

Headquarters U.S. Air Force

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ESOH Resource Transformation

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Overview

- **ESOH Resource Transformation**
- **Cleanup Program Review**



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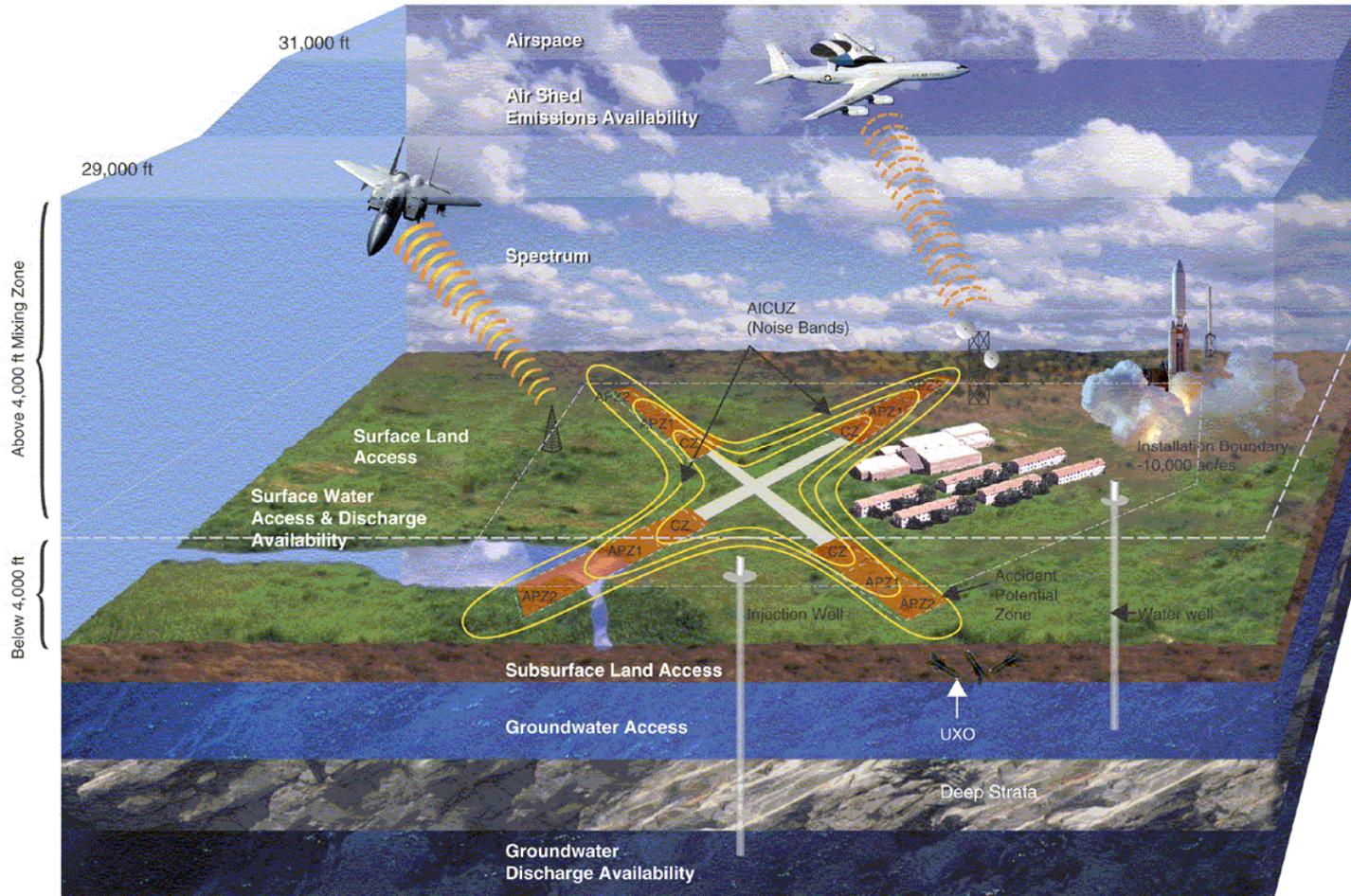
Traditional “E”

- **Air Quality**
- **Water Supply and Quality**
- **Hazardous Waste**
- **Pollution Prevention**
- **Natural Resource (Endangered Species, Marine Mammals)**
- **Cultural Resources (Historic Properties, Native American consultations)**
- **NEPA (National Environmental Policy Act)**
- **Noise Pollution**



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The Resource Base



Components of “Natural, Statutory & Workforce Infrastructure”

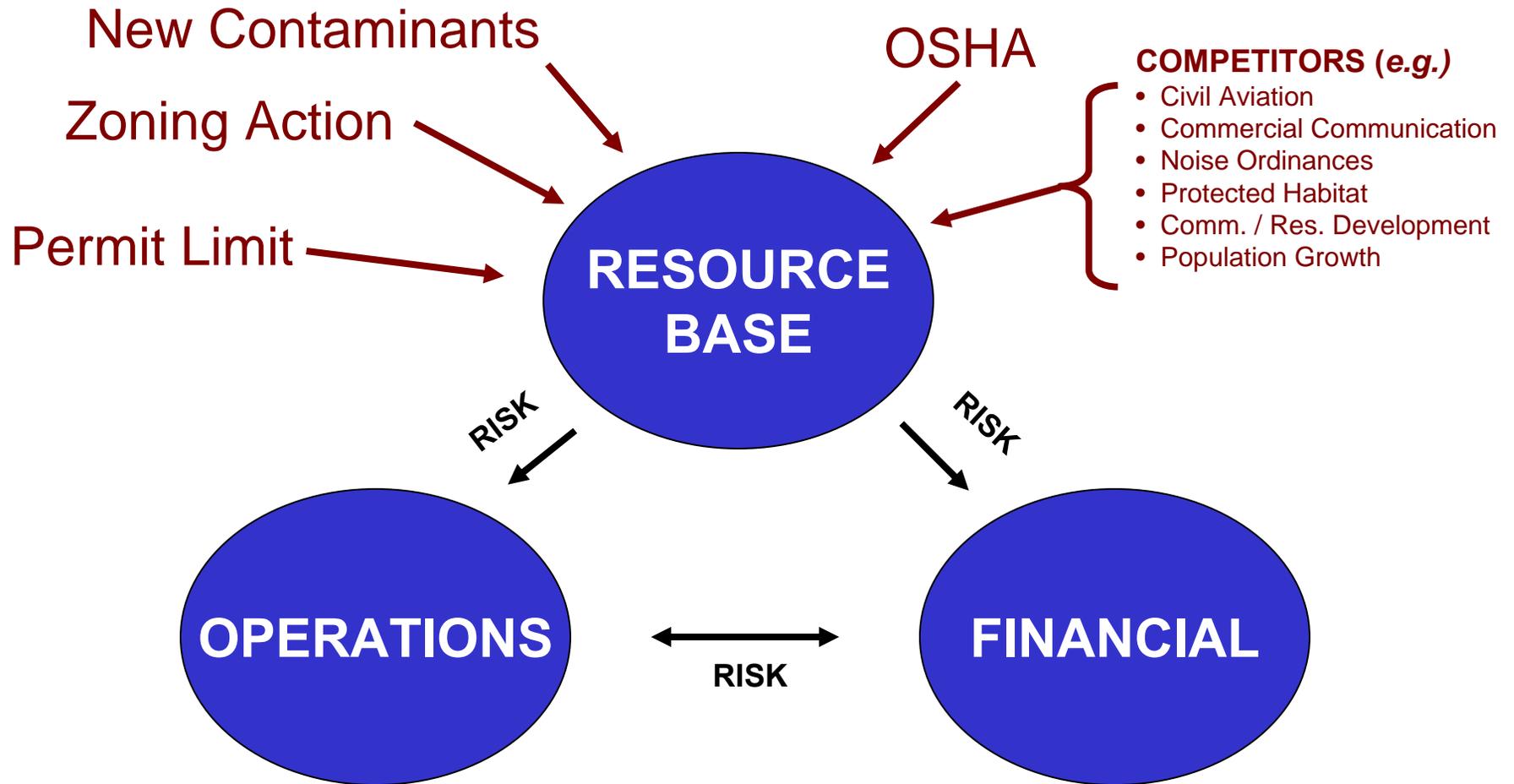
- Airspace
- Air Shed Emissions Availability
- AICUZ (Noise Bands)
- Groundwater Access
- Groundwater Discharge Availability
- Surface Land Access
- Surface Water Access & Discharge Availability
- Subsurface Land Access
- Spectrum
- Work Force

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Encroachment Risk

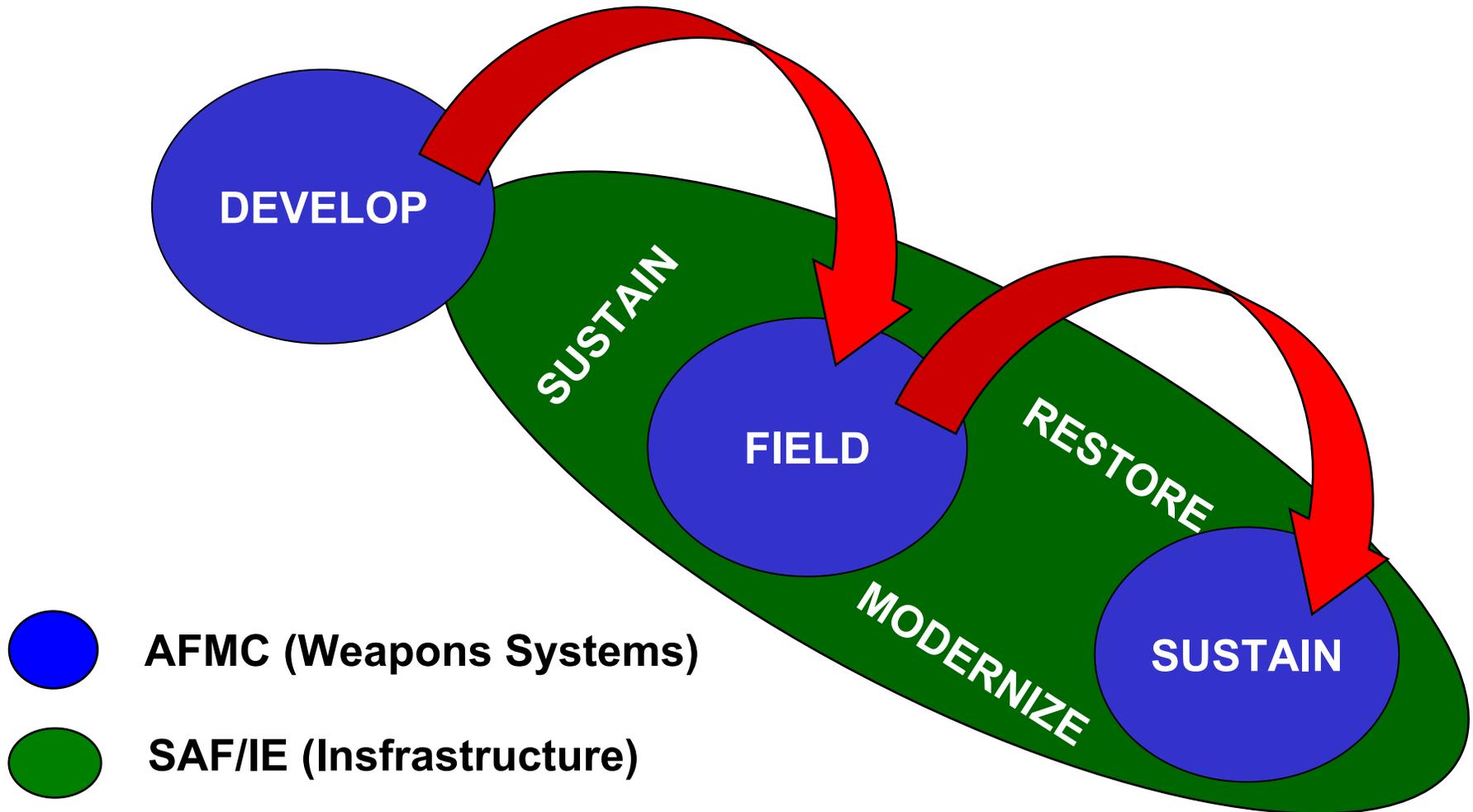
Competing Needs





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AFMC and Transformation



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LINE OF SIGHT

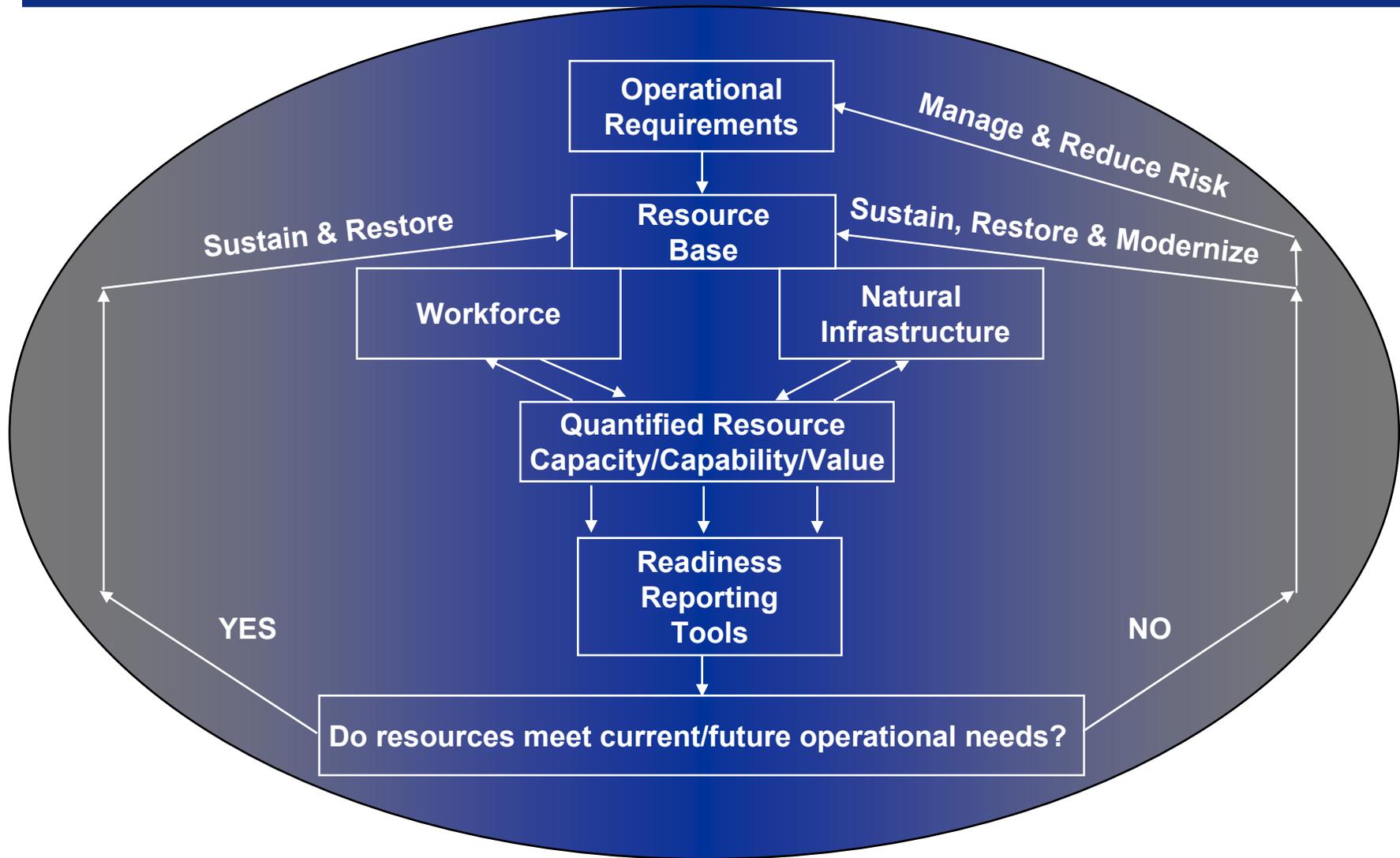


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The Operationally-Driven ESOH Management System



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RESOURCE ECONOMICS

- **Environmental & Labor Laws**
Redefined Internalization of Cost
 1. **Rationed Resource Supply**
(Conservation, Permits, Emission Limits, Skilled/trained workforce)
 2. **Created New Cost (Penalties) for non-compliance**



ESOH TRANSFORMATION

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- **GOAL: sustain, restore & modernize natural, statutory & workforce infrastructure to ensure operational capability over perpetual useful life**
 - **Health protection and regulatory compliance *inherent* in operability**
- **Principles:**
 - 1. Identify operational and financial risks to resource requirements in an objective, quantified manner**
 - 2. Make informed risk management decisions through total cost visibility for ESOH resource sustainment**
 - 3. Leverage equity and knowledge value of the ESOH resource portfolio**
 - 4. Manage risk through investment that supports operational and regulatory requirements**



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1. Identify Operational and Financial Risks to Resource Requirements

- **Formal modeling developed to quantify resource capability needed and available to support operational needs**
- **Enables proactive stance on emerging issues affecting resource base**
- **Memorialize requirements in Base General Plan**
- **Key metrics to operations as part of ESOHMS implementation, e.g.**
 - **% air shed available for operational use**
 - **Restored land for available operational use**
 - **Workforce availability (under development)**

Must Tie ESOH Planning and Budgeting Decisions to Quantified Operational Requirements



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RESOURCE READINESS RATINGS*

Relationship to existing readiness ratings

	DESCRIPTIVE RATING	RATING CODE	SORTS Relationship
Opportunity	> 140%	RO3	C1
	121 – 140%	RO2	
	111 – 120%	RO1	
Adequate	110 – 90%	RR	
	89 – 80%	RD1	C2
	79 – 60%	RD2	C3
Degraded	< 60%	RD3	C4

SORTS – Status of Resources and Training System

RO = Resource Opportunity
RD = Resource Degradation

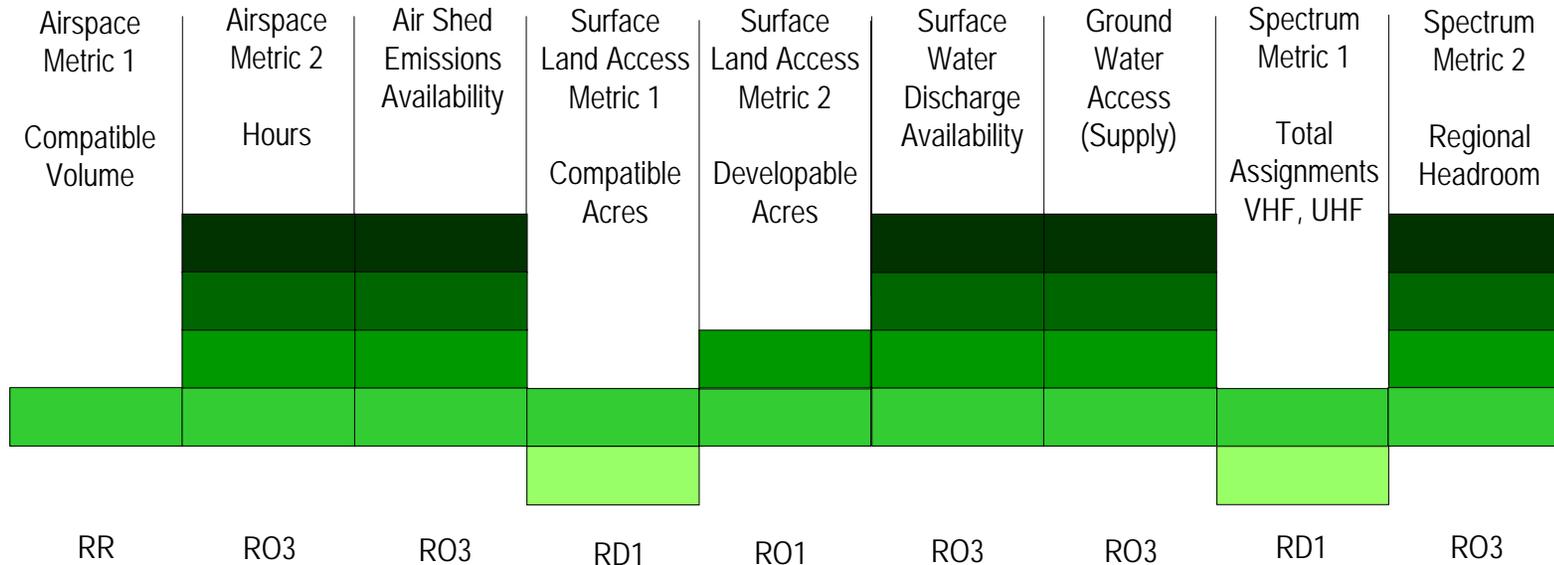
* Percentages results from comparison of resource availability to resource requirements, using 100% as the baseline for breakpoints.



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Resource Readiness Ratings for the Installation

Tested Metrics



- Installation has significant resource opportunity
- Approximately 9.9% airspace encroachment in the aerodrome using Metric #1
- Approximately 11-15% off-base surface land encroachment using Metric #1
- Resource Deficiency for Spectrum Metric 1 is due to AFFMA denial of four requests for frequency assignments, not encroachment



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2. Total Investment & Cost Visibility

- Resource sustainment carried through numerous funding lines
 - MILCON, Acquisition, O&M
- Total Costs and Liabilities must be identified to inform future resource investment decision
- Efforts underway to understand current state and improve visibility
 - ESOH cost audit
 - FM Transformation

Total Cost Visibility Required for Informed Decisions



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3. Leveraging Asset and Knowledge Value

- **Resources are a commodity with an intrinsic value**
 - **Tools exist to inventory and appraise resources**
 - **Expanding appraisal capability to include natural infrastructure, e.g. value of bankable wetlands**
- **Resource value leverageable in managing risk more effectively and efficiently**
- **Enables communication/negotiation from positive position**
- **Applying previous experience and knowledge enhances future performance and effectiveness**

ESOH Is Not Just About Liabilities

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INFRASTRUCTURE VALUATION

(underway at several bases)

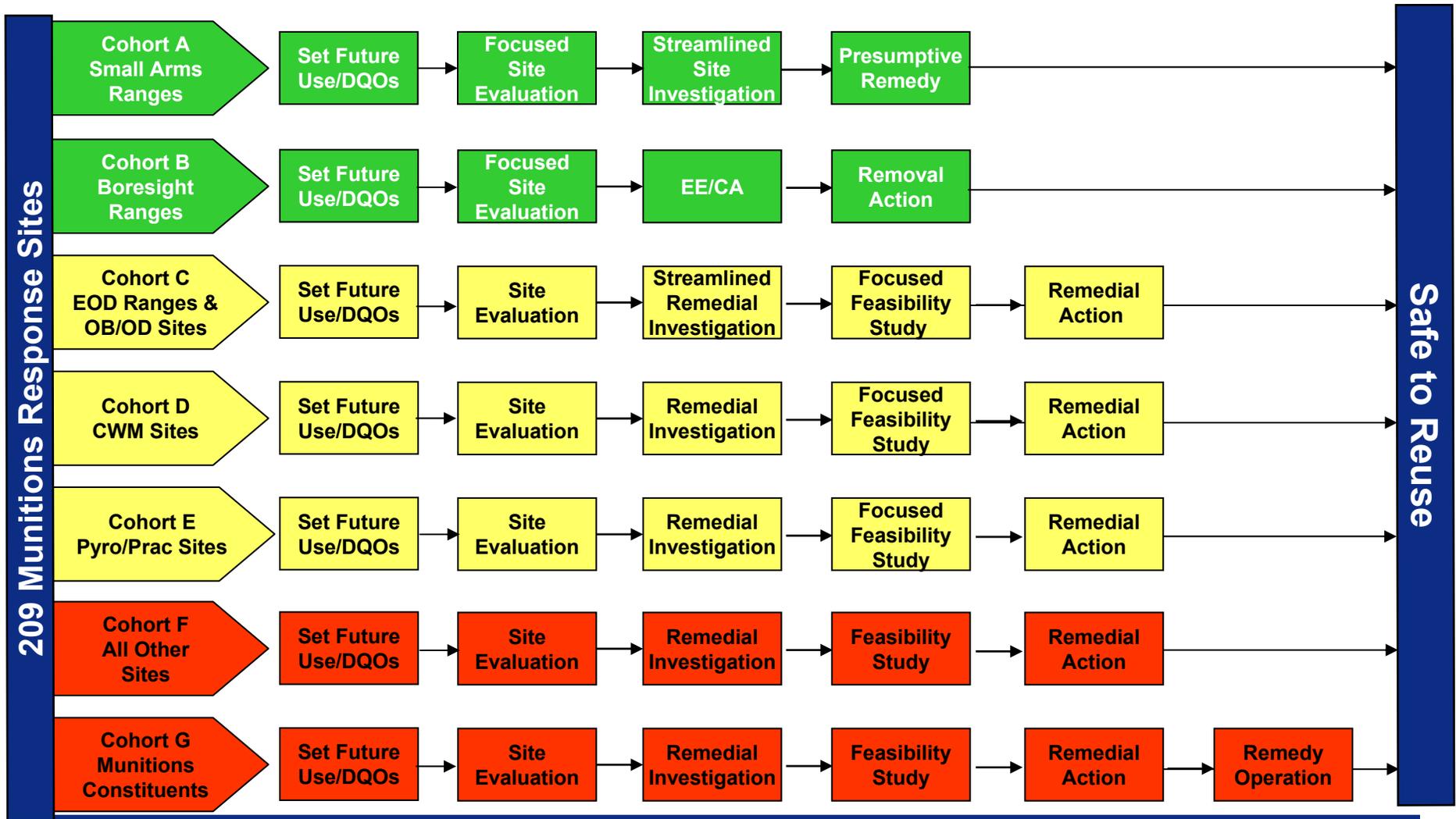
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- **Infrastructure**
 - Wetlands (banking)
 - Open space credits
 - Habitat and biodiversity preservation value
- **Statutory**
 - Air space
 - Air shed emissions (tradable in multi markets)
 - Water supply and recharge
- **Historic and Cultural**
 - E.g. Preservation credits of \$4M at WPAFB



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PAST PERFORMANCE STREAMLINES RESPONSES



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4. Manage Risk Through Investment That Supports Operational and Regulatory Requirements

- **Currently**
 - Defense Program Goals tied to regulatory requirements
 - Goal: No open enforcement actions
 - Goal: Federal Facility Agreement milestones

Therefore

- **Budget tied to regulatory requirements**
 - Level 0, 1 prioritization, FFA requirements
 - Investment to sustain operations (P2, conservation, permit enhancement) not always eligible

Better Goal

- **Transform to investment strategy (SRM) that meets operational-based metrics while achieving compliance**

Move From Impact Driven Programmatic



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New Policies

- ***AFPD 90-8 Environment, Safety, and Occupational Health***
 - ***AFI 90-801, ESOH Management System***
 - ***AFI 90-802, ESOH Committees***

- ***Policy Letter Performance-Based Records of Decision (RODs) for Land Use Control (LUC) Implementation (7 Oct 03)***

- ***Policy Letter Natural Infrastructure Management and Encroachment Prevention***

- ***Policy Letter 2004 AF Cleanup Program Policy***

- ***CERCLA Re-delegation of Authorities***



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ENVIRONMENTAL TRANSFORMATION:

Airshed Resources at McGuire AFB

- Replacing C-141s with C-17s
- Ozone Non-attainment Area
- Near Limit on NOx “Budget”
- P2 Efforts Created “Head Room” in VOC “Budget”
- Traded VOC “Head Room” for NOx in SIP
- Increased Resource Availability = Doubled Mission Capacity





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Cleanup Program Review

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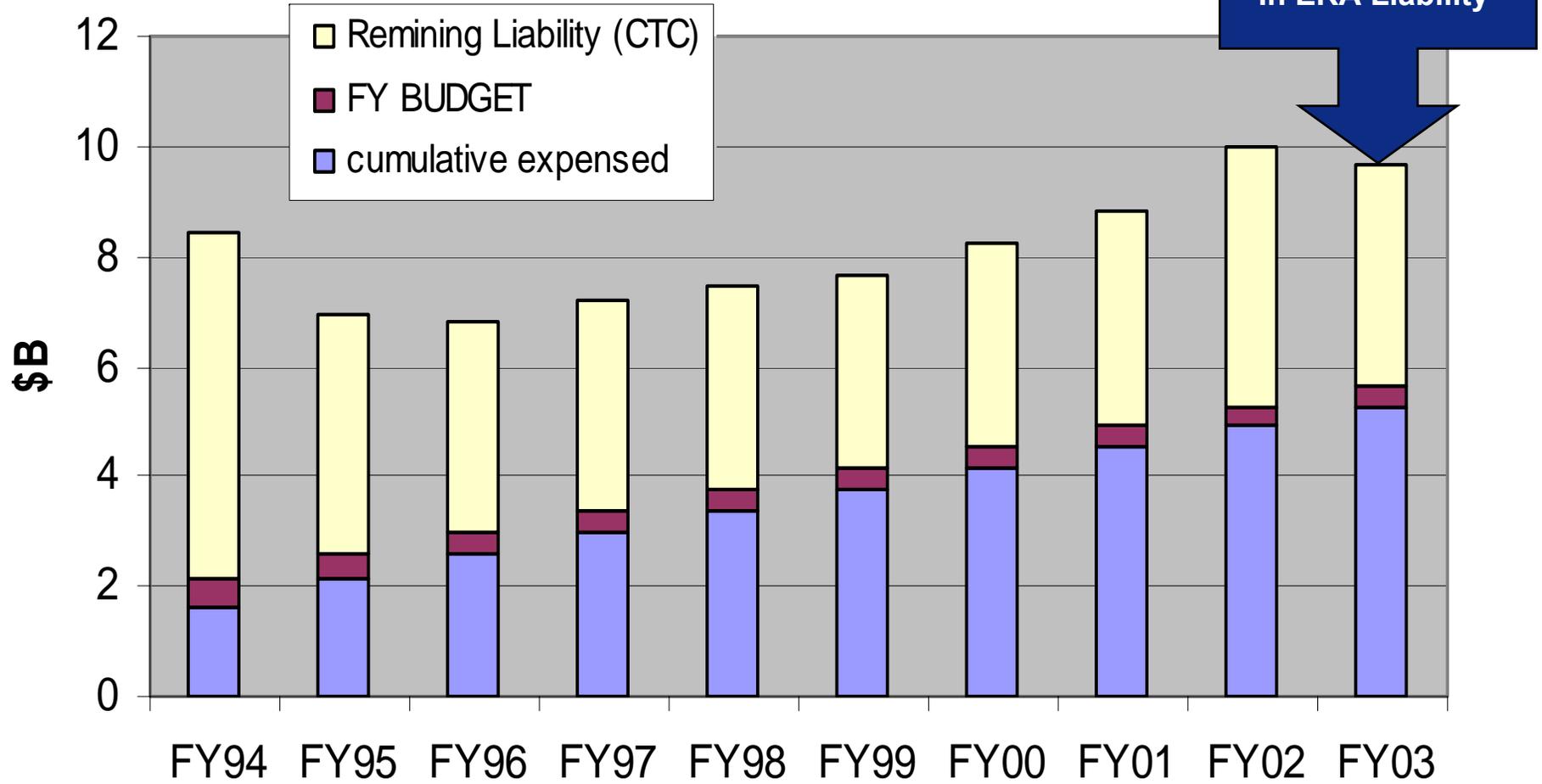


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What we found...

- **Increasing Cost/Time to Complete**
- **Increasing Requirements**
 - **New Sites**
 - **“Emerging” Contaminant Issues**
- **Budget Stable or Decreasing**

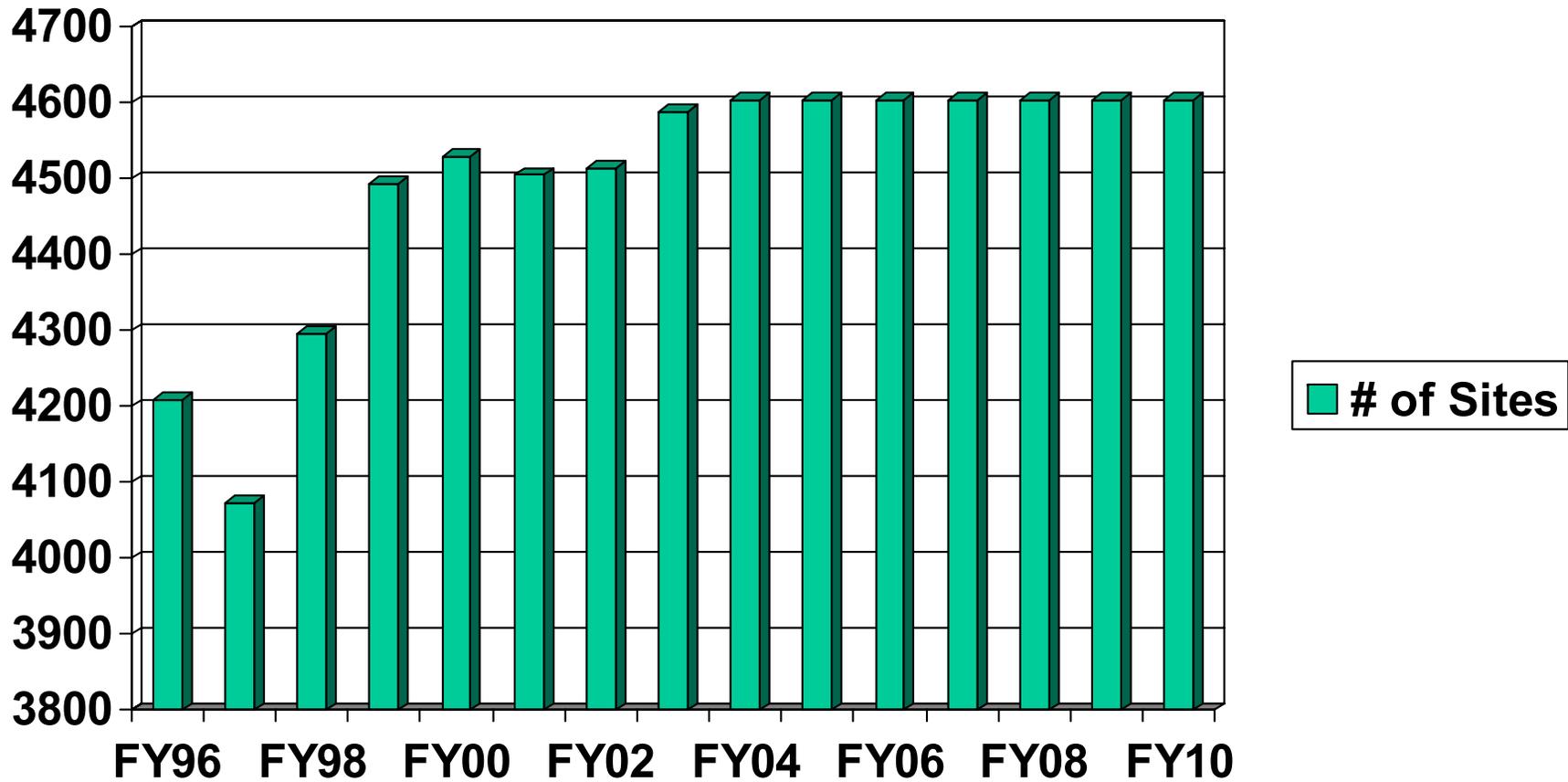
AF ERA Total Costs





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Number of Sites



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What we're doing about it...

- **Adjust metrics**
- **Designate and Manage Land Use**
- **Knowledge Management** – *How to use 20 yrs of data to inform future decisions??*
- **Reduce Process Constraints**



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PBM Tools for Program Improvement

- **Performance-Based Management (PBM) Tools**
 - **Streamlined Investigation (IPO)**
 - **Presumptive Remedies / Private Sector Benchmarks**
 - **Remedial Process Optimization (RPO)**
 - **Performance-Based Decision Documents**
 - **Performance-Based Contracts (PBC)**



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FY04 Areas of Emphasis

- **Convert Further to Performance Goals and Metrics Based on Operational Capability**
 - **Changes to other Policy Directives, AFIs**
 - **Performance-based agreements**
 - **Performance-based contracting**
 - **Build MMRP**
- **Mature the Unregulated & Emerging Contaminants Engagement Process**
- **Develop Investment and Engagement Strategy – Invest in assets, buy down liabilities**



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Cleanup Program Goals

- **Create AF Center for Environmental Knowledge**
- **Maximize Operational Capability of Natural Infrastructure**
 - **Permits, carrying capacity**
 - **Reuse/development (e.g. F2P)**
 - **Groundwater**
- **Minimal Cost, Minimal Restrictive Easements**
- **Managed via**
 - **Base General Plan**
 - **Base Mission Support Plan**
 - **Predictive Readiness Assessment System**



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Maximize Use of Performance-Based Contracting

- **New Land Disposal Actions / Acceleration of Cleanup to Facilitate Land Disposal:**
 - Fence-to-Fence Contracting
 - Insurance (e.g. GFPR)
 - SAF/FMB, Corporate Board Interest

- **Remaining Program Emphasizes:**
 - Outsourcing
 - PBC (all types)
 - Goals TBD by Program Managers



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PB Cleanup Process Management (all pillars)

- **Land-use Determinations – *current and future***
 - Reconcile with Base Development Plans (active)
 - Sensible Zoning (UXO sites ≠ Future Playground)
- **Data Quality Objective (DQO) Determinations**
- **Dynamic Data Collection - IAW DQOs**
- **Remedy Selection, Based On:**
 - Land-use
 - Data collected
 - ARAR sufficiency
 - Benchmarks
- **PB Agreement Template**



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ARAR Sufficiency: “Necessary, Feasible, Practicable”

- **CERCLA 120(d)(4) - ARAR Can Be Waived If:**
 - Will Result in Greater Risk
 - Technical Impracticability
 - Equivalent Performance
 - Inconsistent Application of State Requirements
- **AF Policy: If ARAR Not Promulgated Then:**
 - Cost / Benefit Analysis
 - Uncertainty Analysis
 - SAF/IEE Approval
- **This Encompasses “Unregulated / Emerging” Contaminants Issues**
- **Delegation of Authorities**

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