



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

**Briant Charboneau, Director Waste Treatment and Immobilization**

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



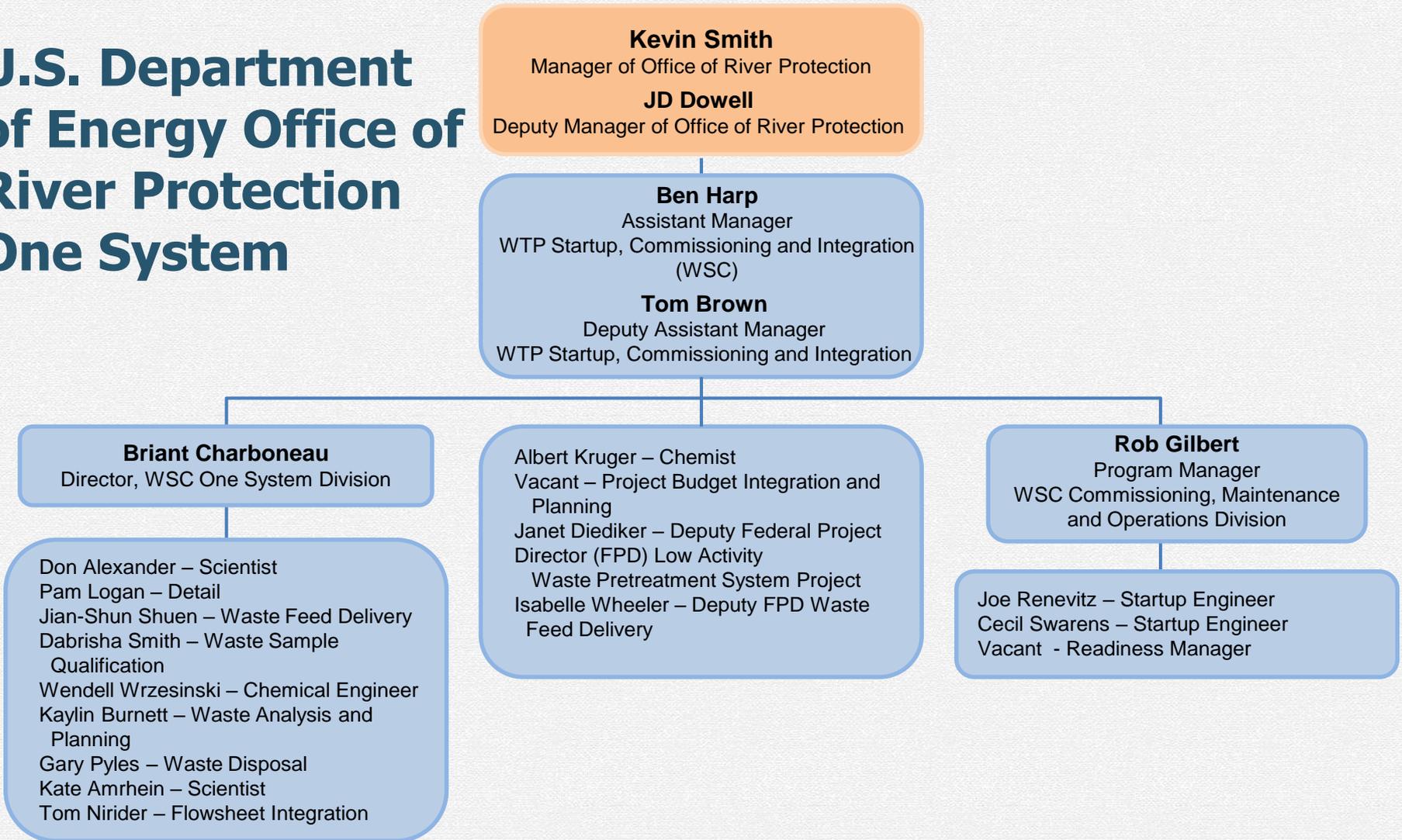
	INTEGRATED FLOWSHEET	REFERENCE PLAN	INTEGRATED SCHEDULE	STRATEGIC PLAN	RISK & OPPORTUNITY PLAN	TECH ROADMAP	PERFORMANCE METRICS
ORP							
RL							
BNI							
WRPS							
CHPRC							
MSA							
ATL							
NATIONAL LABS							

**CROSS-CUTTING PROGRAMMATIC  
MANAGEMENT TOOLS**

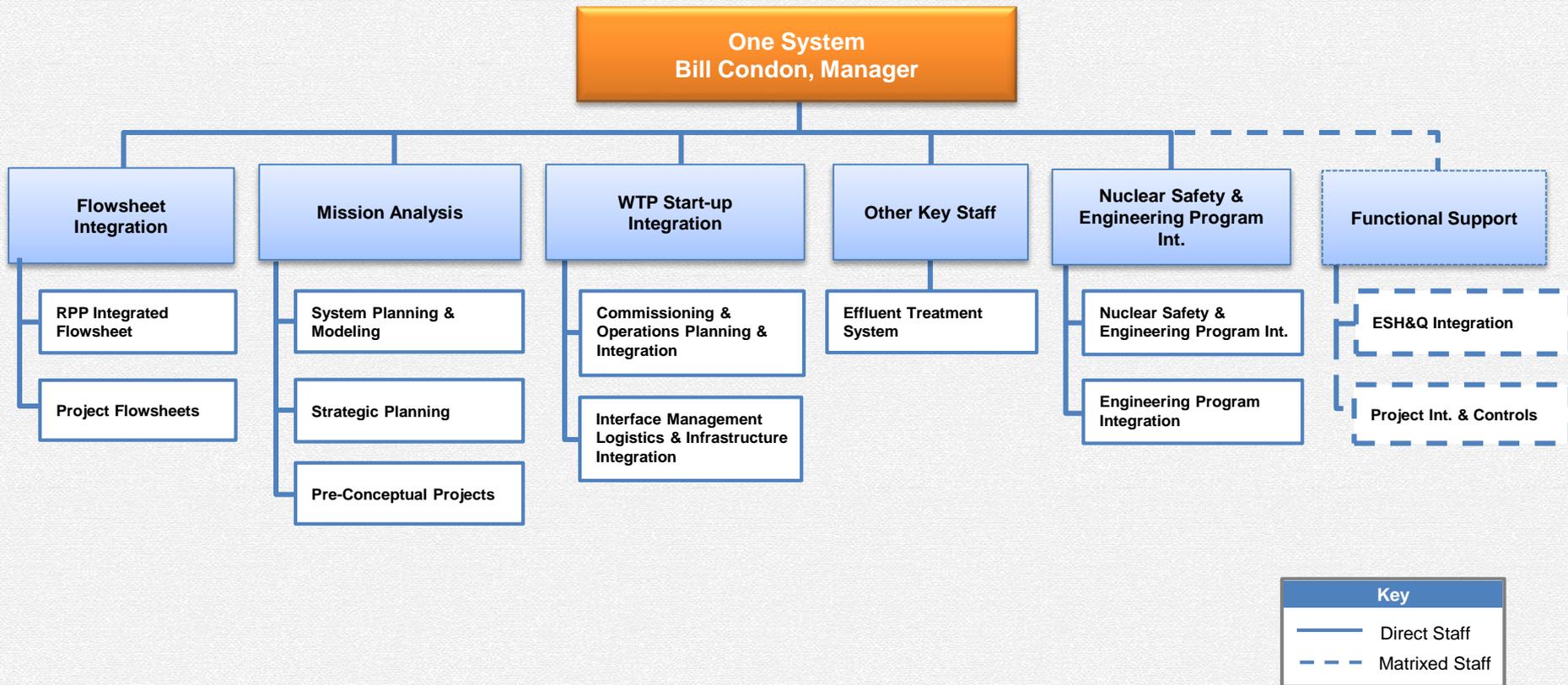




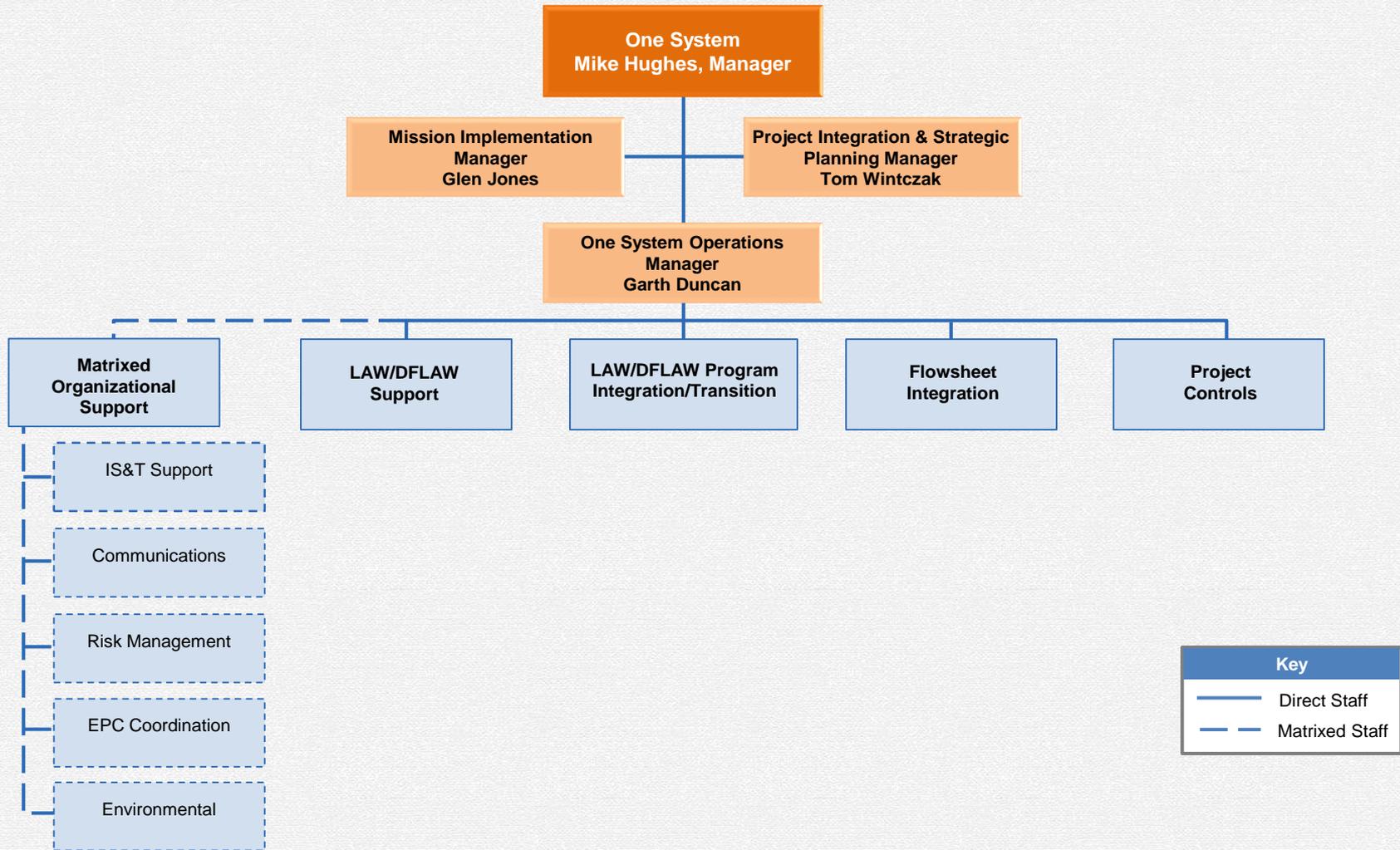
# U.S. Department of Energy Office of River Protection One System



# Washington River Protection Solution One System Organization



# Bechtel National, Inc. One System Organization

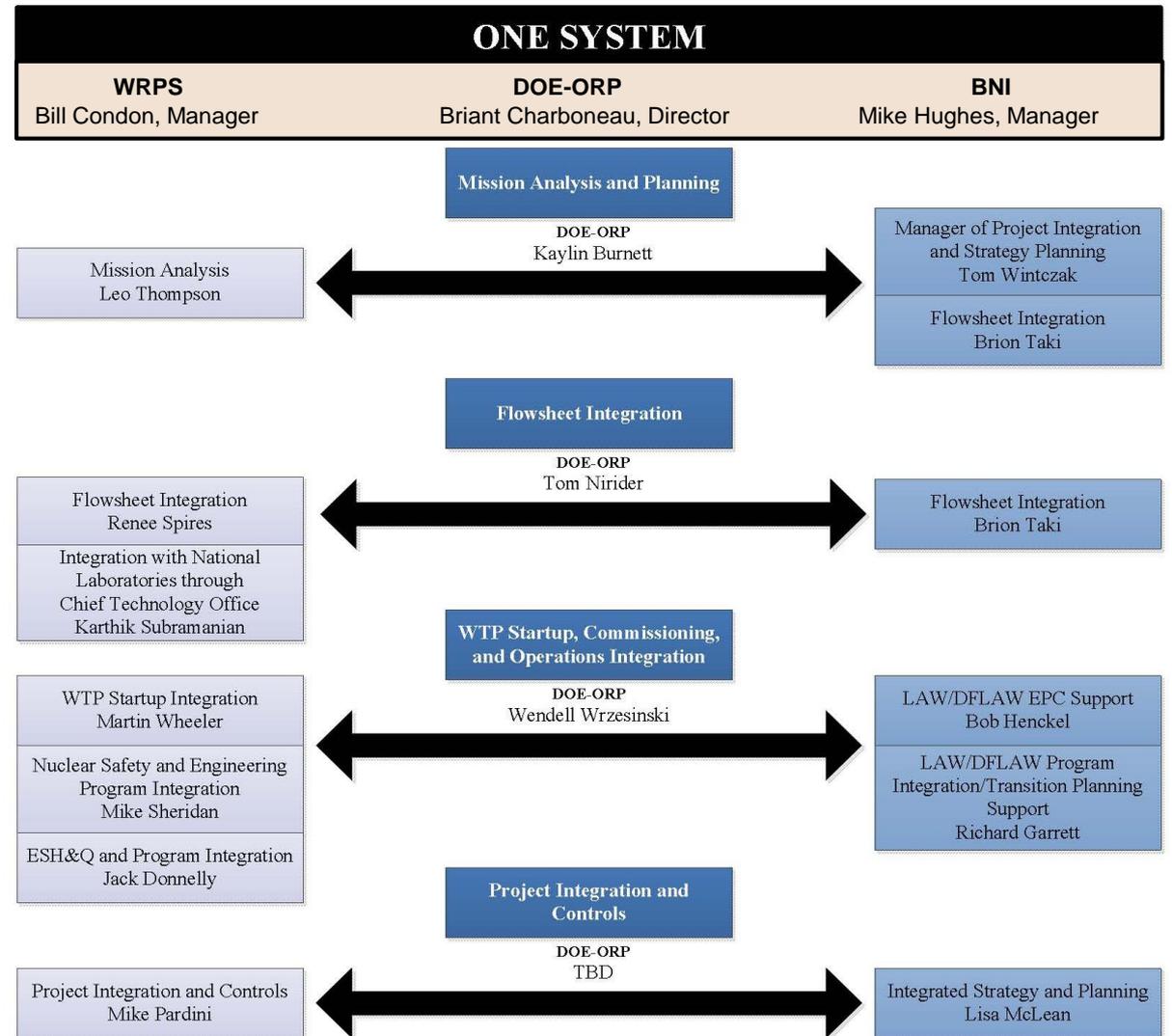




# One System Organization Interfaces

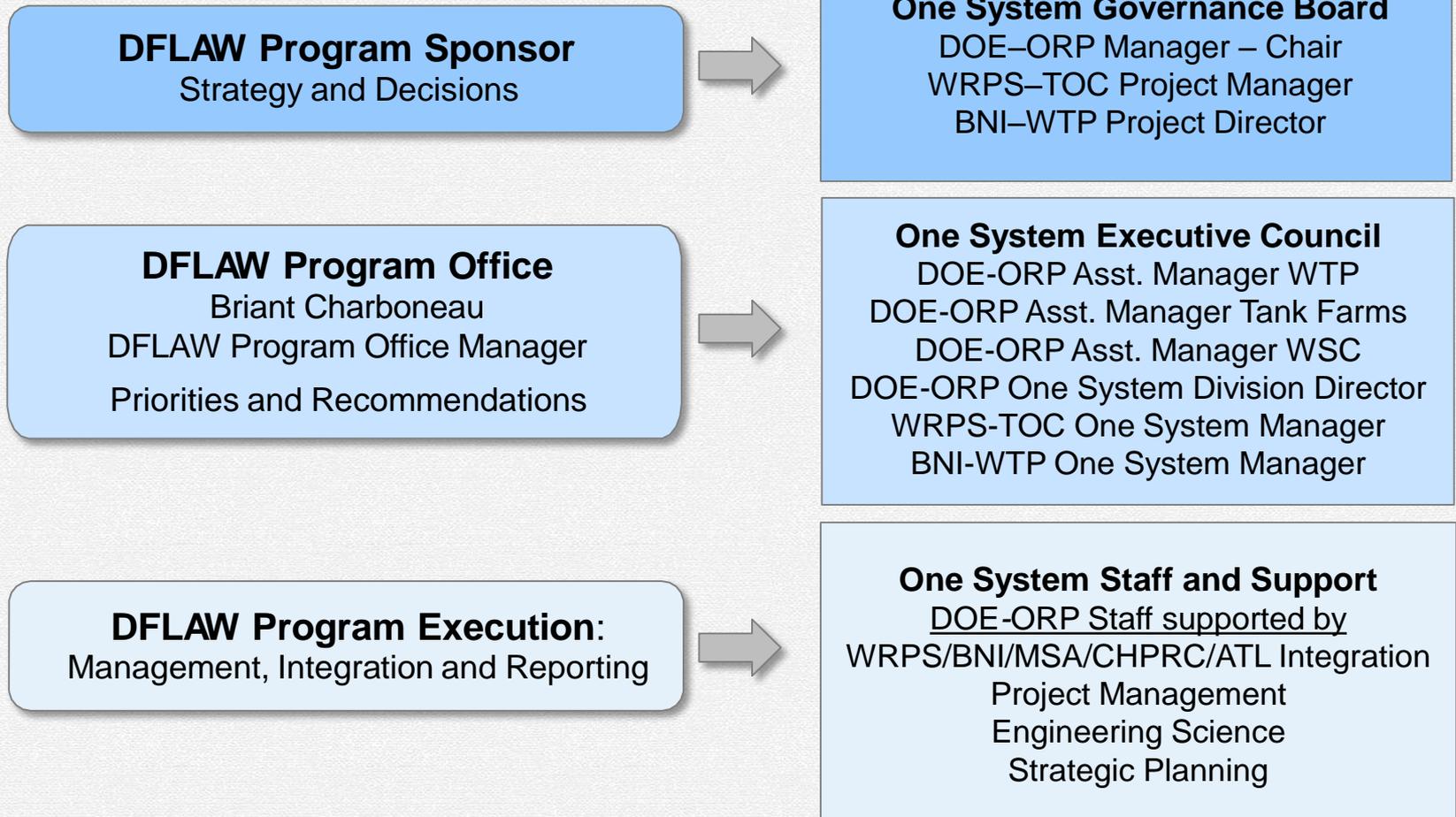
**EPC – Engineering, Projects and Construction**

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





# Managing the Direct-Feed Low Activity Waste Program





# One System – Program Tools



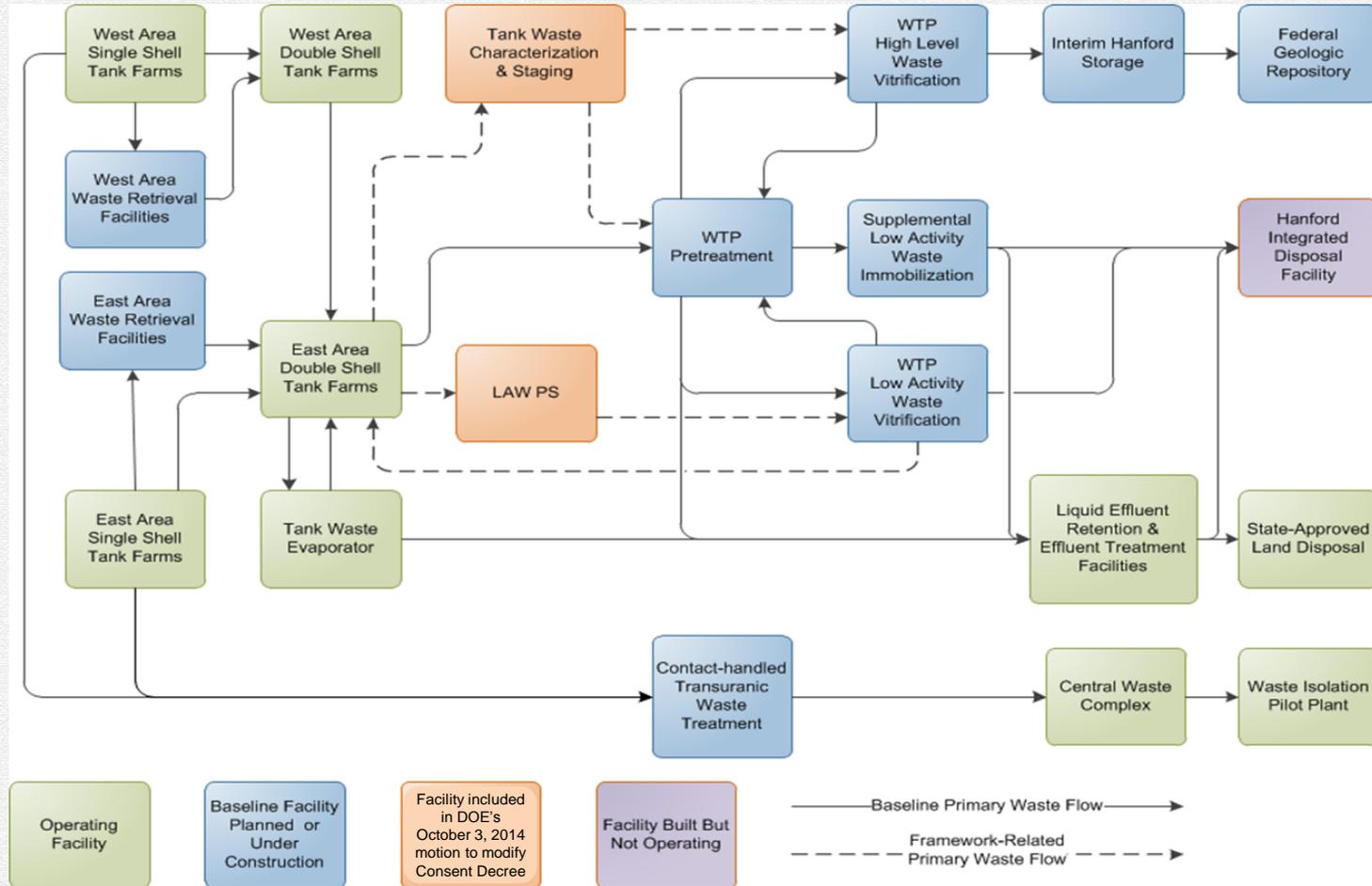
## Tools Include:

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





# River Protection Project Integrated Flowsheet



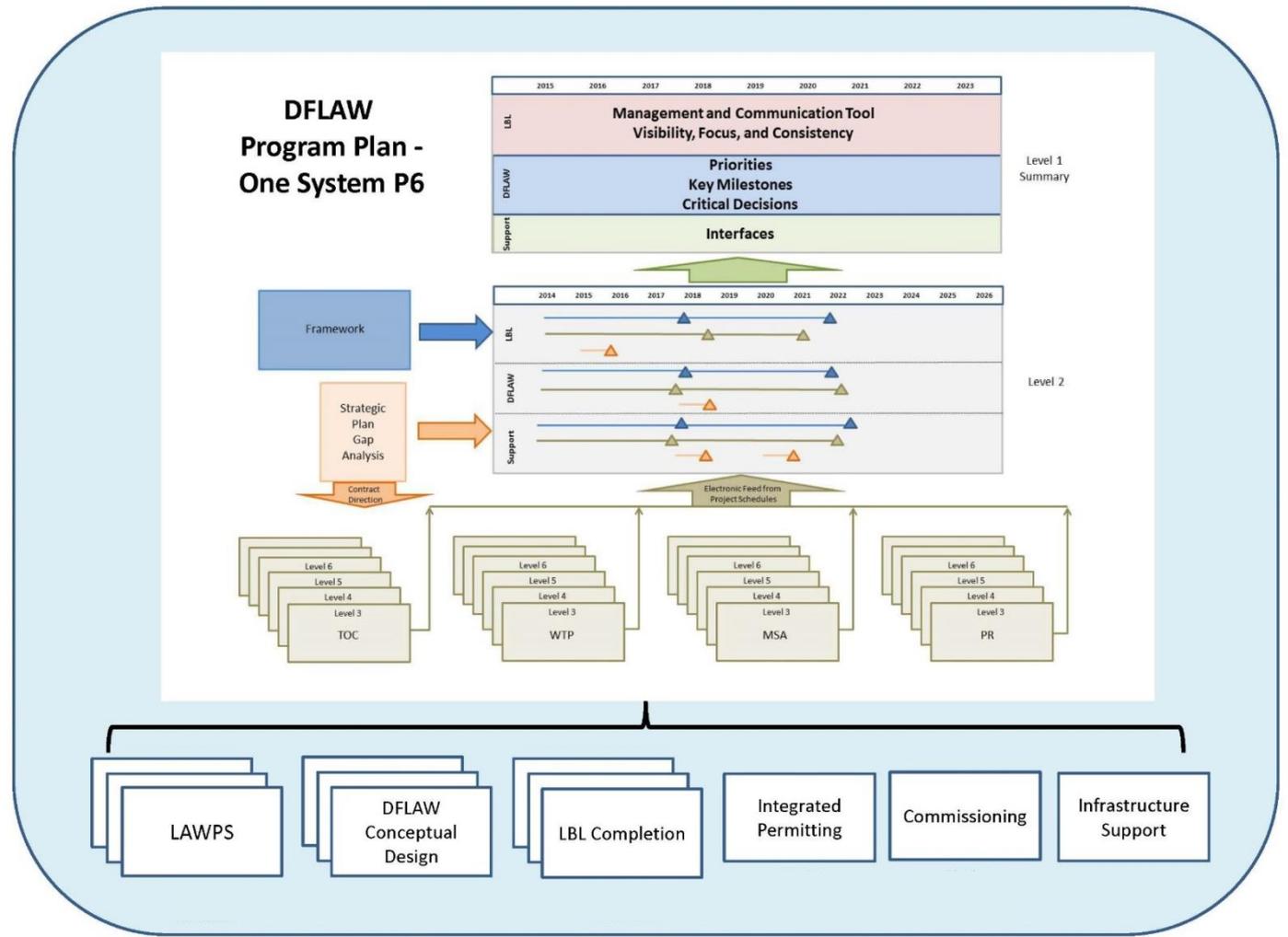
*Flowsheet established with Risk and Opportunities defined*





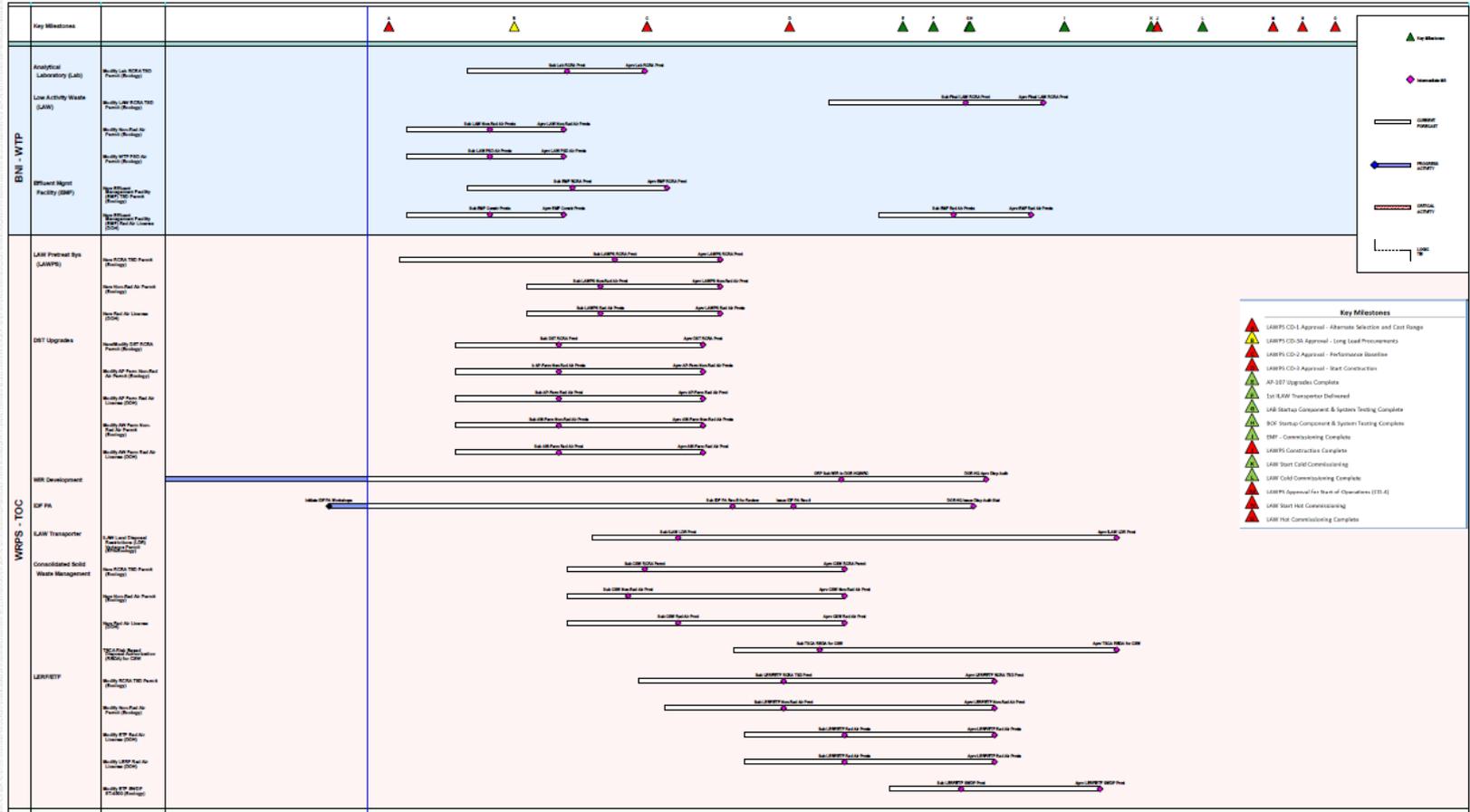
# Development/Process/Output

## Integrated Schedule Process





# Direct-Feed Low Activity Waste Permitting Schedule



*Integrated schedule for permits has been established*

DFLAW 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

