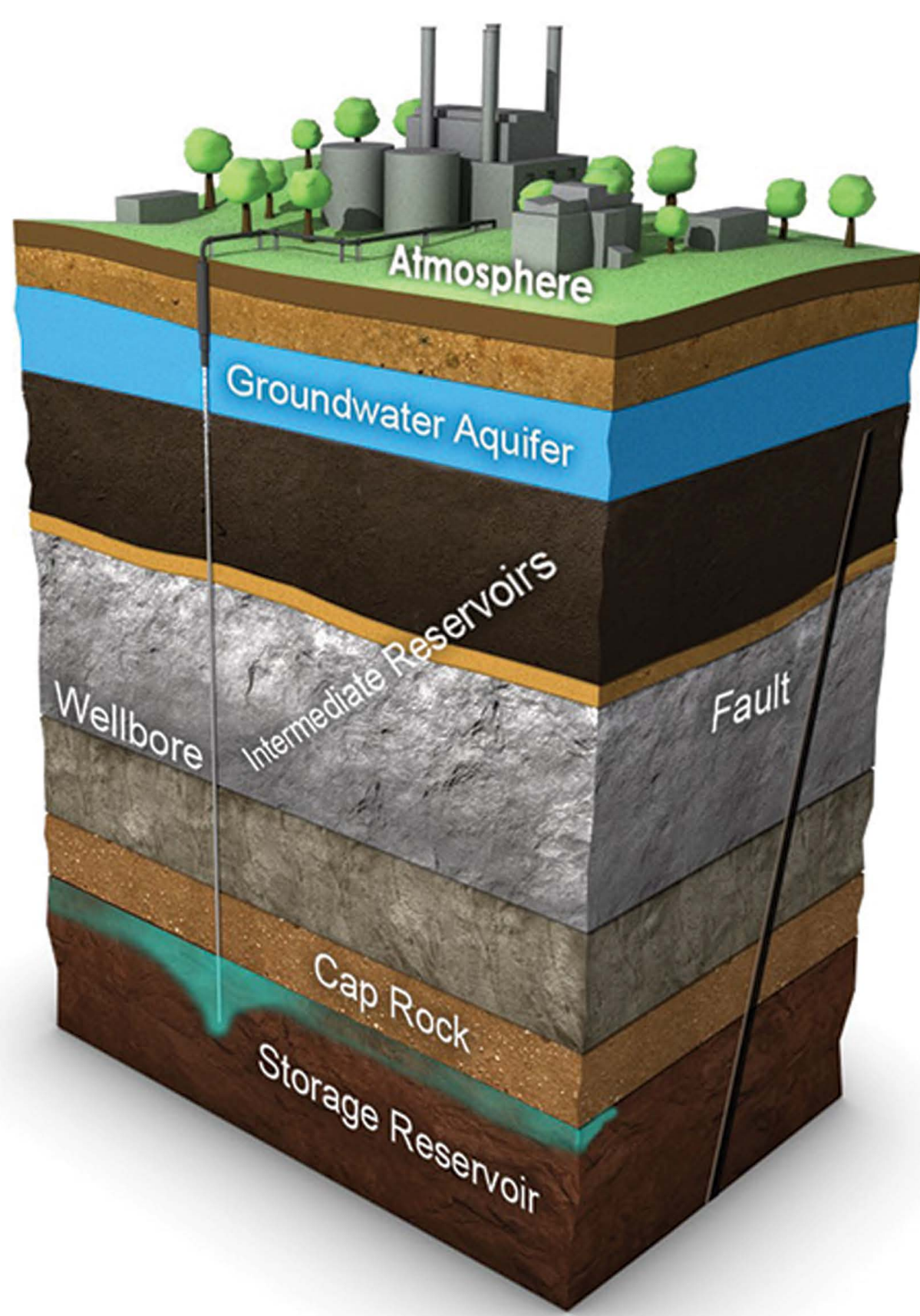


The U.S. DOE's National Risk Assessment Partnership

Computational tools and workflows for quantitative risk assessment and decision support for geologic carbon storage sites



Receptors of Concern

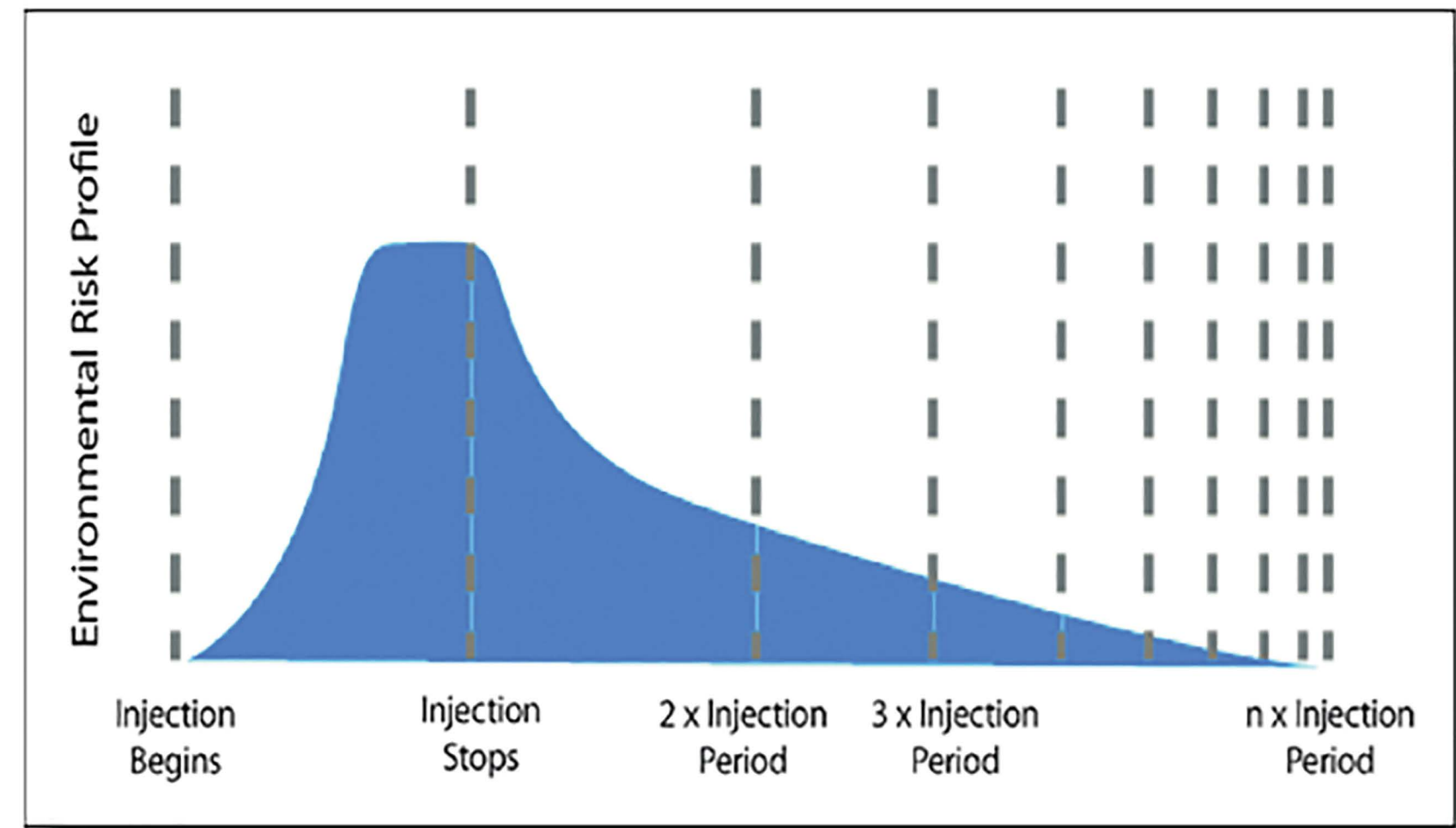
- Groundwater Aquifers
- Atmosphere

Potential Migration Pathways

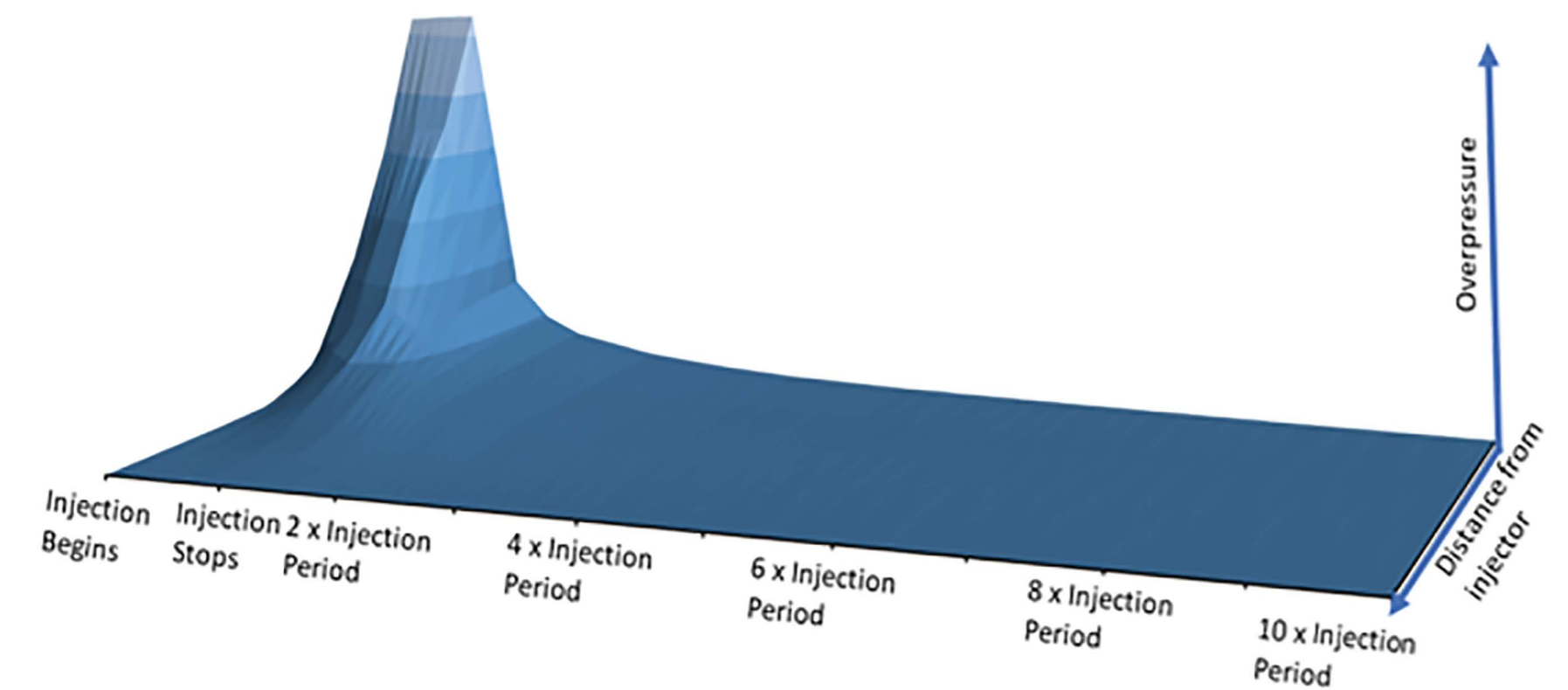
- Wells and Boreholes
- Fractures and Faults
- Intermediate Reservoirs

Storage System

- Storage Reservoir
- Cap Rock



Field Validated Methods and Tools for Physics-Based, Quantitative Risk Assessment



What Is NRAP?

NRAP is a research collaboration between five U.S. DOE national laboratories supporting geologic carbon storage deployment goals by developing methods and open-source computational tools to:

- Assess leakage risk and ensure containment.
- Assess stress state and manage induced seismicity risk.
- Design risk-based, adaptive monitoring networks.
- Estimate life-cycle cost of risk and long-term liability.
- Inform risk management for basin-scale deployment.

NRAP Approach

NRAP leverages physics-based and statistical models to forecast response of geologic storage systems to large-scale CO₂ injection and uses those forecasts to inform stakeholder decisions related to injection design, permitting monitoring plans, and risk management/site closure.

DOE PROGRAM

Point Source Carbon Capture

NETL PARTNERS

