



OFFICE OF  
**RIVER PROTECTION**  
United States Department of Energy

# **One System: Managing the Office of River Protection Mission and Delivering Direct-Feed Low Activity Waste**

**Hanford Advisory Board – Tank Waste Committee**

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Presented by: **Plant Startup, Commissioning & Integration One System Division**

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# Overview

- One System – leading the way to Direct-Feed Low Activity Waste (DFLAW)
  - Purpose
  - Evolution
  - Organization
- DFLAW Program
- One System Management Tools





# One System Strategic Objectives

- Establish prioritized sets of fully integrated activities and timing to integrate Tank Farms and Waste Treatment and Immobilization Plant (WTP)
- Track, coordinate, measure, and report on these activities
- Identify and recommend actions to more effectively and efficiently conduct the transition to startup, commissioning, and operations to include alignment of DOE directives and contracts
- Establish a long-term tank waste disposition integrated flowsheet and technical management involving National Laboratories
- Provide for the integration of Tank Farms and WTP system planning and modeling, with a focus on the waste feed qualification requirements
- Lead the development of interfaces and controls
- Coordinate the establishment of operational skills required for future operators





## What is One System?

- An integrated team consisting of Office of River Protection (ORP), Washington River Protection Solutions (WRPS), and Bechtel National, Inc. (BNI) personnel to provide integration between Tank Farms and WTP to meet overall ORP mission needs
- Primary focus to deliver the mission with near-term emphasis on DFLAW operations by 2022
  - Begin treating most mobile (liquid) tank waste at earliest practicable time
  - Provide flexibility and redundancy in tank waste treatment
  - Create opportunities to optimize radioactive operations for WTP and validate Low Activity Waste (LAW) glass performance
  - Reduce commissioning and startup risk for remainder of WTP's production facilities

One System has established cross-cutting management tools and is integrating 2 DOE field offices, 5 Hanford Site contractors, and 6 National Labs





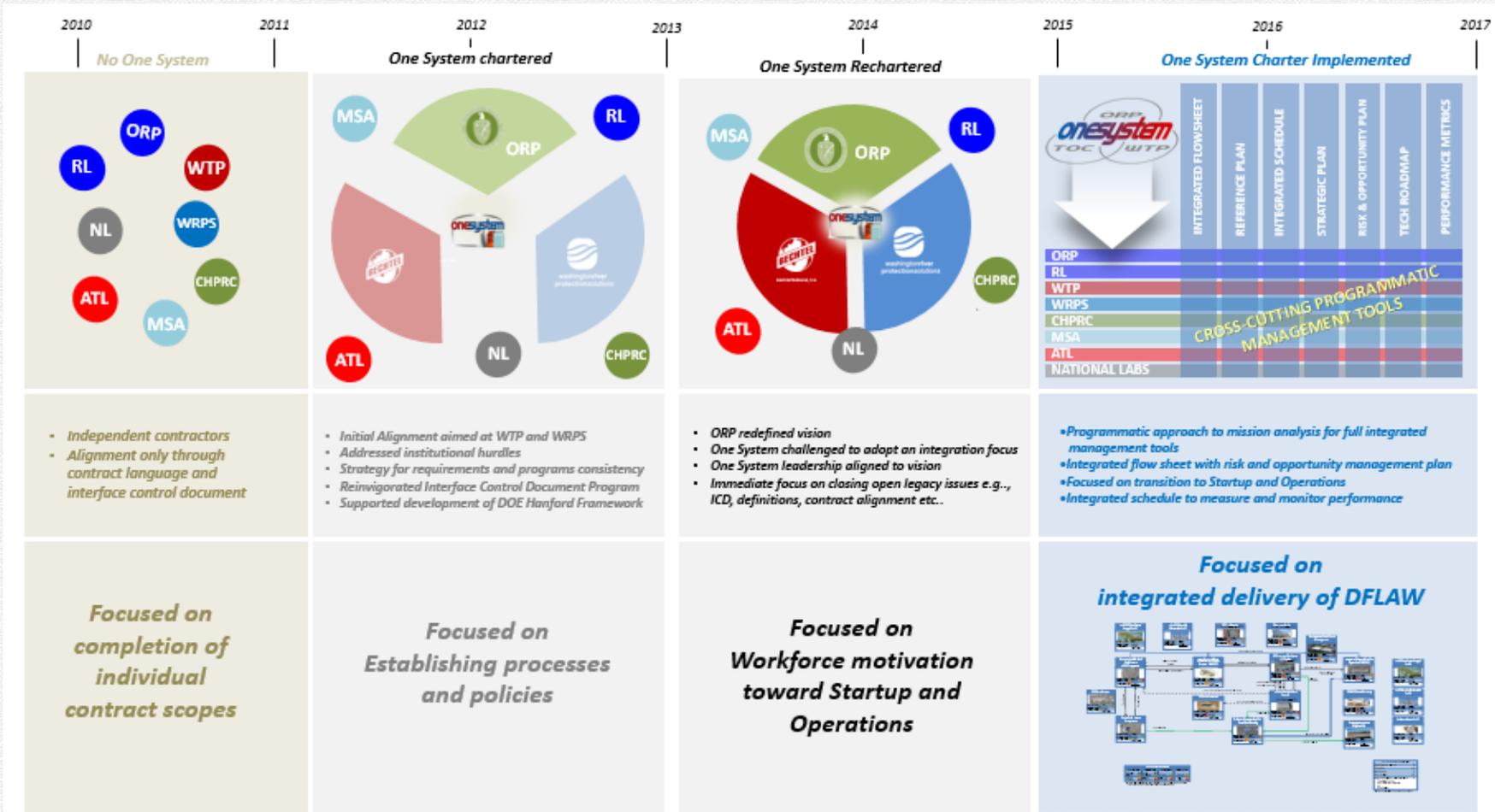
## Direct-Feed Low Activity Waste

- Treating supernate (liquid) portion of the tank waste
- New facility to pretreat waste stream prior to vitrification
  - Filtration to remove solids
  - Ion Exchange to remove cesium
- Enable glass production of 30 metric tons/day of glass
- On site disposal of LAW glass





# Evolution of One System





# One System Charter Implemented



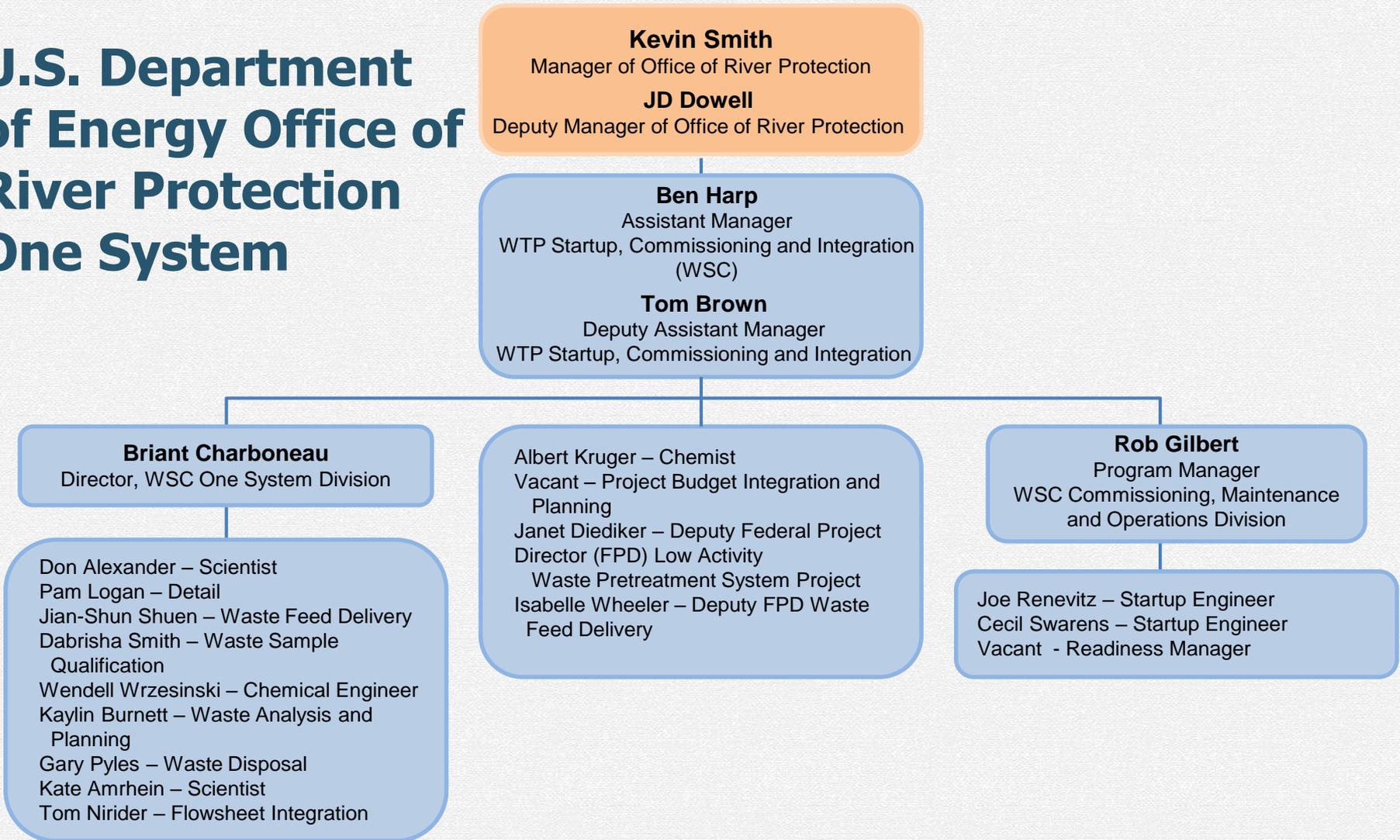
	INTEGRATED FLOWSHEET	REFERENCE PLAN	INTEGRATED SCHEDULE	STRATEGIC PLAN	RISK & OPPORTUNITY PLAN	TECH ROADMAP	PERFORMANCE METRICS
ORP							
RL							
BNI							
WRPS							
CHPRC							
MSA							
ATL							
NATIONAL LABS							

**CROSS-CUTTING PROGRAMMATIC  
MANAGEMENT TOOLS**



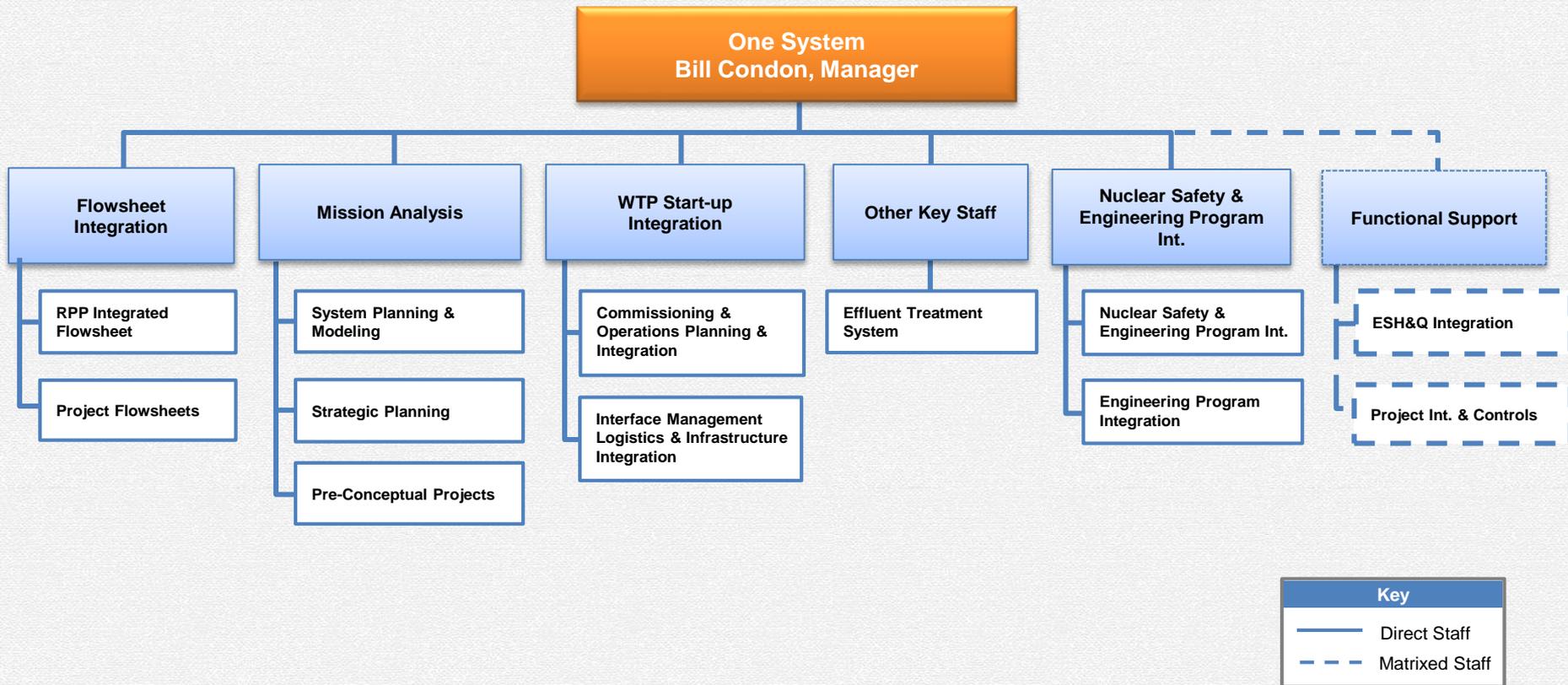


# U.S. Department of Energy Office of River Protection One System

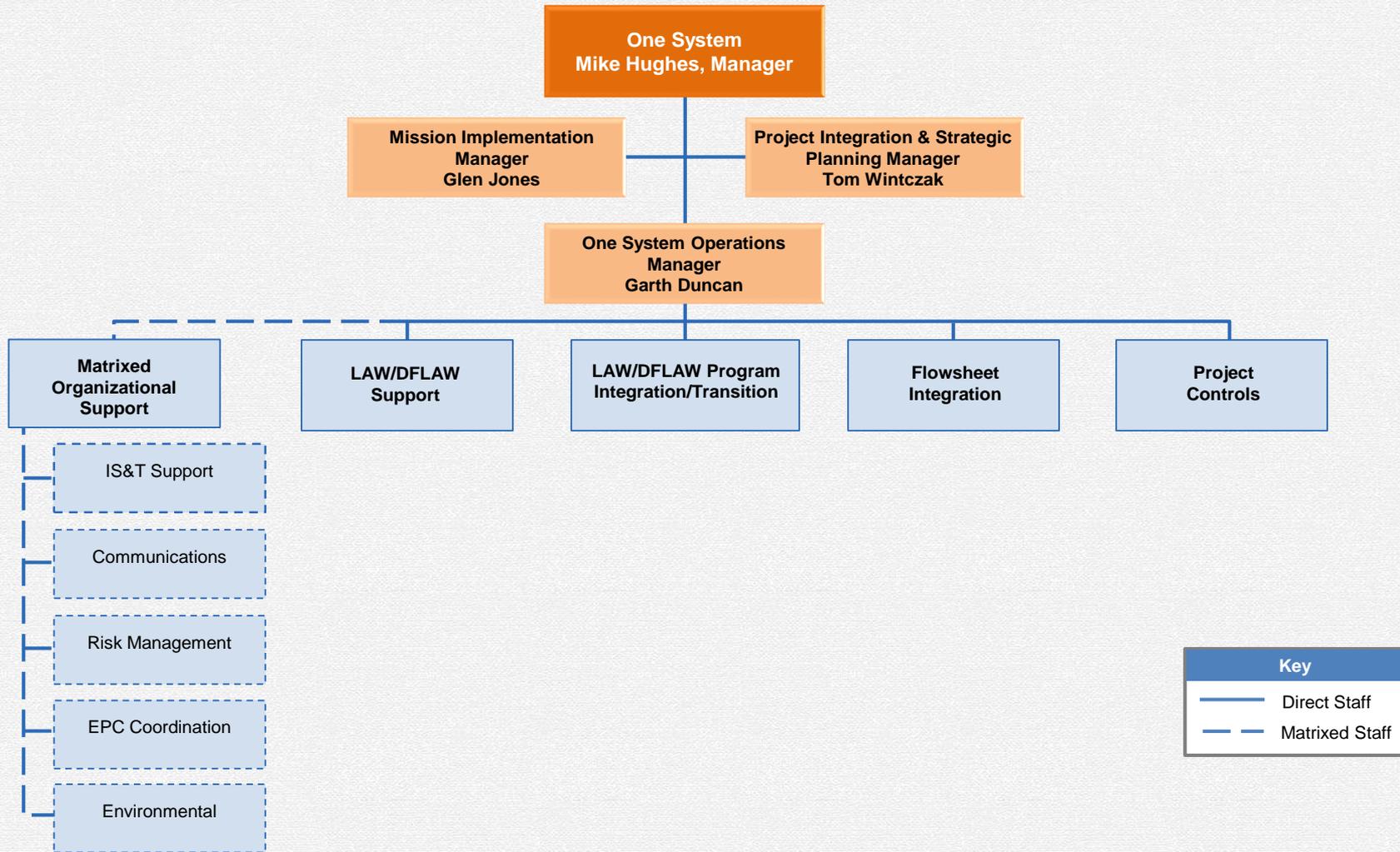




# Washington River Protection Solution One System Organization



# Bechtel National, Inc. One System Organization

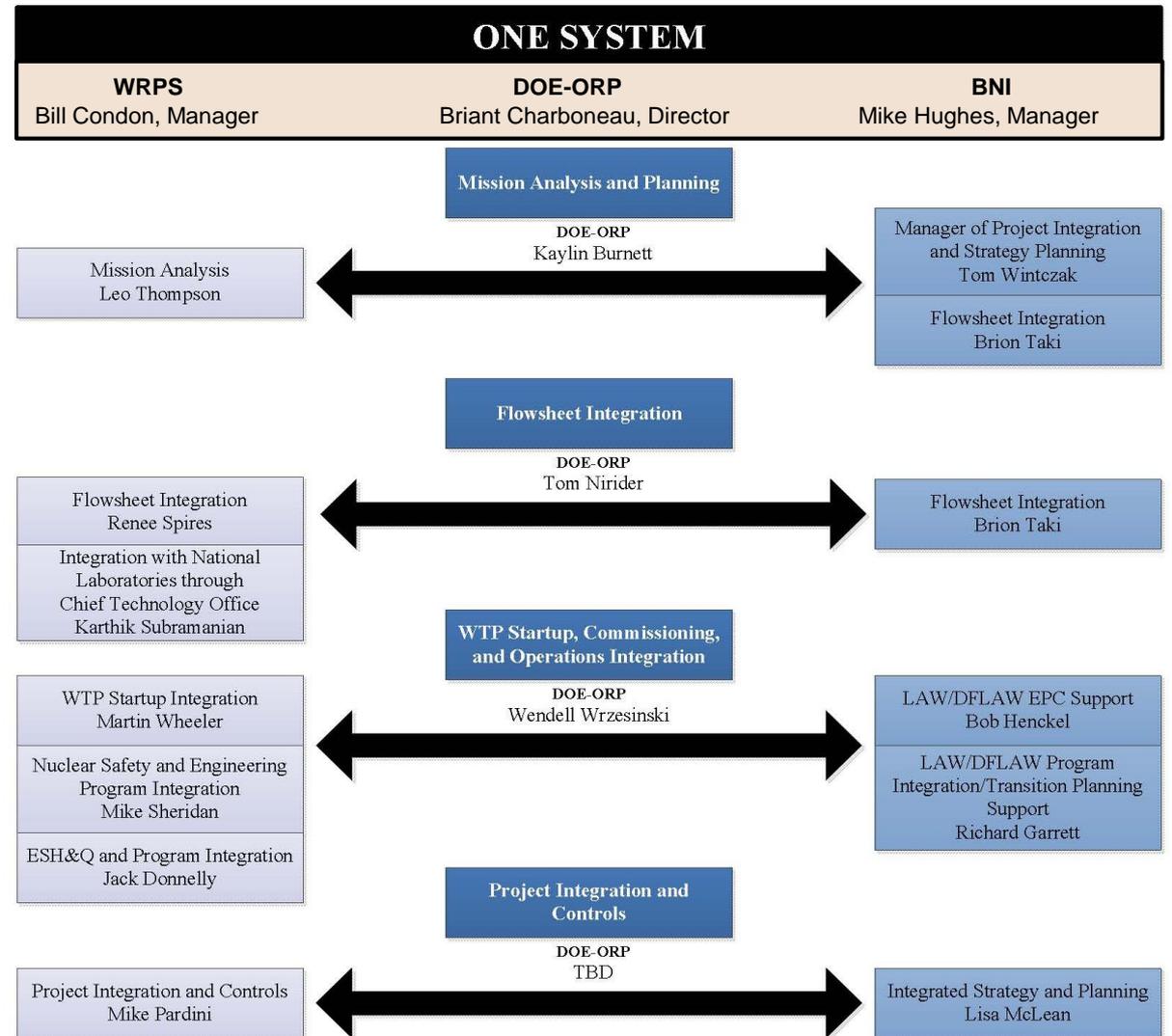




# One System Organization Interfaces

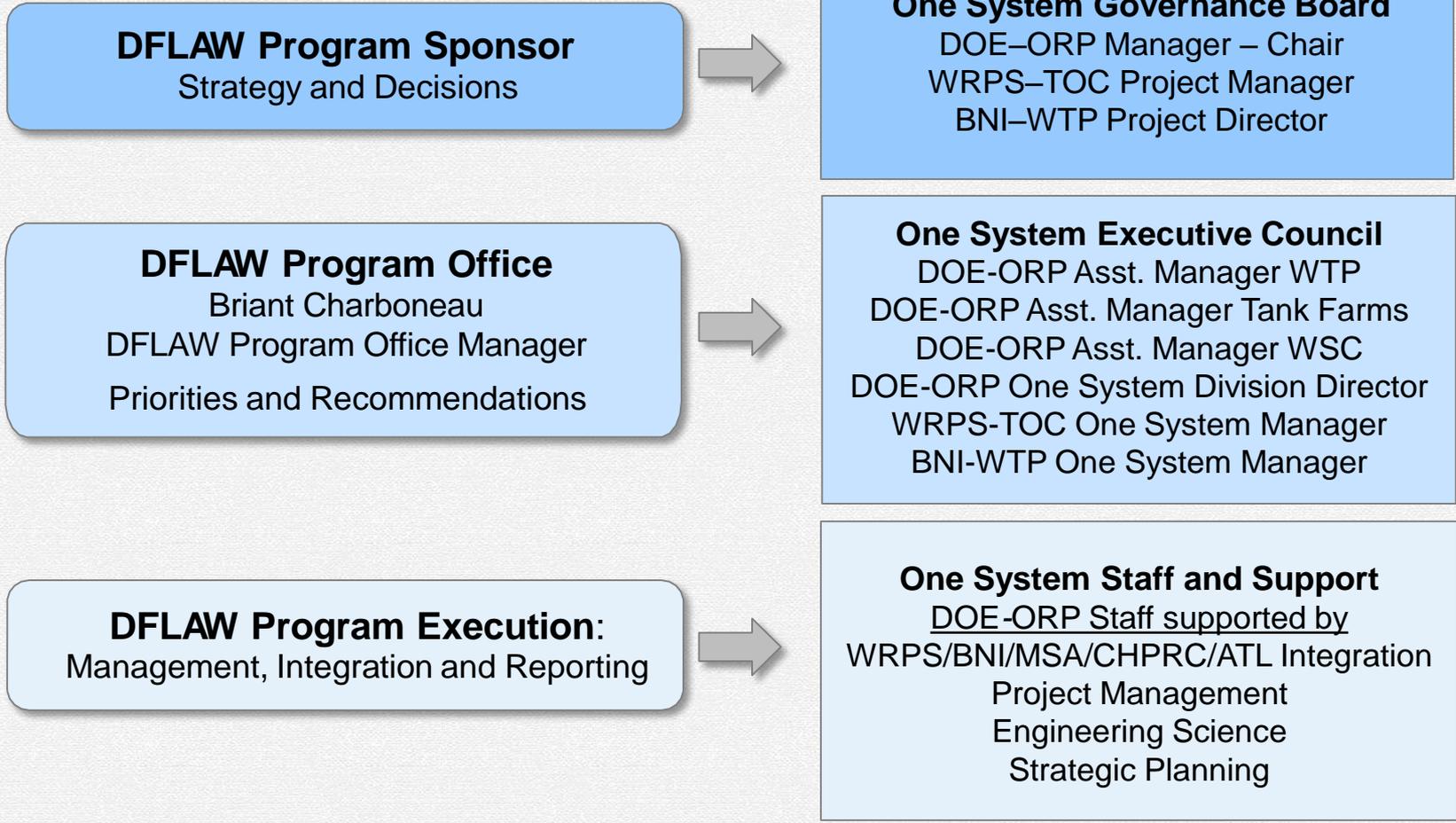
**EPC – Engineering, Projects and Construction**

**ESH&Q – Environment, Safety, Health & Quality**





# Managing the Direct-Feed Low Activity Waste Program





# One System – Program Tools



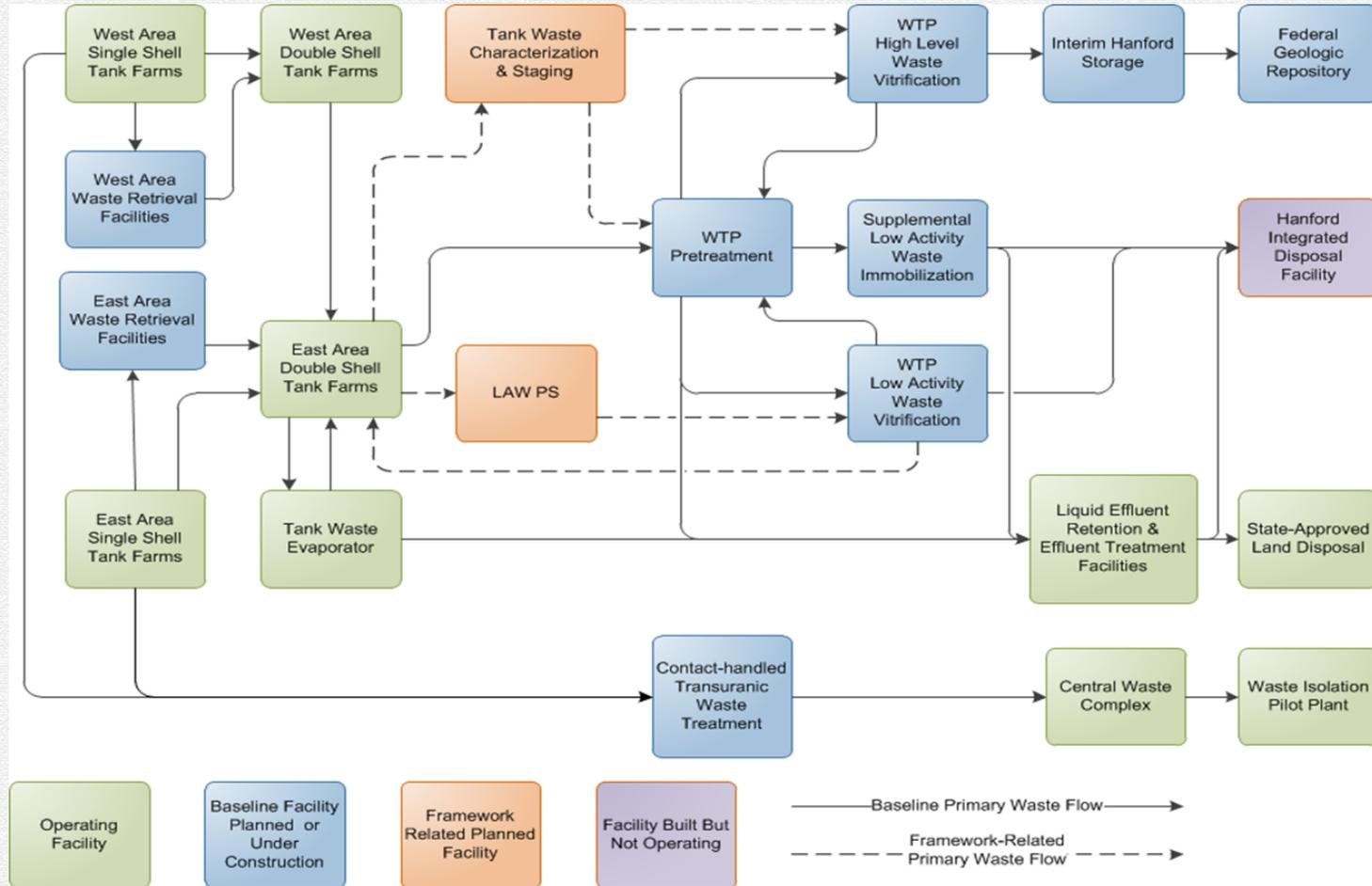
## Tools Include:

- Integrated Flowsheet
- Program Status Metrics
- DFLAW Integrated Schedule
- Integrated Permitting Plan
- Technology Roadmap
- DFLAW Risk Management Plan





# River Protection Project Integrated Flowsheet

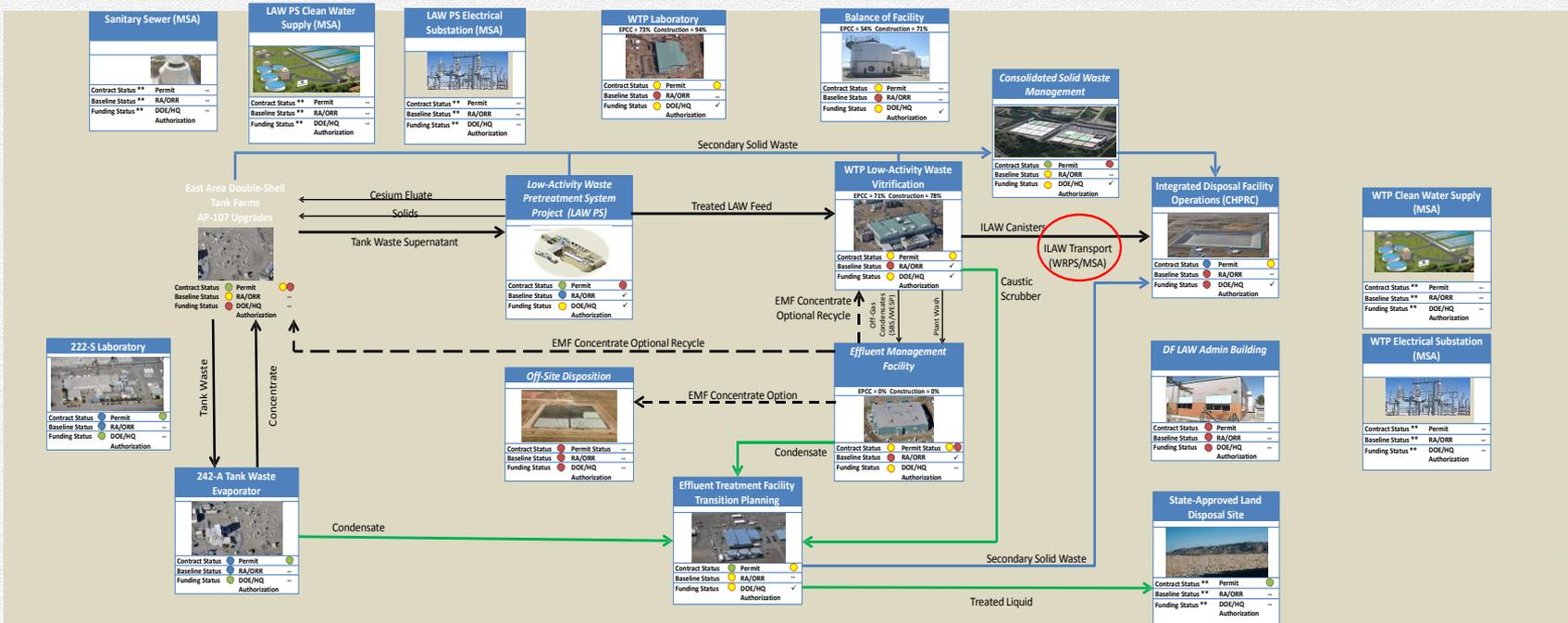


*Flowsheet established with Risk and Opportunities defined*





# Direct-Feed Low Activity Waste Program Scope and Status



DF LAW Project Status			
Contract Status	Baseline Status	Funding Status	Permitting Status
On Contract	In PMIS	Full Fund	Existing
AWA/NITE	In Lifecycle	Full Fund	Existing
RFP Rev'd	AWA/NITE	Partial Fund	Modify
No Direction	No Direction	Not Funded	New

Italicized Facility Name = Facilities that are not currently designed or constructed  
\*\*= TBD, status to be provided in next revision (November 2014)

DF LAW Authorizations Summary	
DOE/HQ Authorizations	21
Regulatory, DOE ORP and RL Approvals	39
ORRs / Readiness Assessments	3
New Permits	8
Permit Mods	20
Additional Regulatory Approval Items	4

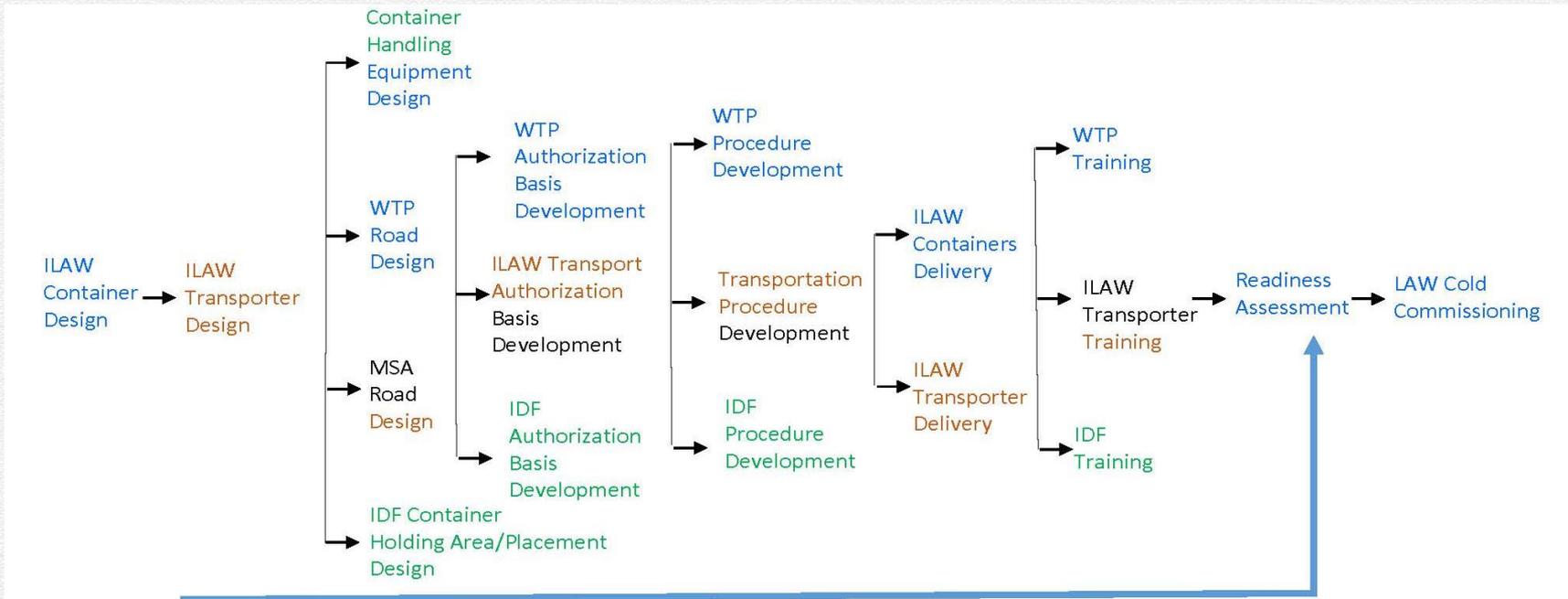
- TSCA RBDAs for SSW
- ILAW Treatment Variance
- WIR
- NEPA Review

RBDA = Risk Based Disposal Authorization





# Example: Immobilized Low Activity Waste Transporters Scope Diagram



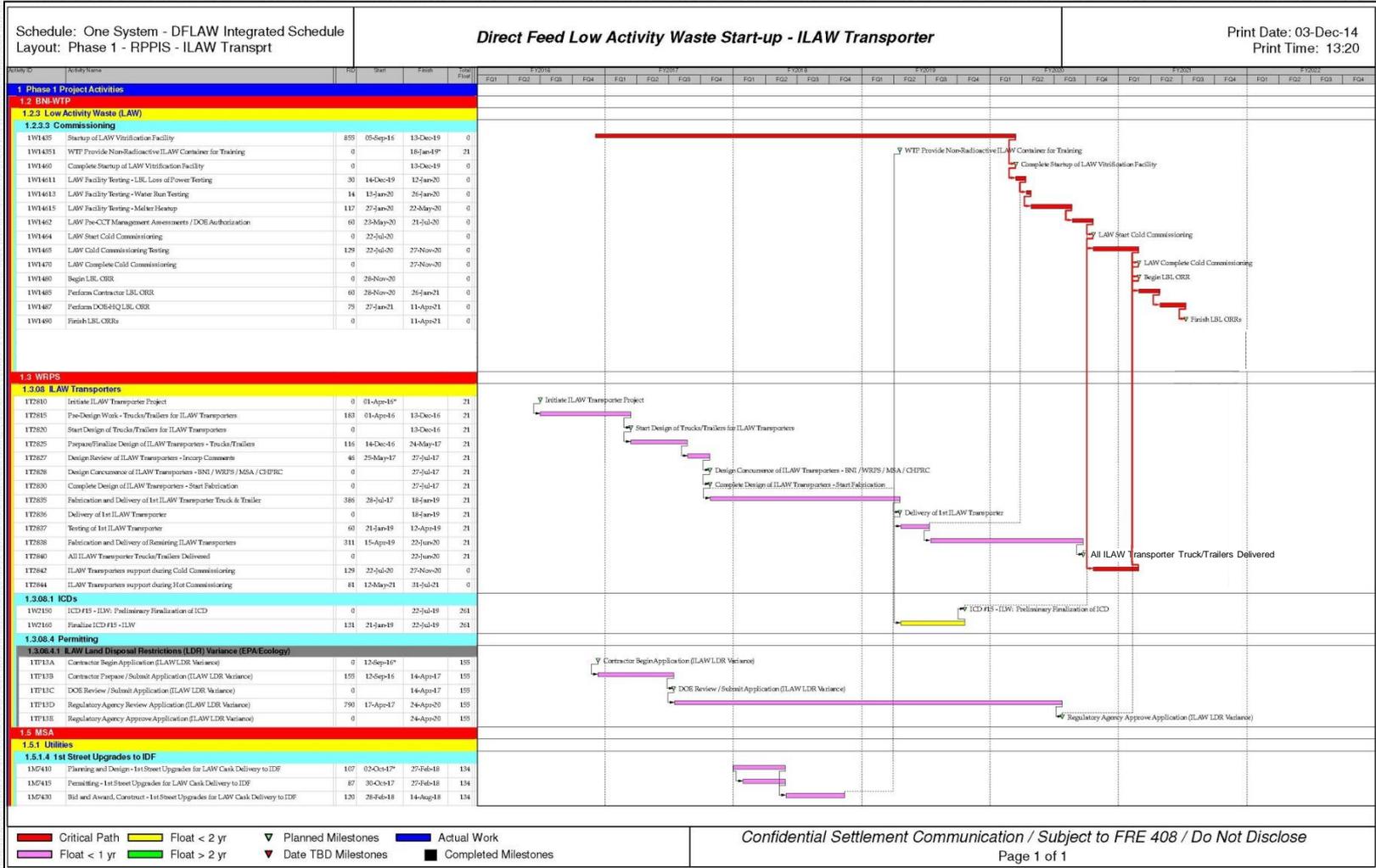
Performance Assessment / Waste Incidental to Reprocessing  
DOE HQ Disposal Authorization

- Waste Treatment Plant
- Tank Operations Contract
- Mission Support Contract
- Plateau Remediation Contract





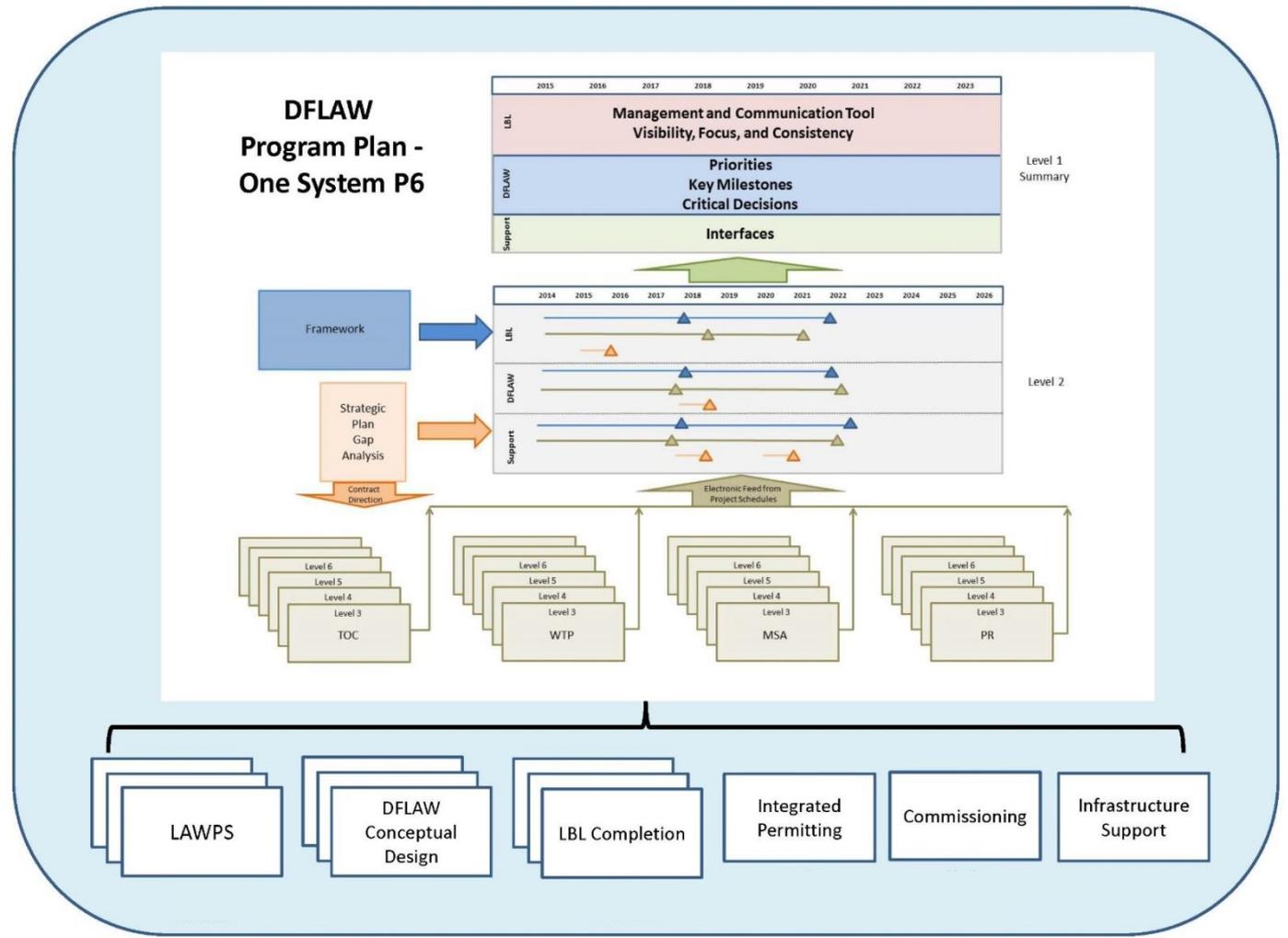
# Example: ILAW Transporter P6 Level 2 Schedule





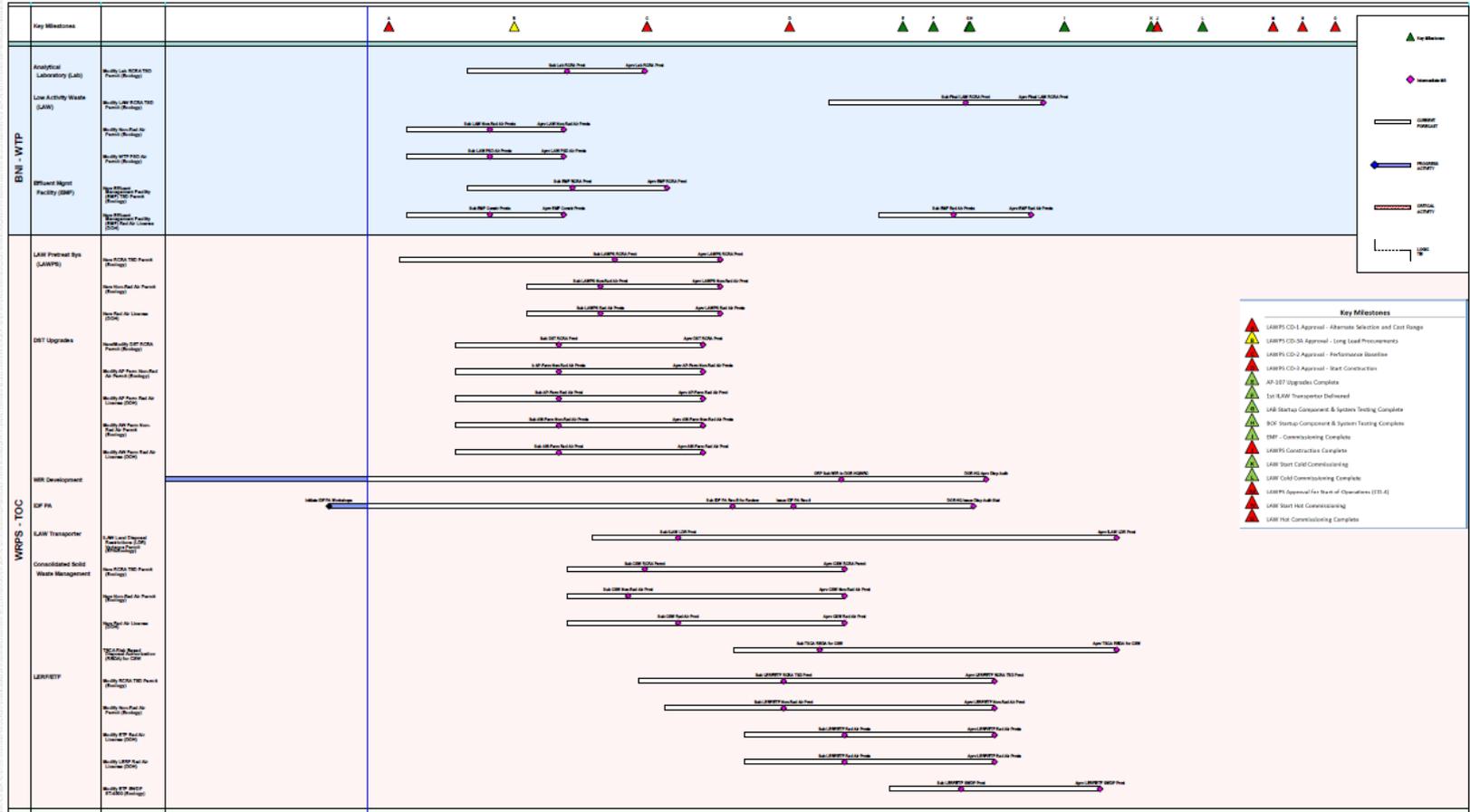
# Development/Process/Output

## Integrated Schedule Process





# Direct-Feed Low Activity Waste Permitting Schedule



*Integrated schedule for permits has been established*

OFLAW Integrated Schedule, FEB-2015 Status - through 2/22/2015





## Summary



### One System – leading the way to DFLAW

- A driving force for accomplishing the ORP mission
- Establish and maintain the integrated flowsheet
- Establish and maintain the integrated schedule
- Lead the development and maintain the interfaces and controls
- Coordinate, track, measure, and report on the integrated activities
- Identify and recommend actions to more effectively and efficiently execute our work





# Thank you Questions

The Hanford Reach  
White Bluffs Overlooking the Columbia River

