

Water Quality Assurance Revolving Fund (WQARF)

Arizona's State Superfund Program – An Overview
and Results of our Accelerated Cleanup Initiative

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Water Quality Assurance Revolving Fund

WQARF

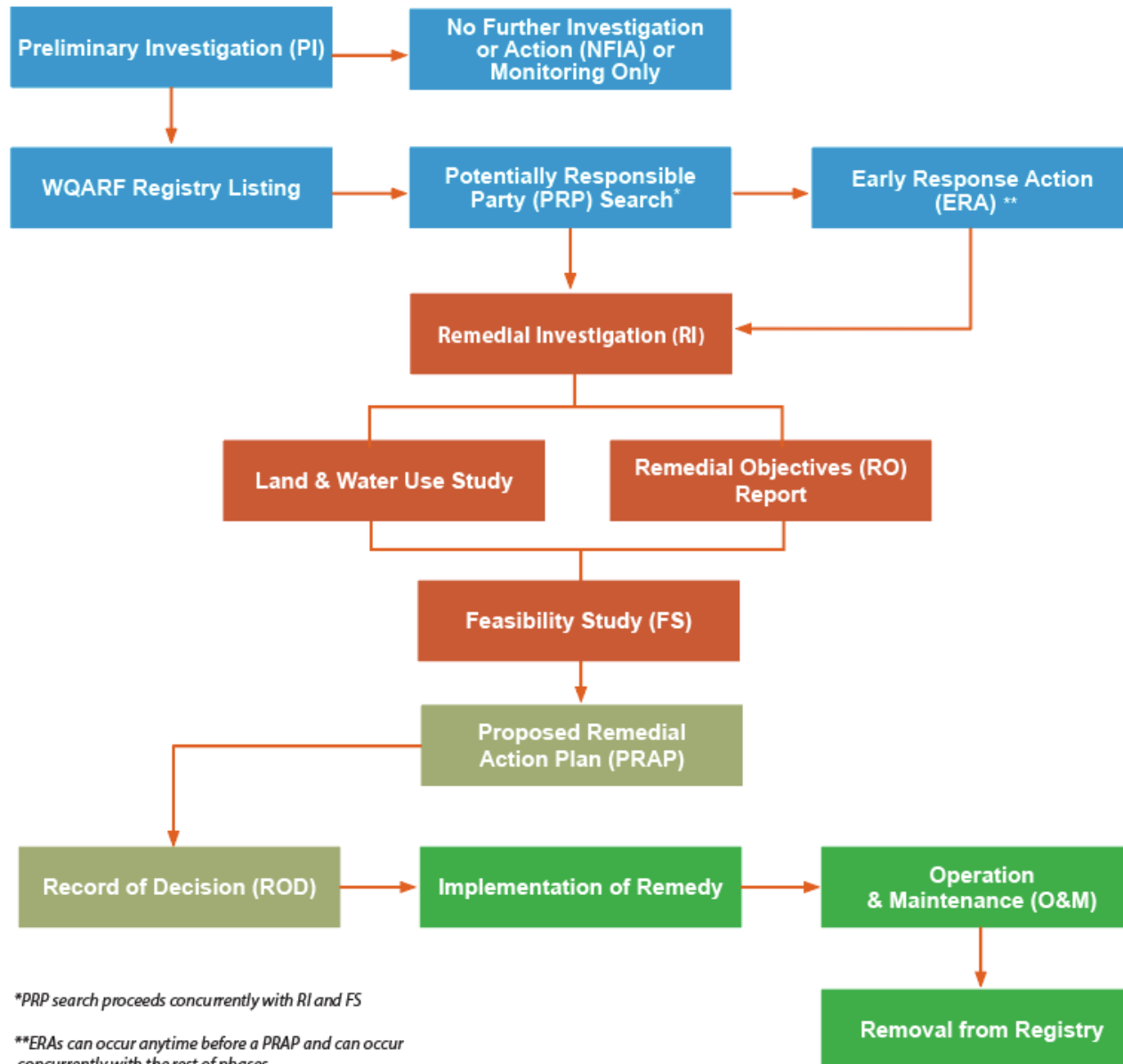
What is WQARF & How does it relate to CERCLA?

- A state program established in 1986 and revised in 1997 loosely patterned after the Federal Superfund program
- Established to safeguard public health, protect Arizona's unique environment and restore natural resources through investigation, management and remediation of soil and groundwater contaminated with hazardous substances.

– **Specific components include:**

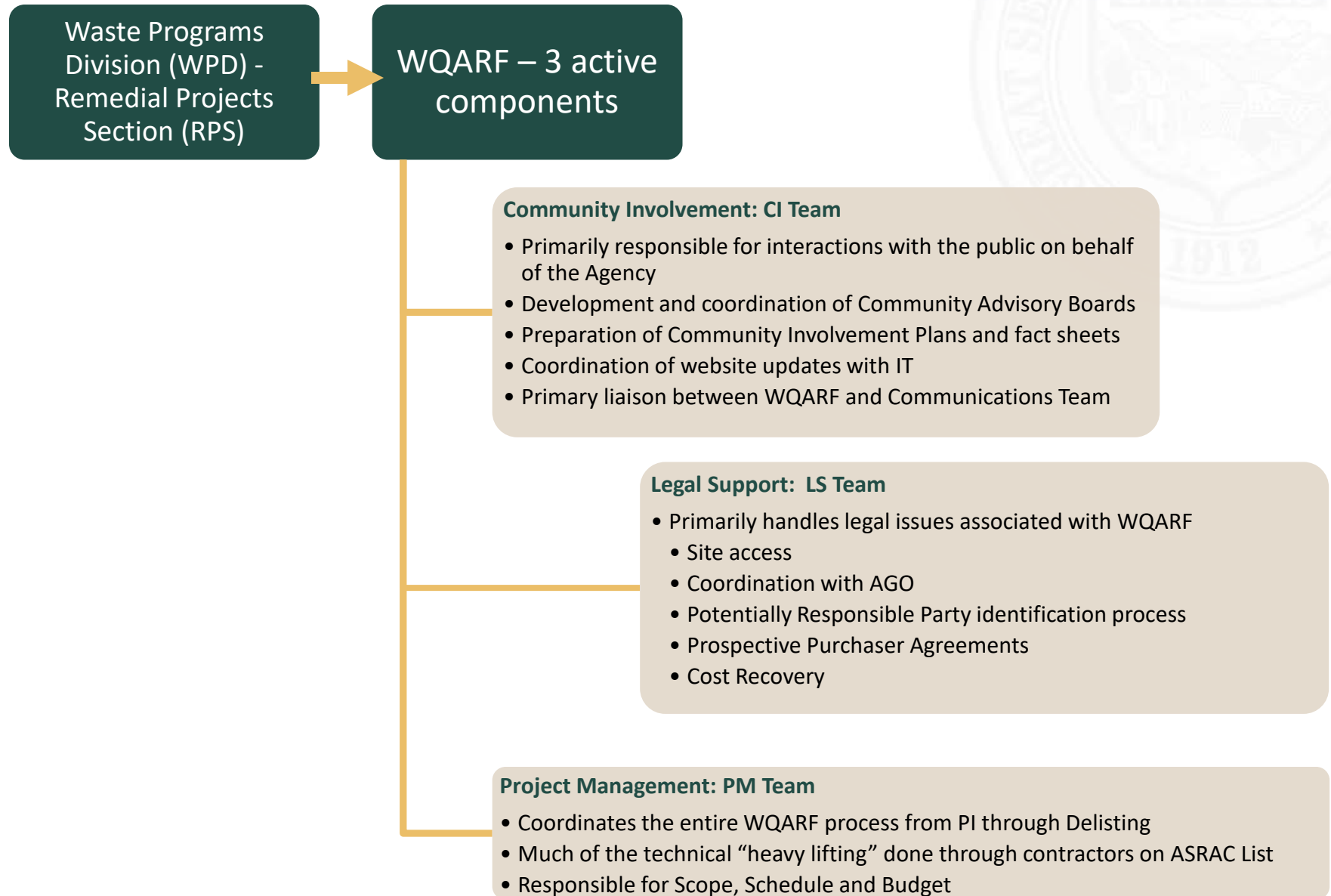
- Has its own state Statute and Rules (does not simply follow CERCLA)
 - ❖ Bulk found in A.R.S Title 49- Article 5 281:298 Remedial Actions
 - ❖ Associated Rules; majority found in A.A.C. Title 18 Chapter 16 WQARF
- Has a proportional liability scheme based on equitable allocation of liability
- Provides settlement discount of 25% on allocated share of liability
- Focuses heavily on water quality protection; allows options to restore, replace or otherwise provide for a lost resource
- Remedial Objectives are defined in terms of resource use and not necessarily numerical standard-although numerical standards apply by default
- Has provision for expanded Community Involvement through the formation and participation of Community Advisory Boards
- Gives wide latitude to the Agency Director to authorize and conduct remedial actions

Phases of WQARF



*PRP search proceeds concurrently with RI and FS

**ERAs can occur anytime before a PRAP and can occur concurrently with the rest of phases



ADEQ's Accelerated Cleanup Initiative



ADEQ
Arizona Department
of Environmental Quality

Strategic Plan
FY 2014 – 2018
Henry Darwin, Director

Goals

- Support Environmentally Responsible Economic Growth
- Enhance Arizona's Unique Environment
- Accelerate Clean-ups

Strategies

- Unleash Human Potential
- Deploy Lean
- Leverage E-Technology
- Increase Outreach
- Strengthen Core Programs

VISION

To lead Arizona and the nation in protecting the environment and improving the quality of life for the people of our state



To protect and enhance public health and the environment in Arizona

Mission

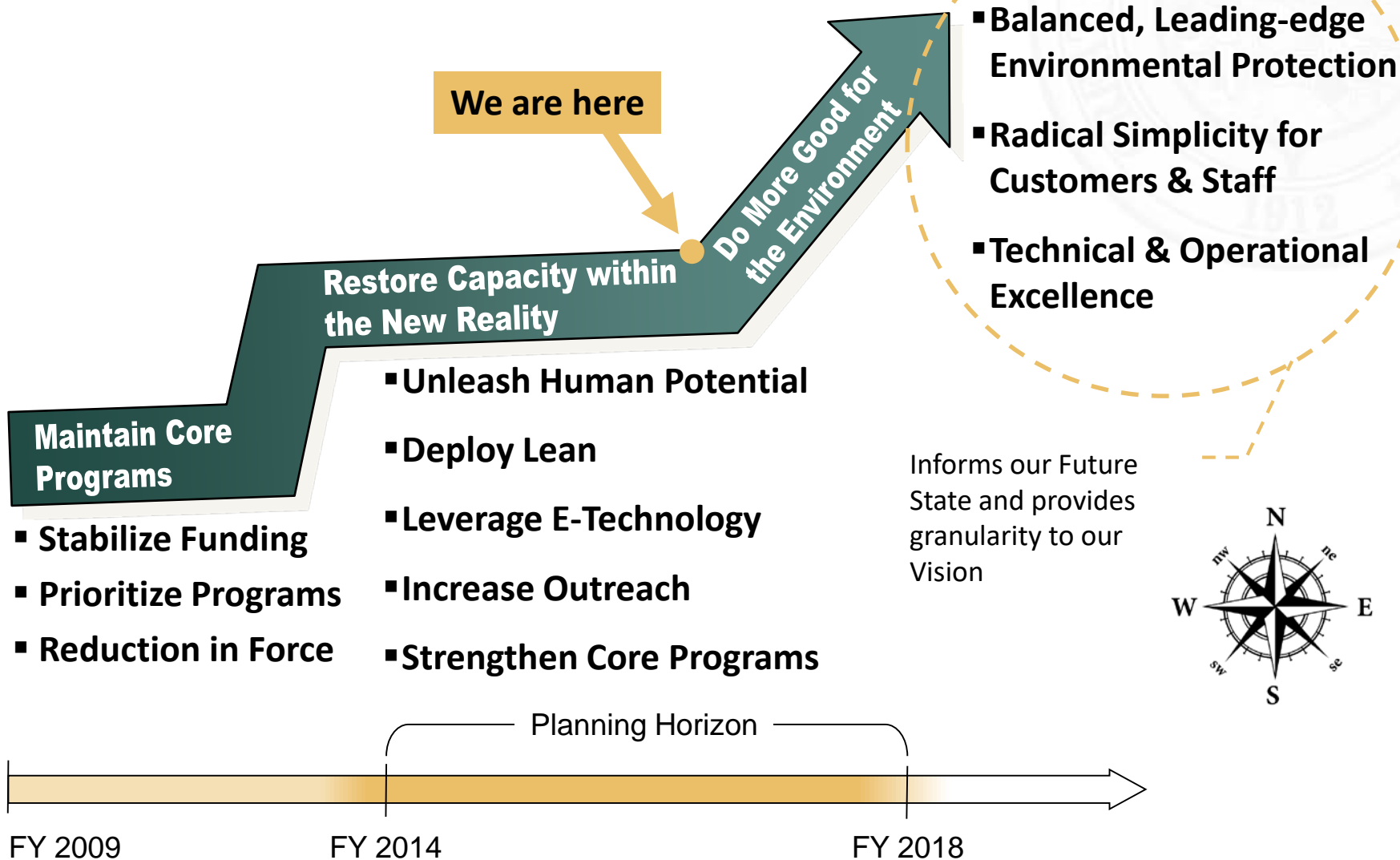
Strategic Goals

Support environmentally responsible economic growth

Enhance Arizona's unique environment

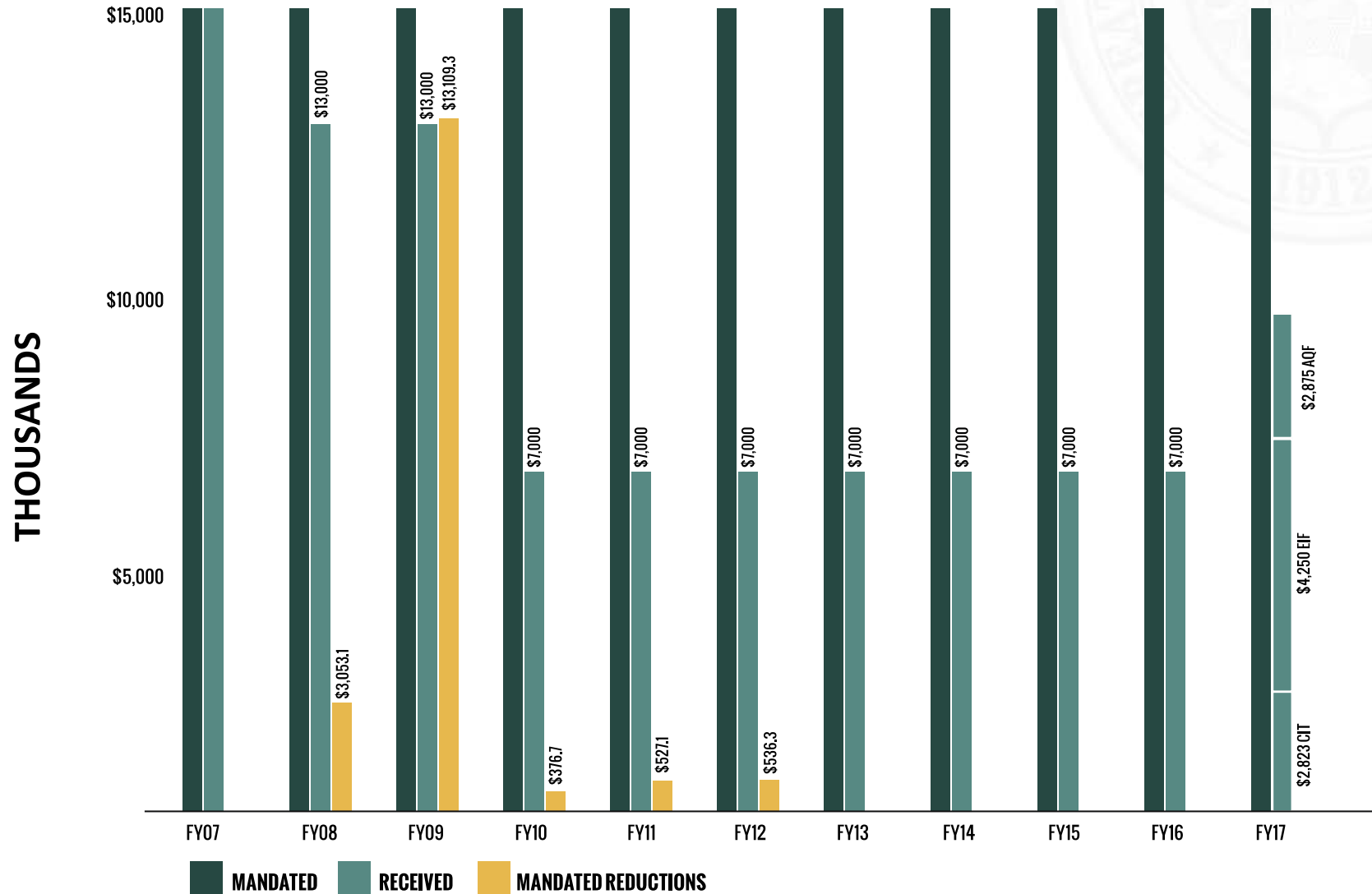
Accelerate cleanups

Overall Strategic Direction



- ADEQ recognized that progress moving sites through the WQARF program was slow
 - ❖ PRPs passing away or filing bankruptcy -Increased ADEQs Orphan Share
 - ❖ Silo mentality
 - ❖ Plume definition was not being achieved in a timely manner
 - ❖ Lack of consistent legislative funding
 - ❖ Fiscal-year funding-contributed to slow start to site work
 - ❖ Task management focus-instead of holistic site management in programmatic context
 - ❖ Main complaint of CABs-progress too slow
 - ❖ Lack of performance measures to drive results

CORPORATE INCOME TAX REVENUE COMPARISON FY08 — FY17



■ ADEQ implemented Process Improvements

- ❖ Kaizen for each WQARF phase (PI/RI/FS/PRAP/ROD as well as legal PRP and CI processes)
- ❖ Developed 80% ideology for RIs
- ❖ Appropriate ROD acceleration measures
- ❖ Tracking performance through metrics reported up to the Governor's office
- ❖ Implementing Standard Work for internal processes
- ❖ Consistent feedback to management from staff
- ❖ Implemented problem identification and problem solving events
- ❖ Renewed importance on the CSM
- ❖ WQARF focus on holistic site management in programmatic context

- WQARF contributes to two AGENCY Performance Measures:
 - **Time to First Remedy**
 - **Contaminated Sites Closed**
- Mission outcomes for WQARF evaluated in light of these measures
- Currently 37 active sites (including new listings) on the WQARF Registry in various phases of completion
- Including PI's we have a universe of 67 sites
- Time for WQARF Process RI to ROD/Allocation – 5 years with ASRAC contractor partnership
- Benefit: **Increased protection of public health and the environment**

ADEQ's Accelerated Cleanup Contractor Expectations



ASRAC Contractor Performance Expectations

✓ Integrate data into CSM

✓ Minimize number of mobilizations

✓ Define vertical extent of contamination

✓ Choose well locations based on science

✓ Holistic approach not task oriented

✓ Is the RI "80 %"

✓ Include remedy acceleration techniques in FS and PRAP

✓ Transparency through better project reporting (WRRs)

✓ Maximize amount of work authorized in fiscal year



Continued Focus on More Mission Outcomes



Use ASRAC Contractors
to augment internal
team


- Coordinate ADEQ expectations
- Expanded knowledge of tools and techniques
- Lessons learned from other sites



Improvement rather
than perfection

- Focus on low-hanging fruit
- Prioritize opportunities that contribute to more mission outcome
- Continuous improvement of processes

Understanding and
revisiting the CSM is
critical



- Are the sources defined – ERA needed?
- Horizontal and vertical delineation?
- Exit strategy-Is remedy acceleration achievable?

WQARF has delisted 5 sites in the last 5 years

- **Fiscal Year 13**
 1. **East Washington Fluff**
 - ❖ ADEQ Implemented ERA 2001, DEUR 2007, CAP improvement 2010 by new owner
 - ❖ ROD issued in 2013
 - ❖ Site has subsequently been redeveloped into productive reuse as an office building
- **Fiscal Year 14**
 2. **Tonto & Cherry**
 - ❖ ROD issued 2008 MNA till 2018
 - ❖ MNA conducted for 5 years
 - ❖ Remedial objectives met in 2013 - 5 years ahead of schedule
- **3 of 5 sites delisted in fiscal year 17:**
 3. **Tyson Wash**
 - ❖ ROD signed 2009 - Pump and Treat till 2032
 - ❖ Implemented ISCO in 2015
 - ❖ Remedial Objectives achieved in FY17 –15 years ahead of schedule
 4. **West Central Phoenix – West Grand Avenue**
 - ❖ ROD signed 2016 – Confirmation monitoring and sampling
 - ❖ Confirmed groundwater concentrations were below AWQS
 - ❖ Remedial Objectives were achieved
 5. **East Central Phoenix – 40th St. & Indian School**
 - ❖ FS completed 2017 – One source well slightly above AWQS
 - ❖ Implement ISCO pilot test at source in 2017
 - ❖ Remedial Objectives achieved same year - No further action
- **WQARF Annual Report**
 - <http://www.azdeq.gov/programs/waste/WQARF>

HIGHLIGHTS

FY14 - ADEQ Completed 12 RIs (3 Final 9 Draft), 3 FSs and 1 PRAP
– *more RIs completed in a single year than completed during 1998 to 2013*

FY15 - ADEQ completed 7 final RIs and 2 FSs as well as 4 PRAPs
– *more overall progress than any year previously.*

FY16 – Began comprehensive evaluation of over 70 PI sites resulting in 2 new sites listed on the WQARF Registry, ADEQ completed 1 FS and 3 RODs and 6 new ERAs –*first new WQARF sites listed since 2004*

HIGHLIGHTS

FY17 - ADEQ listed 4 new WQARF sites, completed 5 FSs, 5 PRAPs and 2 RODs, completed our first ever "180-day" soils only remedy, and delisted 3 sites – ***most comprehensive progress to date!***

FY18 – ***continued environmental good! So far completed 1 RIs, 2 FSs, and 1 ROD. On track to delist more sites, complete 6 more RIs and 4 more RODs. Future program results highly dependent on program funding.***



Questions?

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- Mr. Green has a wide variety of experience as an environmental professional. Scott has a Bachelor's degree in Geology and a Master's in Hydrogeology and is a Registered Geologist in Arizona as well as Tennessee and has held professional licensure in 3 other states. Over the last 30 years he has worked across the country leading multi-disciplinary project teams performing investigation and remediation of contaminated sites involving numerous industries, including Manufacturing, Petroleum, Chemical, and Automotive.
- Mr. Green's abilities include strategic planning, permitting, regulatory compliance, hydrogeologic evaluation, negotiating cleanup criteria, litigation support as well as conceptual remedial design and development of cleanup objectives to reduce the overall environmental liability on LUST, RCRA and Superfund sites.
- Currently, Mr. Green manages the Remedial Projects Unit for the Arizona Department of Environmental Quality where he is responsible for overseeing and implementing, technical, legal and community involvement aspects of the Agency's Water Quality Assurance Revolving Fund (WQARF) which conducts the remediation of large complex sites of soil and groundwater contamination in Arizona.