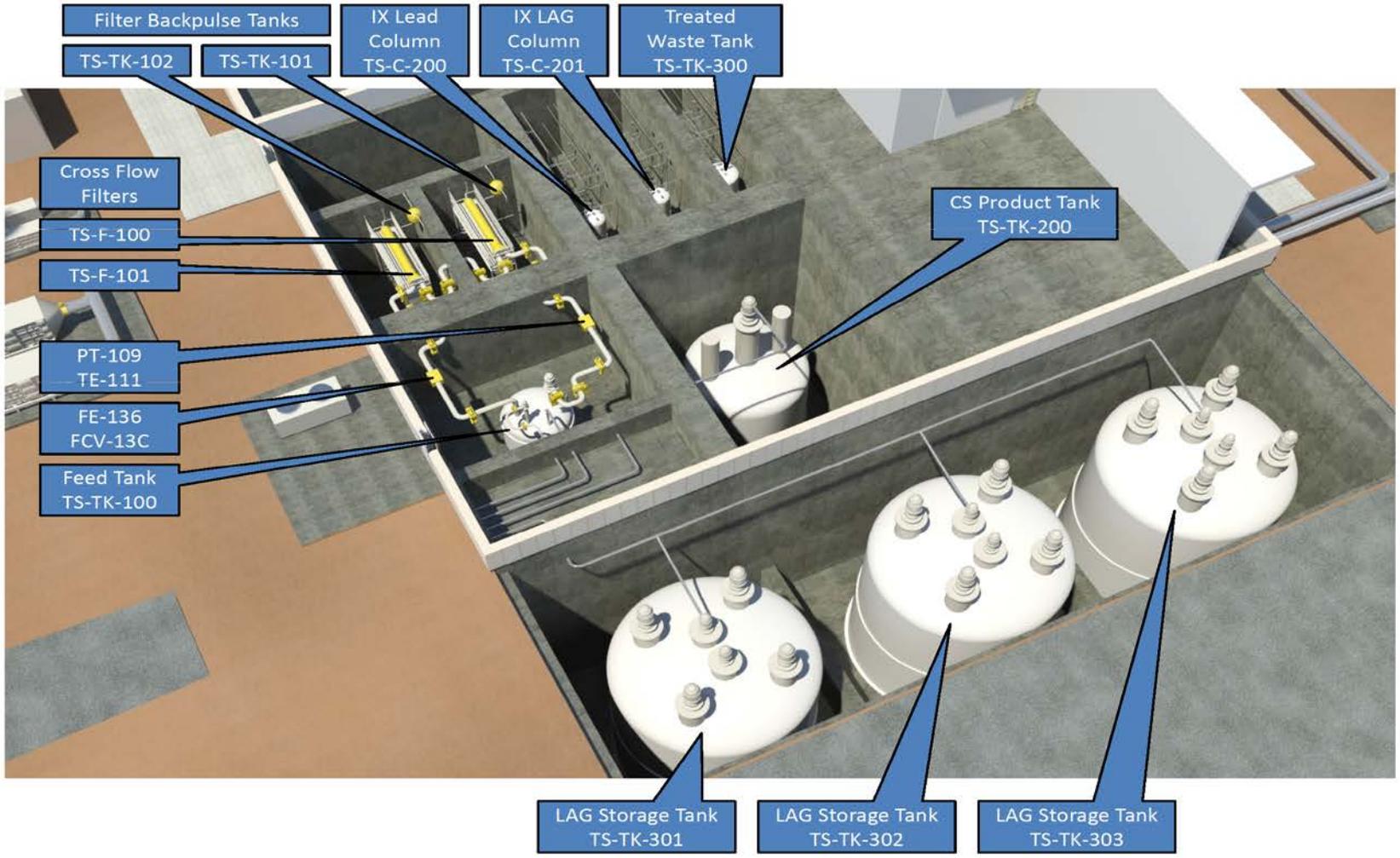
Crossflow Filtration Element





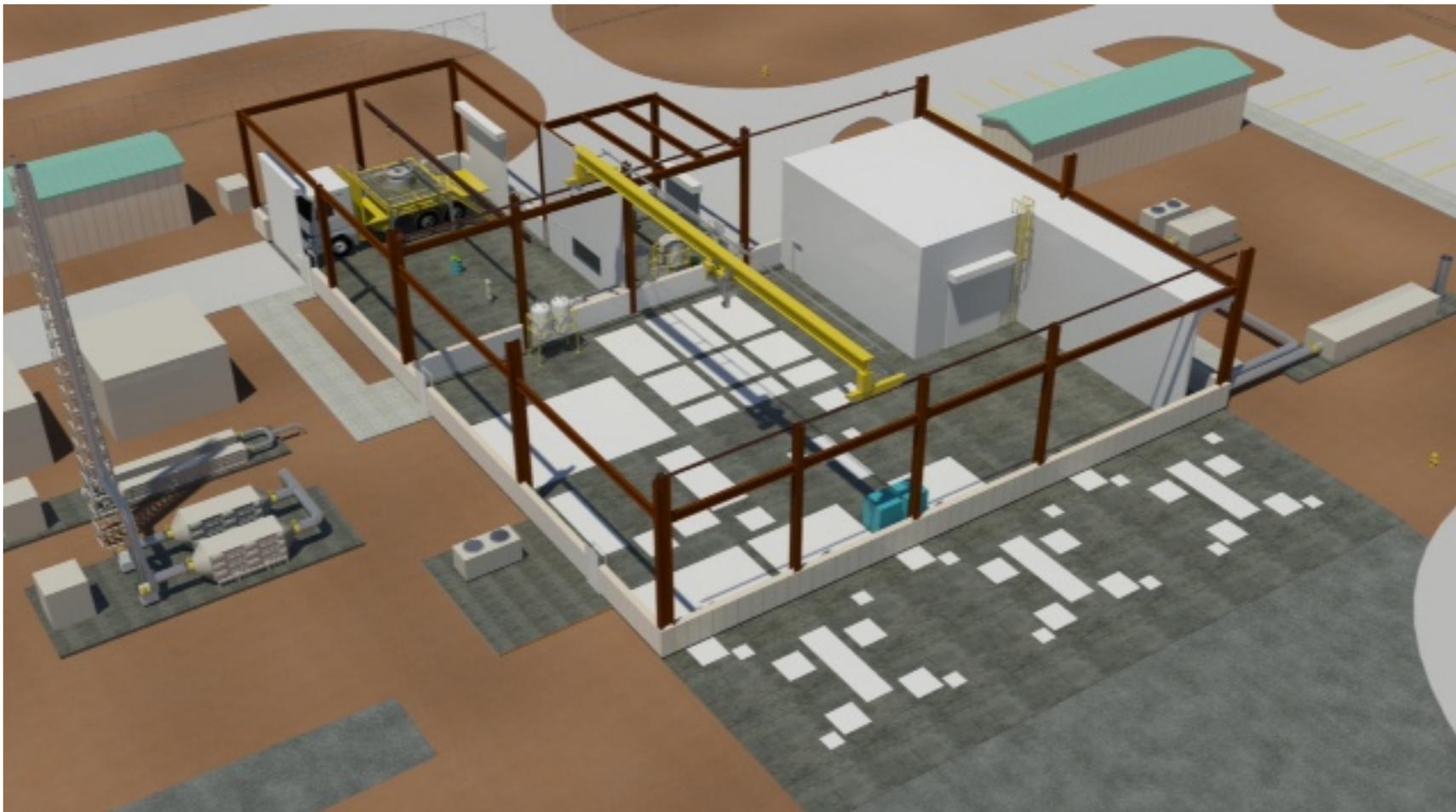


# LAWPS Process Equipment in Vault Facility



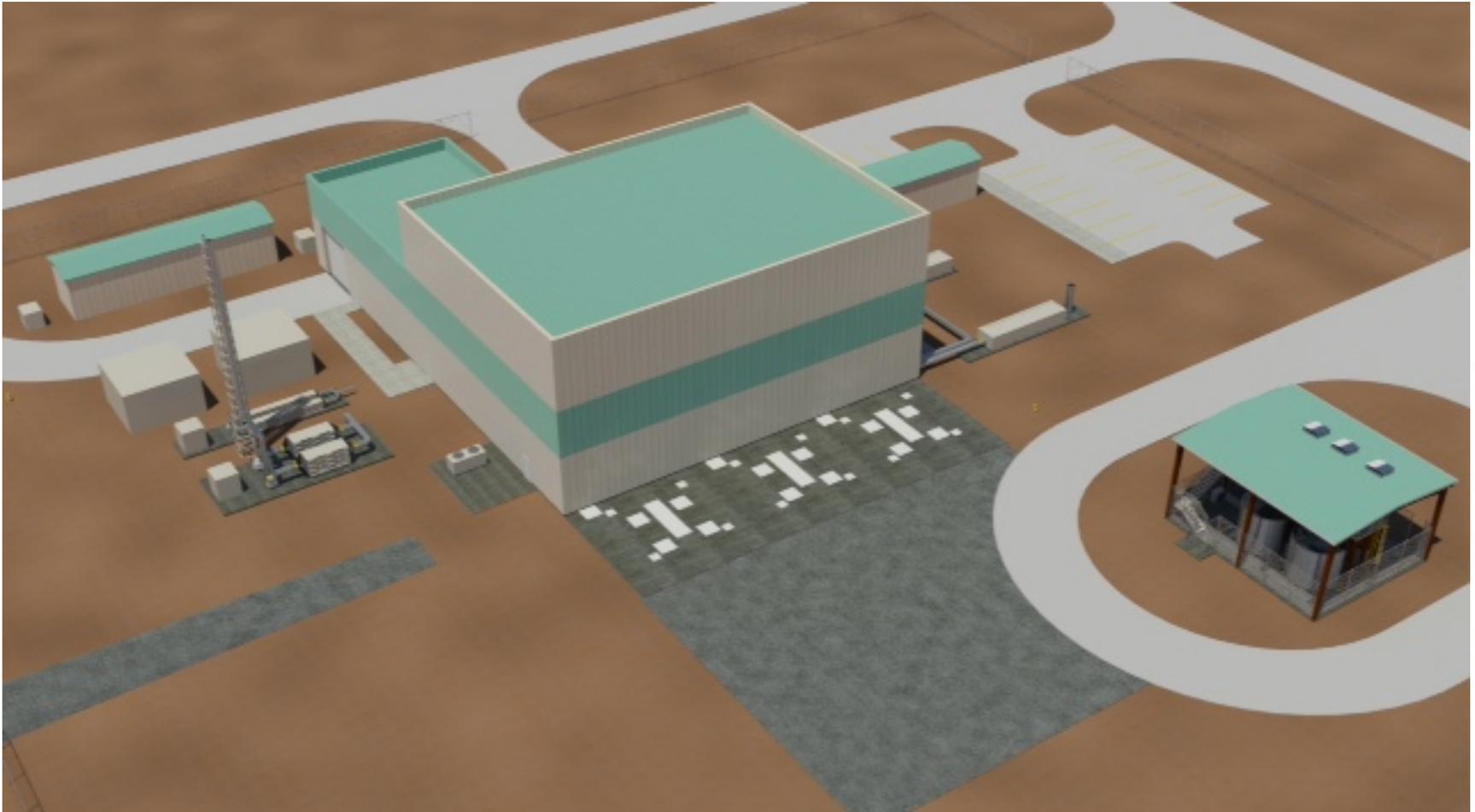


# LAWPS Above – Grade Structures



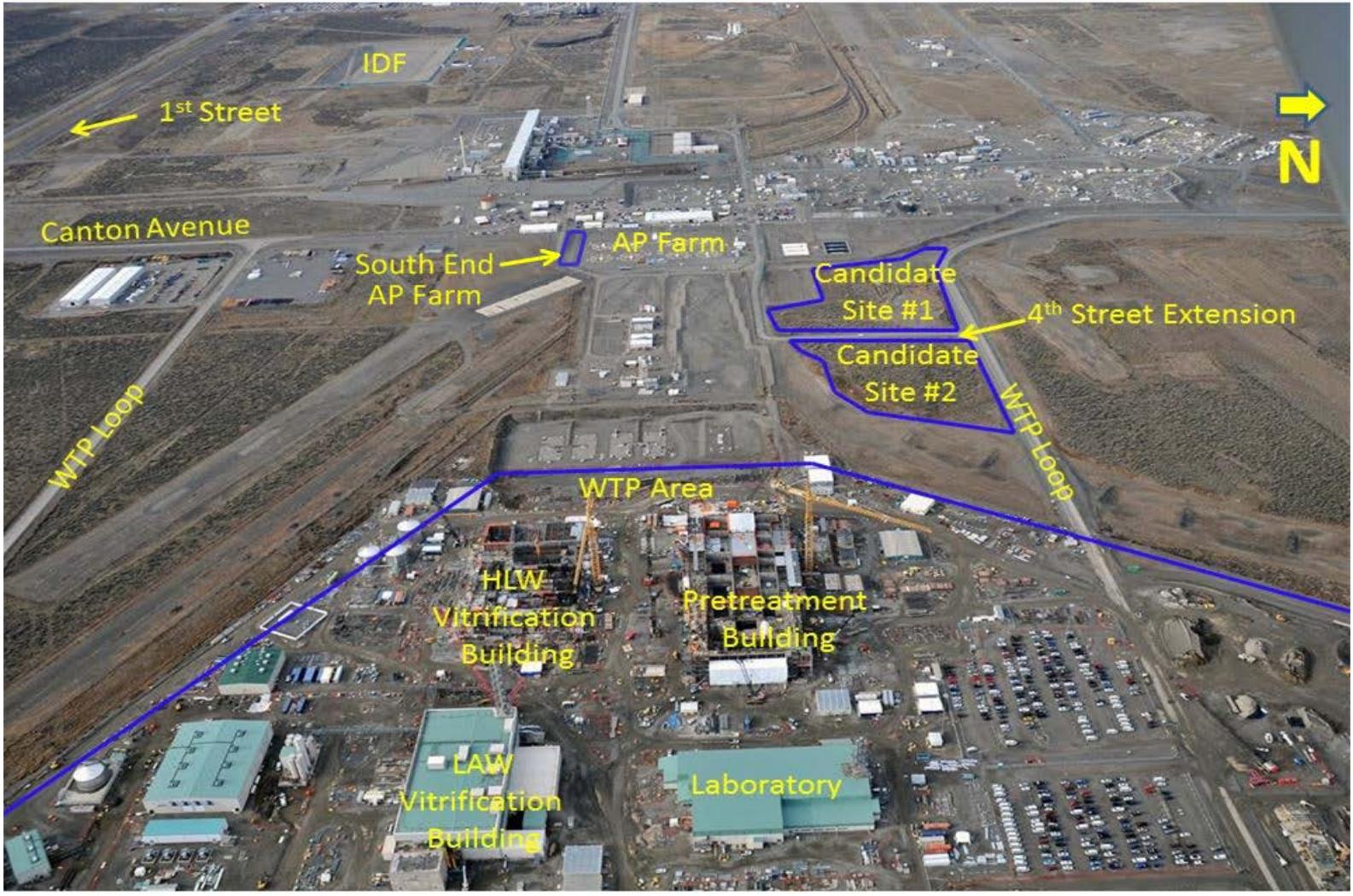


# LAWPS – Artist's Rendition of Finished Facility



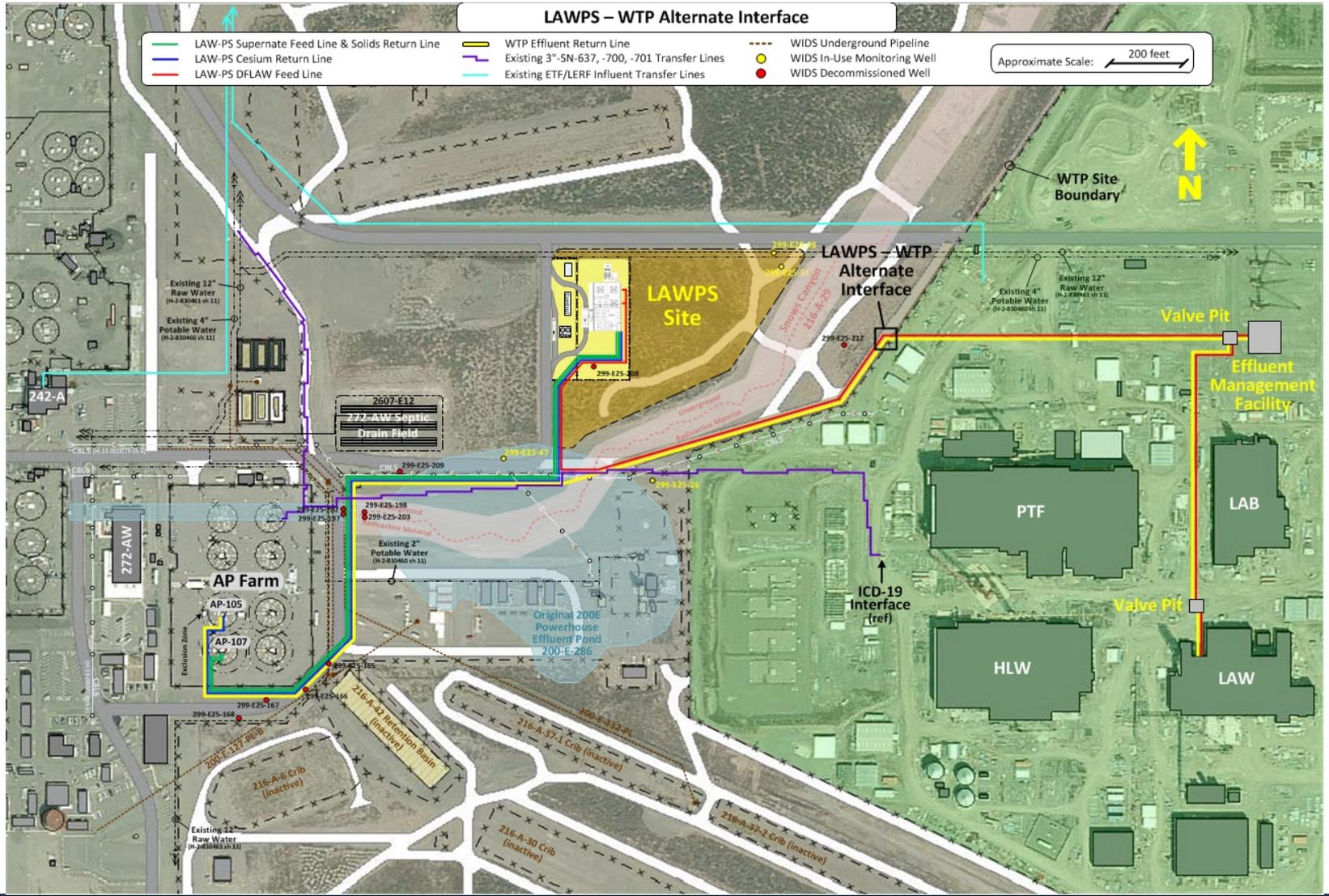


# LAWPS Anticipated Siting Location – Site #2





# DFLAW Proposed Transfer Lines





# DFLAW Program Elements

Tank Farm	Funding		WTP (Capital)
<b>LAWPS</b>	Capital (T5L01)		LAW
DST Management	Expense		Laboratory
DST AP-107 Feed Certification Sampling and Analysis	Expense		Balance of Facilities
Utilities (Mission Support Alliance)	Expense/Capital		Effluent Management
DST Upgrades	Expense/Capital		
Performance Assessment and Waste Incidental to Reprocessing Determination	Expense		
Secondary Solid Waste Management	Expense		
ILAW Transporter	Expense		
Effluent Treatment Facility Upgrades	Expense/Capital		