

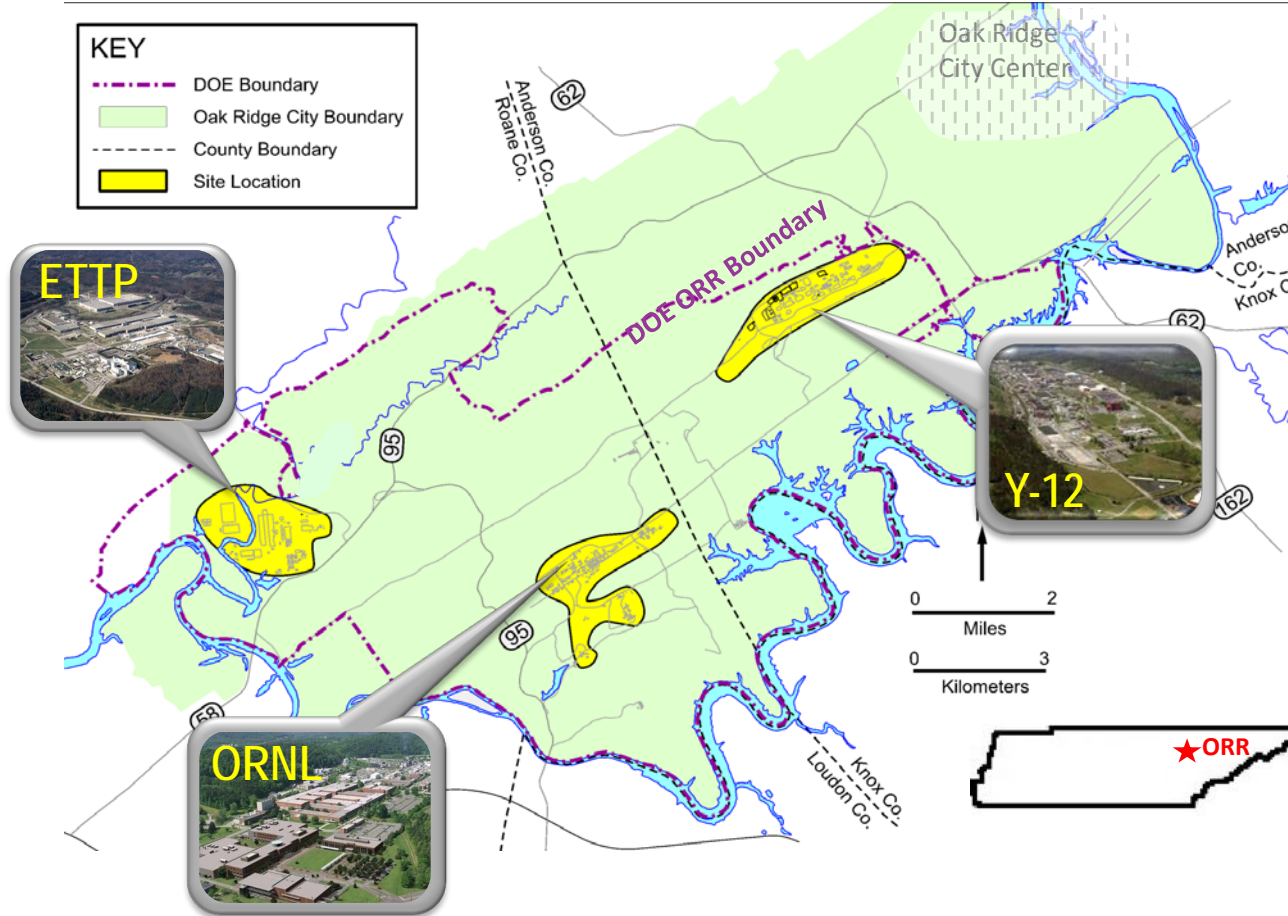
Oak Ridge's Comprehensive Groundwater Strategy



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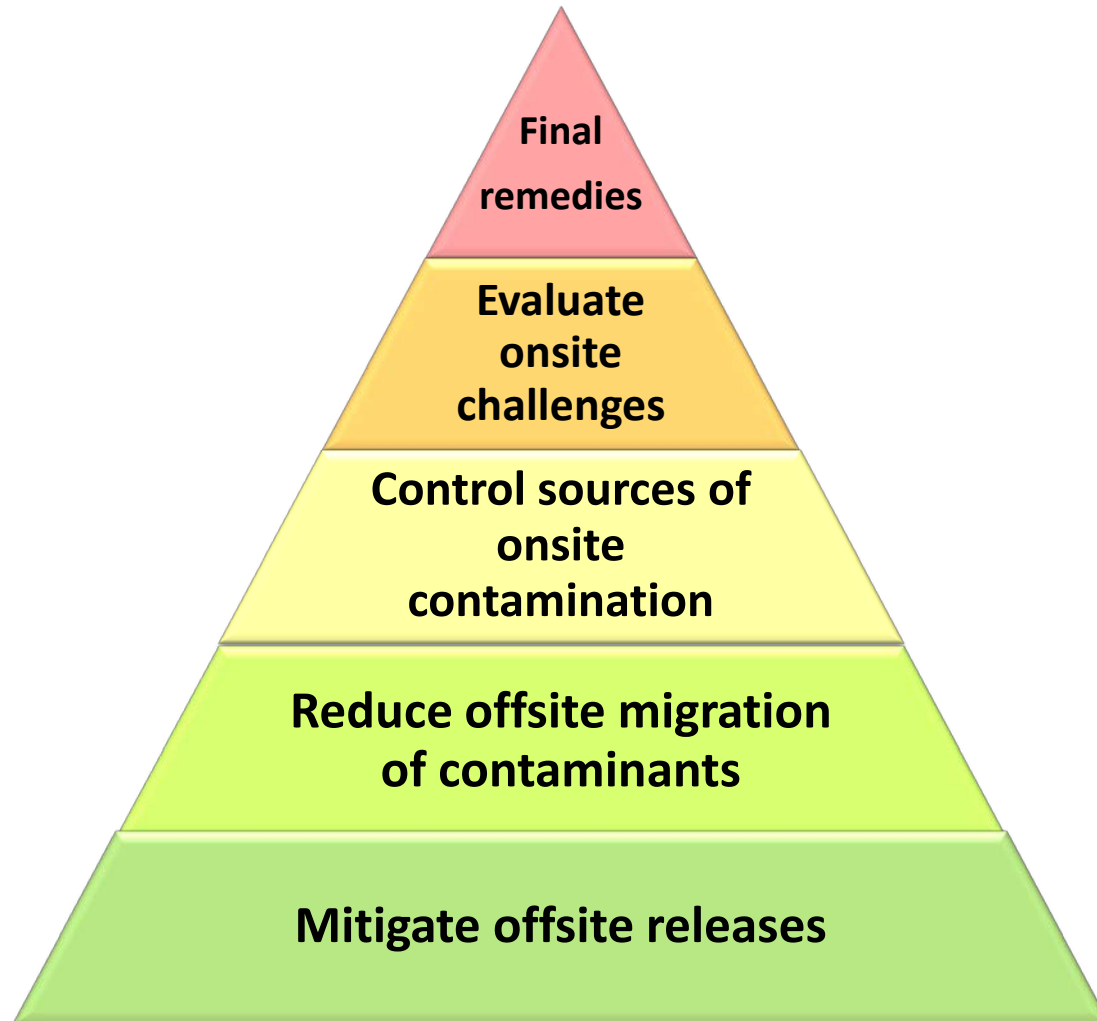
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Manager, Environmental Stewardship
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Three major facilities exist on the Oak Ridge Reservation (ORR)



Our Vision
is that the
Oak Ridge
Reservation is
Remediated,
Modernized, and
Reindustrialized

Cleanup is prioritized to reduce risk



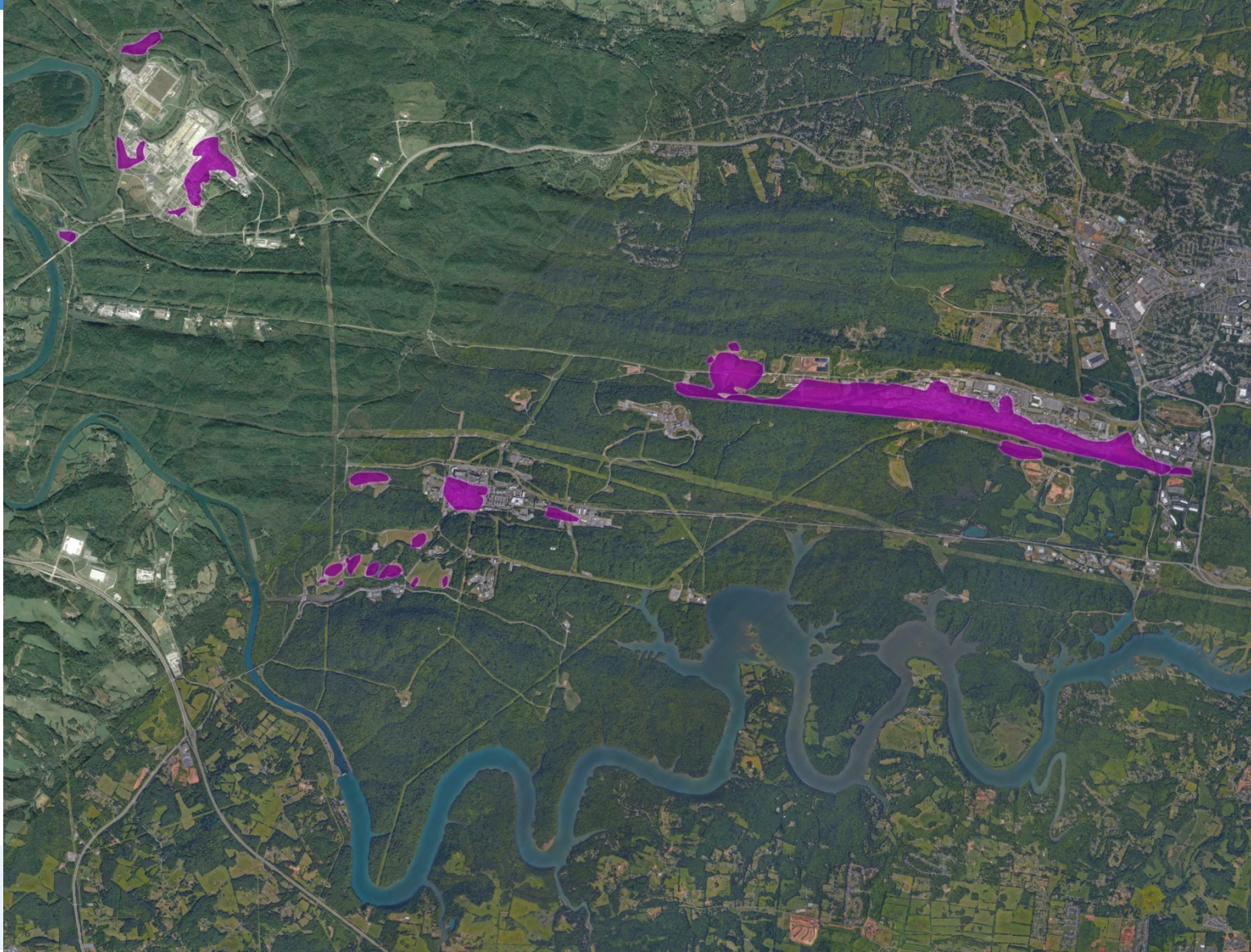
OREM has an extensive program in place to manage groundwater challenges



- Groundwater investigations underway since the 1980s
- Monitor ~2,000 existing groundwater wells
- Annual budget to support water quality program requirements: ~\$12 million



Multiple treatment systems are managing groundwater plumes



Working on path forward for managing legacy groundwater challenges



- DOE/EPA/TDEC agreement on Groundwater Strategy in 2014
- Understanding potential offsite migration has been the highest priority
- Agreed to provide additional funding to base Groundwater Water Restoration Program/Facilities Operations budget to support new activities
- Agreed to develop regional groundwater model
- Discussions underway on selection of next projects



First priority is to protect public health



Top-ranked project:
Offsite Groundwater
Assessment



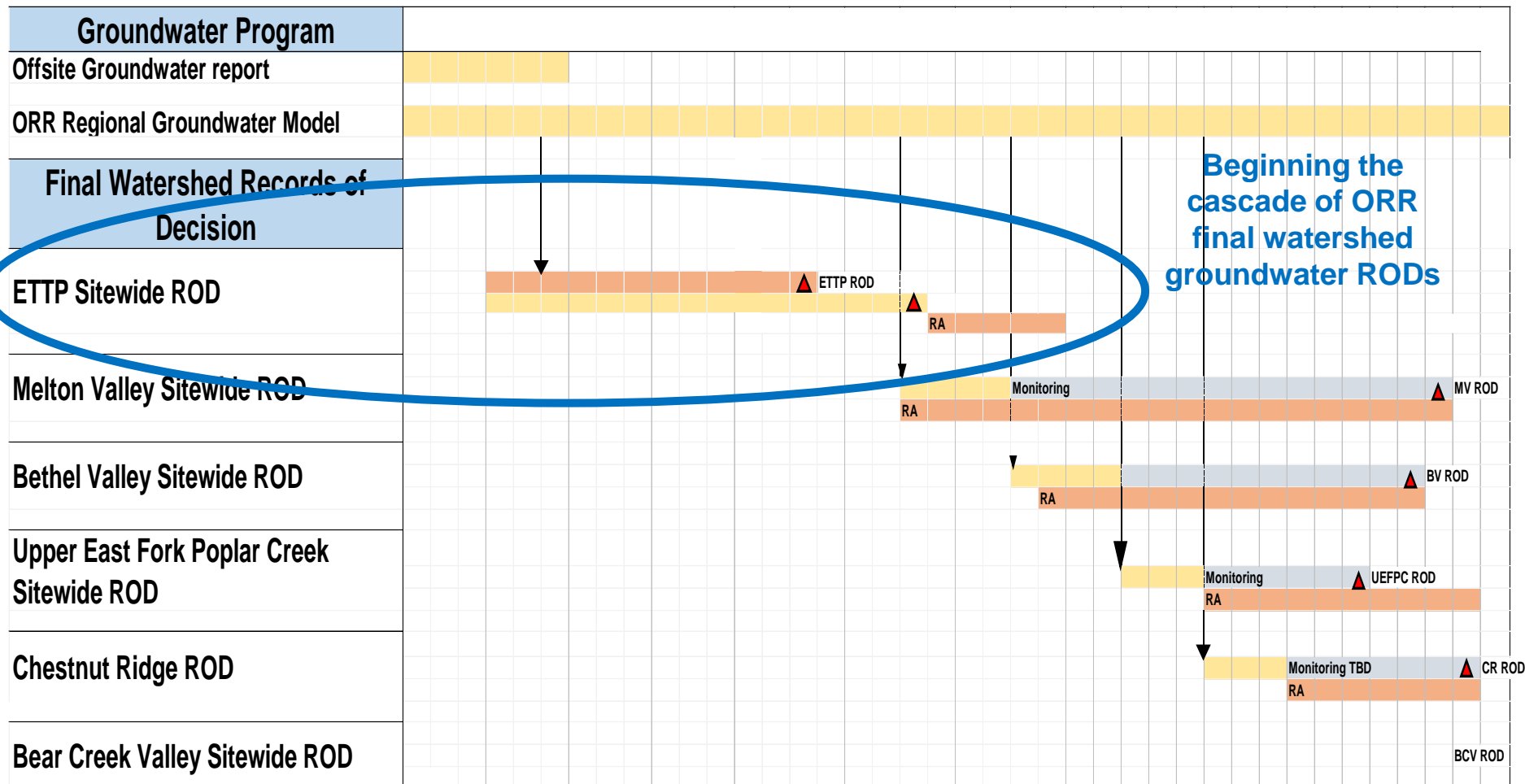
Completed offsite groundwater sampling events and lab analyses



- First sampling event FY15 Q2 (43 locations)
- Second sampling event in FY15 Q4 (48 locations)
- Third event (confirmatory sampling) FY16 Q2 (18 locations)



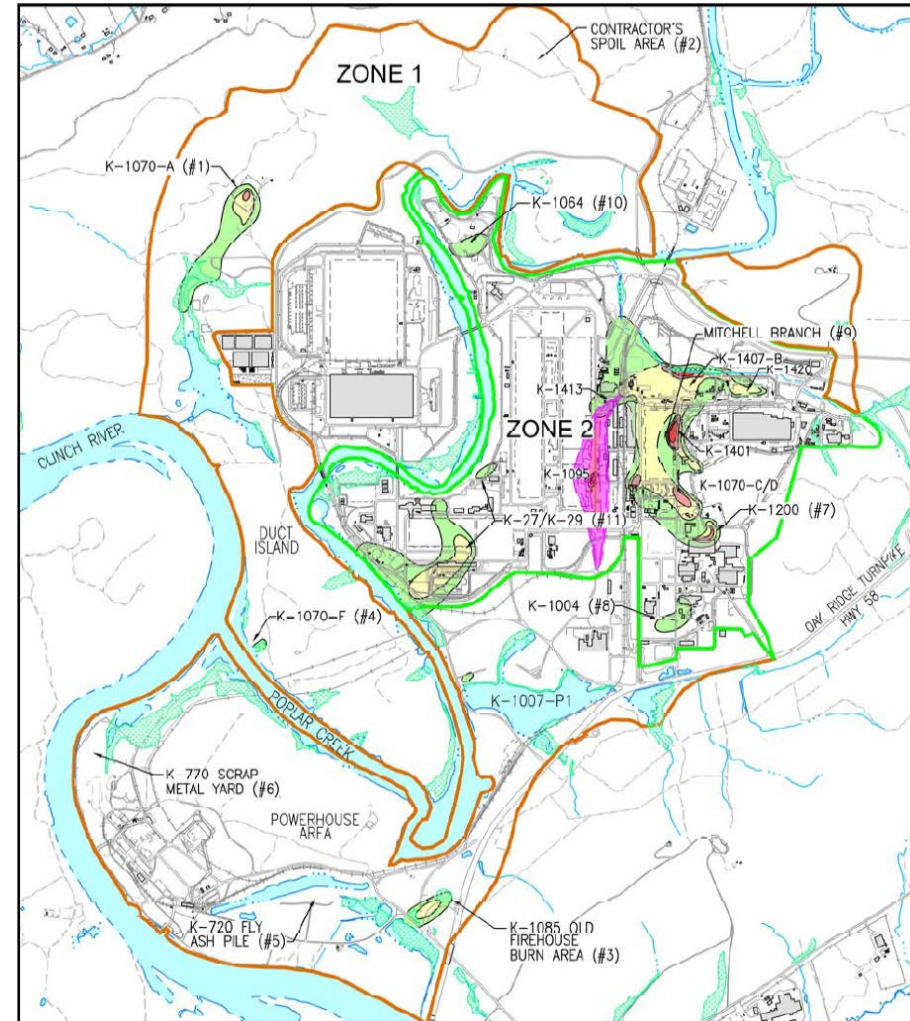
ETTP is the first scheduled watershed-scale groundwater ROD on the ORR



First large-scale groundwater decision at ETTP



- ETTP Final Sitewide ROD will address 13 of 37 ORR plumes
- Groundwater Treatability Study underway to evaluate in-situ thermal treatment
 - Estimate to complete: \$15 million
- Current ROD milestone is 2023, pushing for 2021
 - Estimate to complete: \$22.2 million



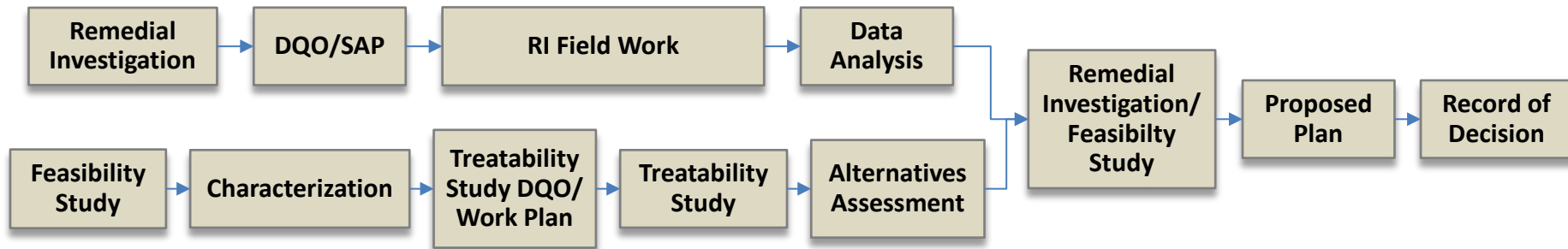
ETTP Sitewide ROD approach



FY 2017 - 2019

FY 2019

FY 2020



ETTP ROD ties into the overall ORR Groundwater Strategy



- Strategy identified the need to build a regional flow model to support future RI/FSs
- Identified the need for technology demonstrations
- Will incorporate likely remedies laid out in the Groundwater Strategy

Remaining challenges for the Oak Ridge groundwater program



- Completing investigations of onsite migration pathways
- Meeting programmatic objectives within budget
- Driving to tri-party agreement on final groundwater measures