ESHID-602424

Los Alamos NATIONAL LABORATORY EST. 1943

NPDES Individual Permit for Storm Water

Public Information Meeting

October 18, 2016

LA-UR-16-27956

Operated by Los Alamos National Security, LLC for the U.S. Department of Energy's NNSA

Agenda

5:30 p.m.	Poster Session	Open
6:00 p.m.	Welcome and Introductions EM Contract Transition Update	David Rhodes, DOE-EM Field Office
6:10 p.m.	IP Overview and Deliverables	Steve Veenis, EM Storm Water Program Manager
6:25 p.m.	IP 2016 Corrective Actions Update	William Foley, EM Storm Water Program Engineer
6:45 p.m.	Supplemental Environmental Projects Overview	Sarah Holcomb, NMED SWQB
7:15 p.m.	Open for Communities for Clean Water	

Overview and Deliverables

Steve Veenis

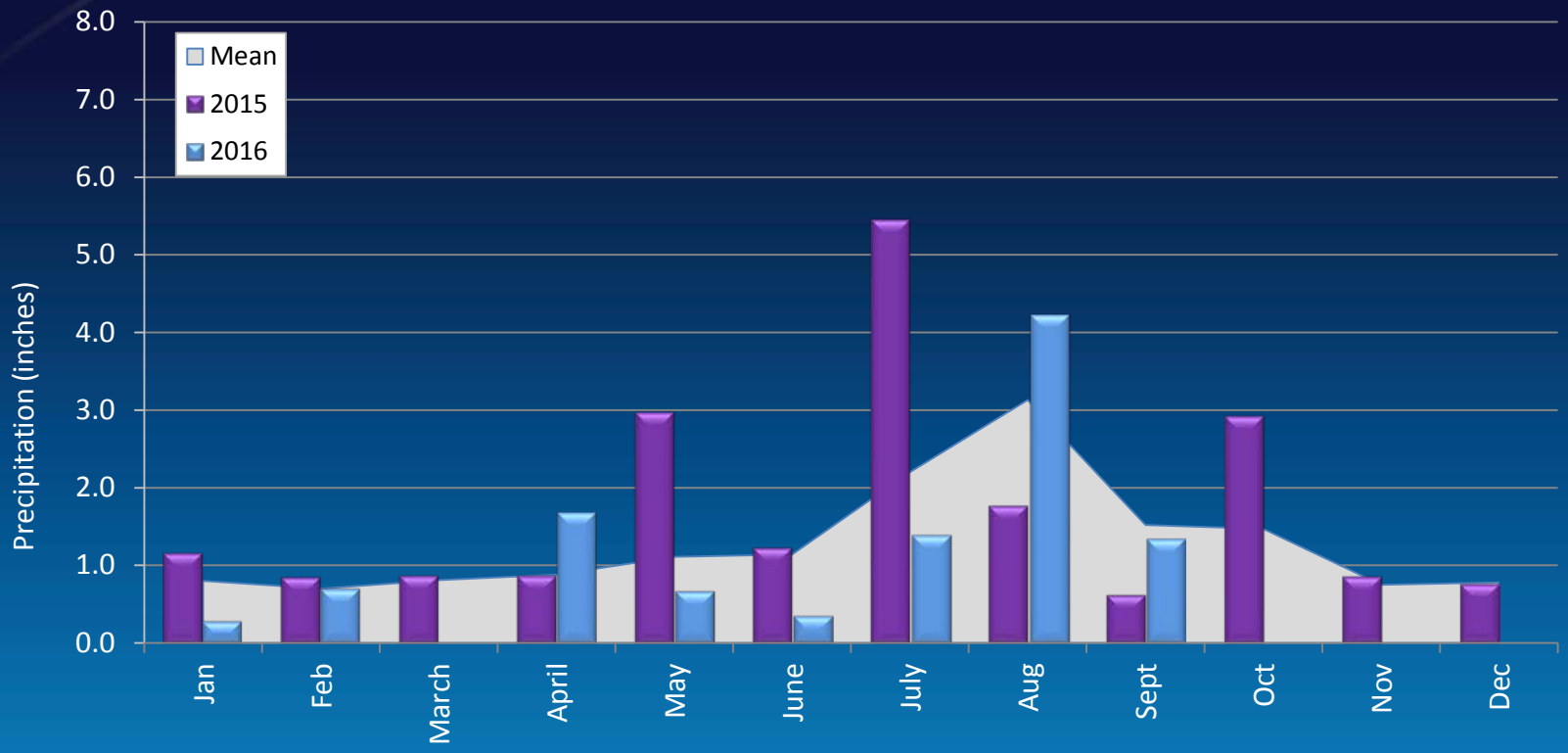
Environmental Management Storm Water Program Manager

LA-UR-16-27956

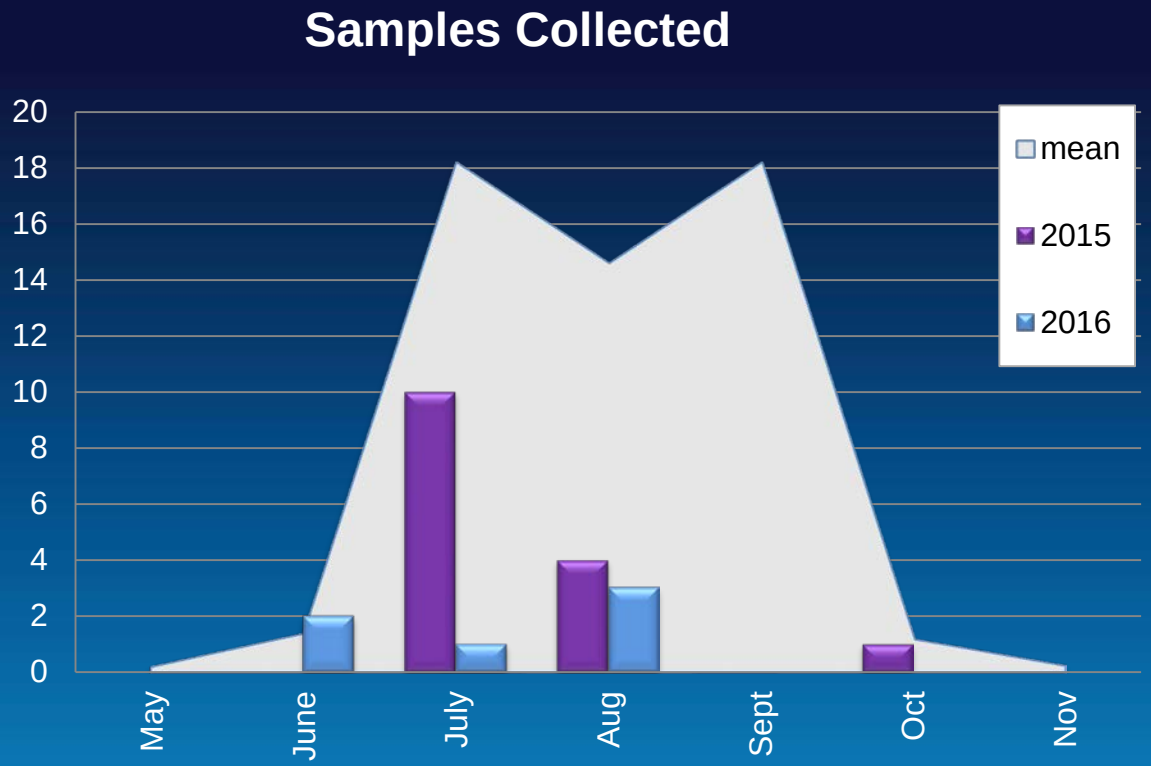
2016 Highlights

- Continued existing IP administratively
- Submitted IP Annual Report and SDPPP
- Installed additional controls
- Conducted more than 1,900 inspections
- Initiated Sample Implementation Planning (SIP) process
- Upgraded telemetry system (RTUs)
- Proposed sediment-management approach
- Initiated Supplemental Environmental Projects

2015-16 Precipitation Summary



2015-16 Sampling Summary



Sampling Summary

- 2015 – Sampled 12 Site Monitoring Areas (SMAs)
  - Results
    - Common Target Action Level (TAL) exceedances of gross alpha, PCBs, copper, aluminum, and zinc
    - Isolated TAL exceedances of arsenic, cadmium, lead, and silver
- 2016 – Sampled 6 SMAs as of 9/30/16
  - Results
    - Common TAL exceedances of gross alpha, PCBs, copper, and zinc
    - 89 SMAs have not collected samples during first permit cycle

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IP Corrective Actions Update

William Foley

Environmental Management Storm Water Program Engineer

LA-UR-16-27956

Installation Update

- Built and certified enhanced controls 2 SMAs
- Completed additional activities at 10 SMAs for additional water quality improvements

Design Approach

- SMA characteristics
  - Size
  - Contributing area characteristics
  - Type/magnitude of TAL exceedances
- Three examples
  - Moderate SMA size/substantial impervious footprint/ minimal diversion opportunity
  - Small SMA size/some impervious footprint/diversion opportunity
  - Large size SMA with sampling location in waterway

CDB-SMA-1

- SMA characteristics
  - 14.4 acres
  - >65% impervious cover
- Design approach
  - Minimize erosion
  - Reduce sediment transport from upper portion of watershed
  - Increase infiltration through increase detention/retention

CDB-SMA-1


C00404060009
riprap
46-004(d2)
C00406010012
rock check dam
C00406010011
rock check dam
C00404060006
riprap
46-004(f)
C00406010010
rock check dam
46-004(w)
C-46-001
C-46-001
46-008(g)
46-009(a)
CDB-SMA-1
14.402 Acres
C-46-001
46-004(t)
C00402040015
established vegetation,
green hatch area
C00403010016
earthen berm
46-003(c)
ICECAP
SUNBEAM
IVY
ITEM

CDB-SMA-1


IVY
C00406010012
rock check dam
C00406010011
rock check dam
46-004(f)
C-46-001
C-46-001
C-46-001
46-004(t)
ICECAP
C00404060008
riprap
C00406010004
rock check dam
C00406010013
rock check dam
SUNBEAM
PAJARITO
Cañada del Buey
46-004(f)
46-004(w)
46-004(d2)
46-009(a)
46-008(g)
46-004(t)
46-003(c)
C-46-001
CDB-SMA-1
14.402 Acres

CDB-SMA-1


406010012
check dam
46-0041
010011
ck dam
C00404060006
riprap
46-009(a)
CDB-SMA-1
14.402 Acres
C00402040015
established vegetation,
green hatch area
C00403010016
earthen berm
46-0161
46-0195
46-0194
46-0158
46-0204

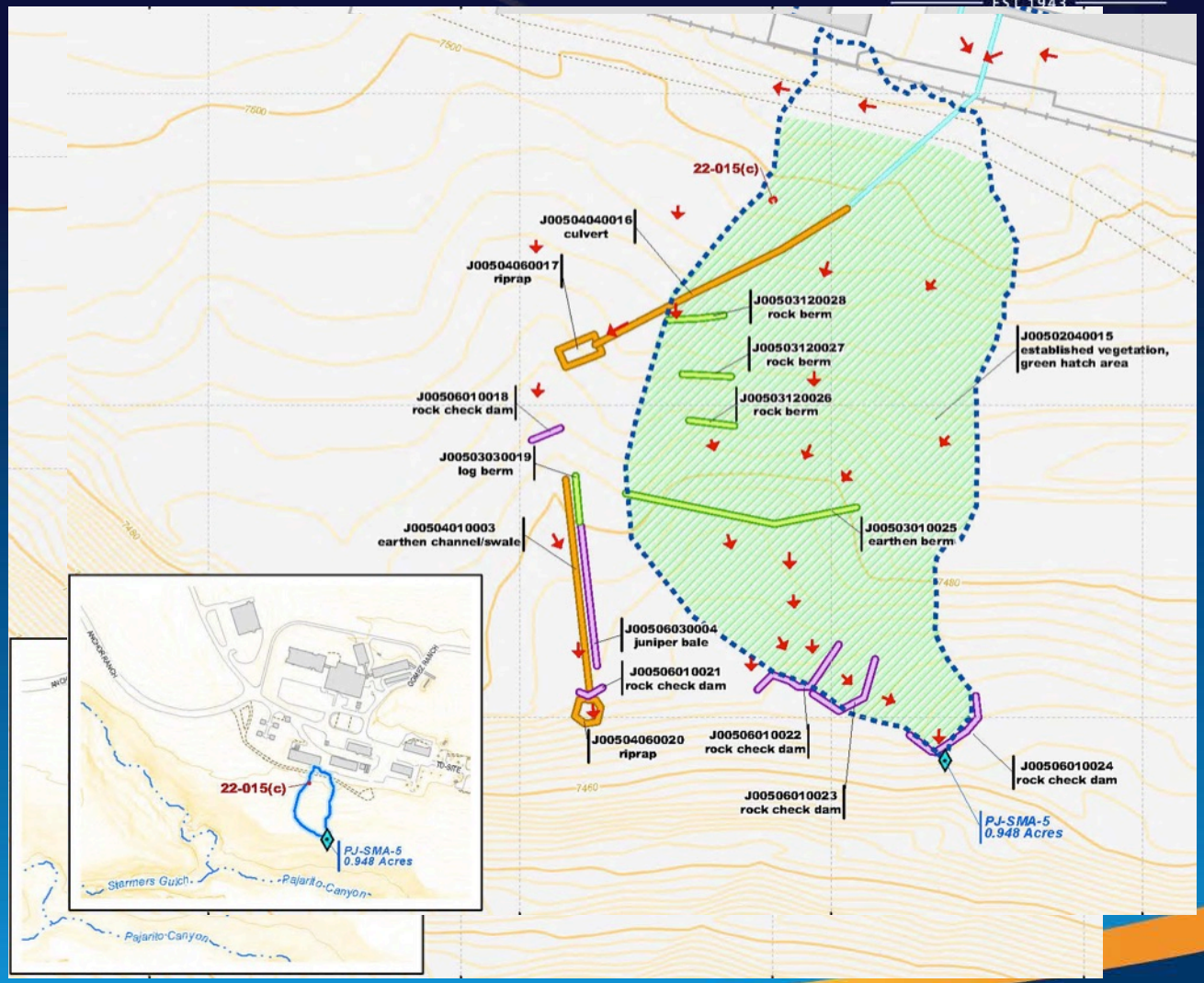
PJ-SMA-5

- Original SMA characteristics (1.2 acres)
  - >20% impervious cover
  - >30% sparse grassland
- Design approach
  - Upstream diversion
  - Increase infiltration through improved vegetation and increased detention/retention
- New SMA characteristics (0.9 acres)
  - <5% impervious cover
  - Improved vegetation

PJ-SMA-5

Original SMA boundaries

New SMA boundaries



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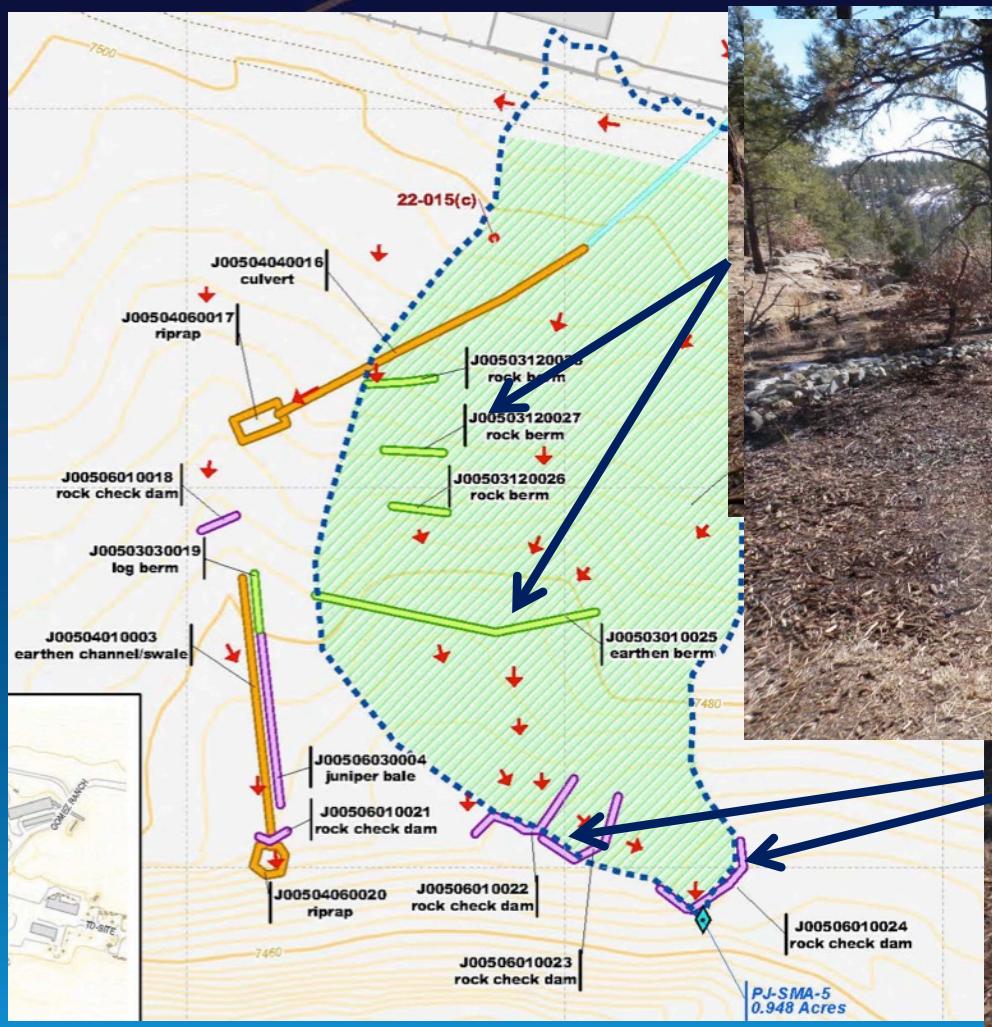
PJ-SMA-5


22-015(c)
J00504040016
culvert
J00504060017
riprap
J00503120028
rock berm
J00503120027
rock berm
J00506010018
rock check dam
J00503120026
rock berm
J00503030019
log berm
J00504010003
earthen channel/swale
J00503010025
earthen berm
J00506030004
juniper bale
J00506010021
rock check dam
J00504060020
riprap
J00506010022
rock check dam
J00506010024
rock check dam
J00506010023
rock check dam
PJ-SMA-5
0.948 Acres

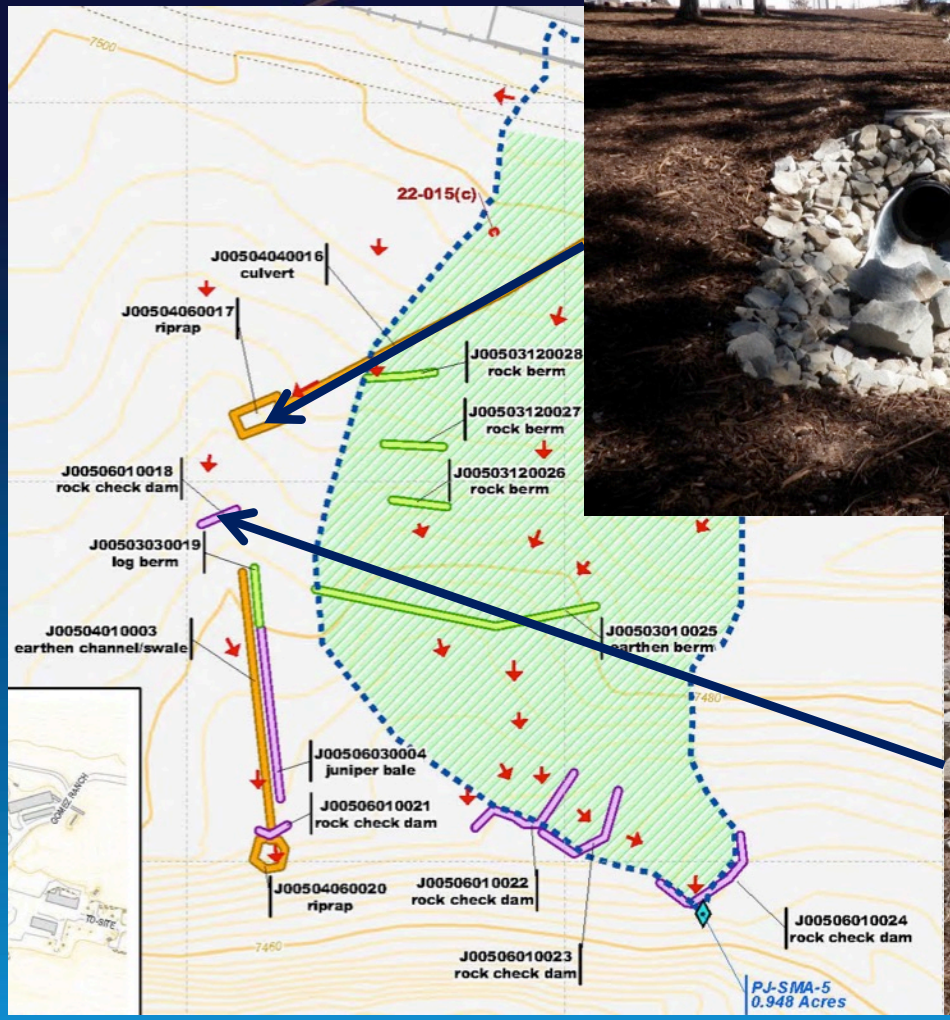
PJ-SMA-5

During construction with native vegetation shown at side

PJ-SMA-5

10–12 months after construction

PJ-SMA-5



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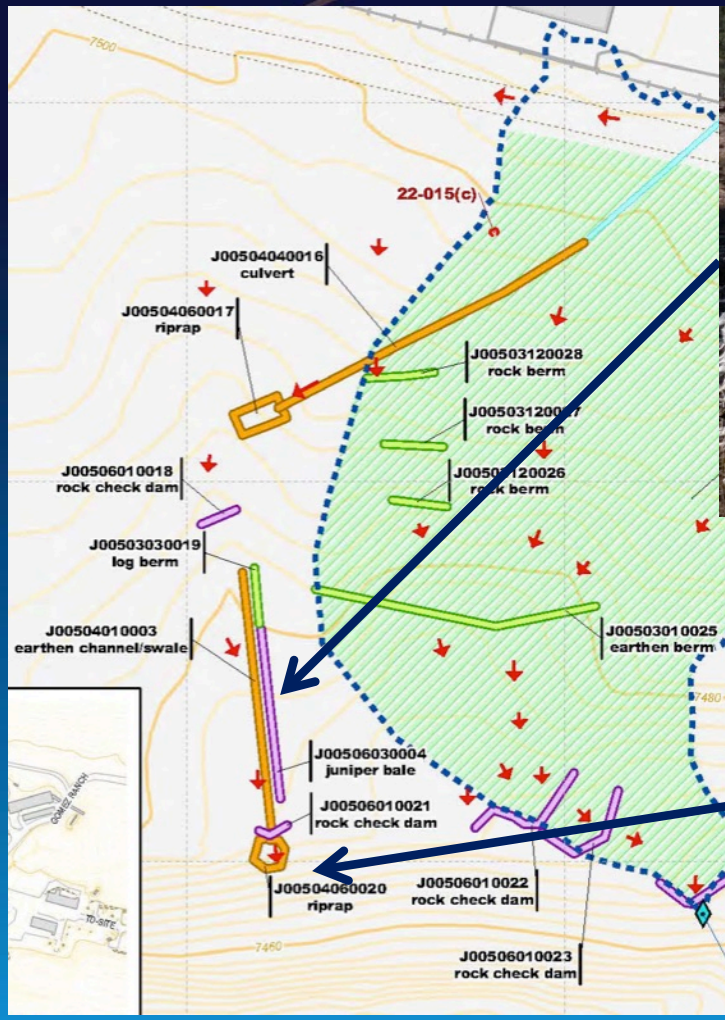
22-015(c)
J00504040016
culvert
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J00503120028
rock berm
J00503120027
rock berm
J00503120026
rock berm
J00506010018
rock check dam
J00503030019
log berm
J00504010003
earthen channel/swale
J00503010025
earthen berm
J00506030004
juniper bale
J00506010021
rock check dam
J00504060020
riprap
J00506010022
rock check dam
J00506010024
rock check dam
J00506010023
rock check dam
PJ-SMA-5
0.948 Acres
7500
7480
7460
GOMEZ RANCH
TO SITE

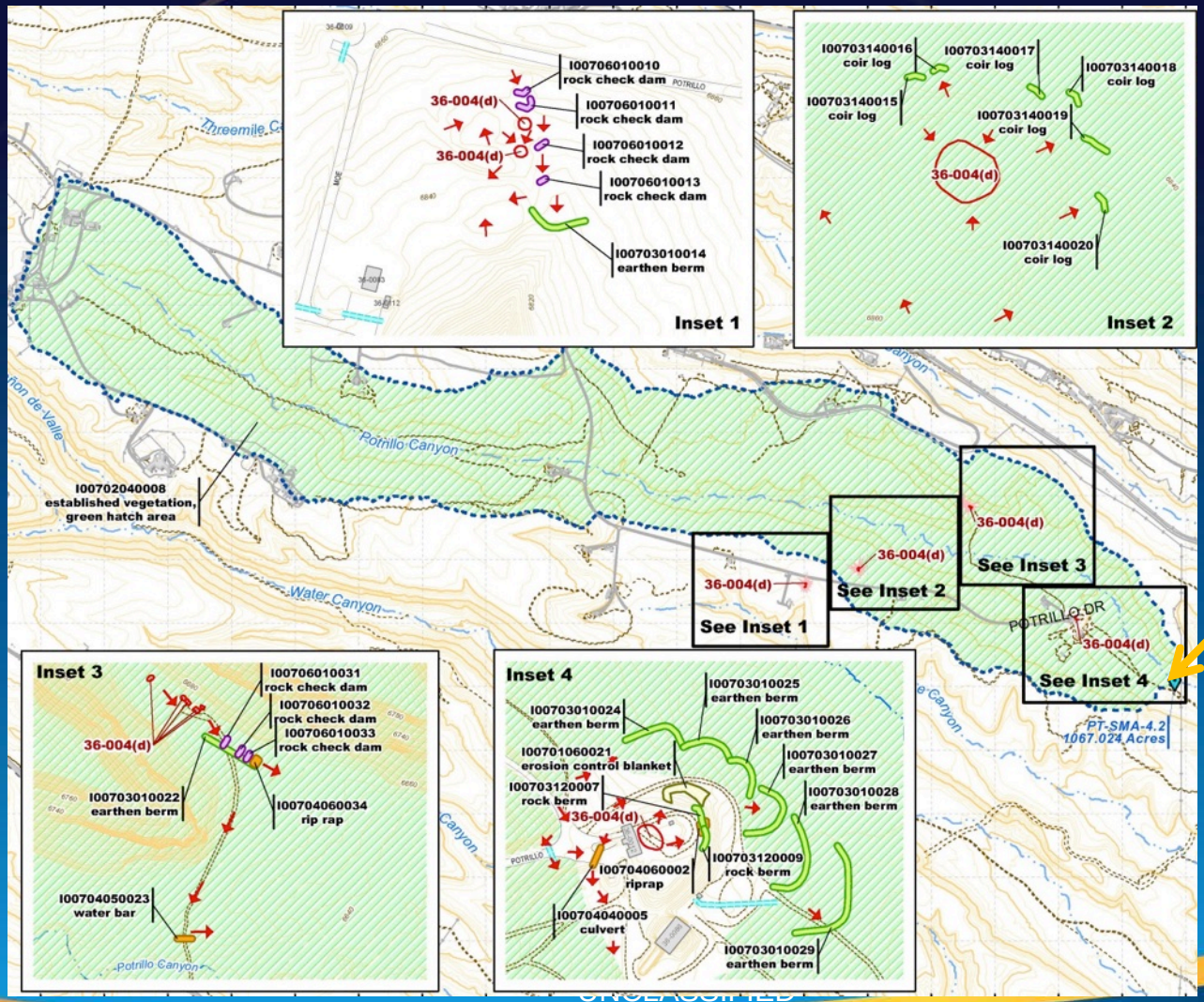
PT-SMA-4.2

- SMA characteristics
  - 1067 acres (>1.6 square miles)
  - Additional controls not accounted for related to:
    - PT-SMA-0.5
    - PT-SMA-1.7
    - PT-SMA-2.01
    - PT-SMA-1
    - PT-SMA-2
    - PT-SMA-3

PT-SMA-4.2

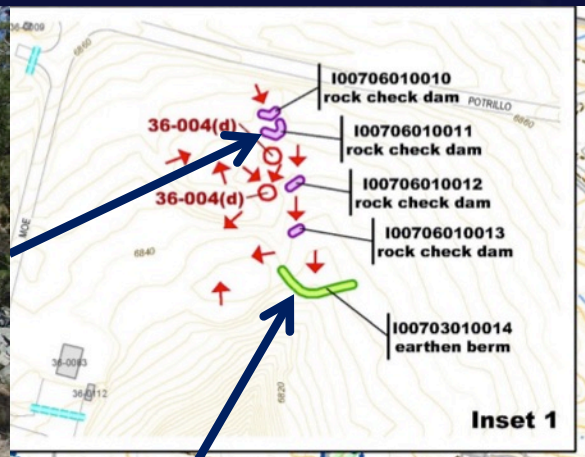
- SMA characteristics
- Design approach
  - Site-specific controls
    - Erosion control
    - Limit sediment migration
  - Watershed controls
    - Promote sheetflow
    - Arrest head cuts
    - Promote infiltration

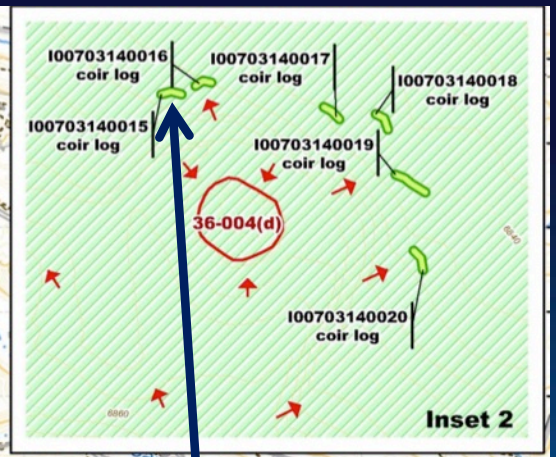
PT-SMA-4.2

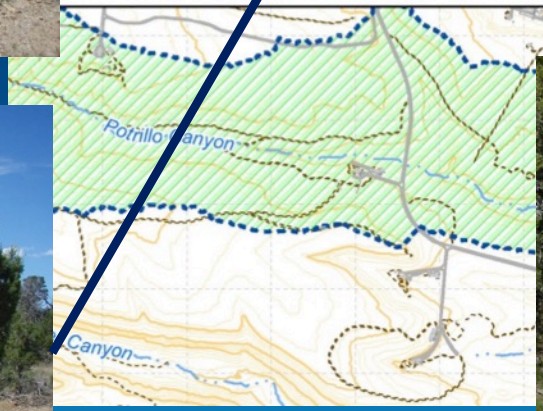


Sampler Location

PT-SMA-4.2







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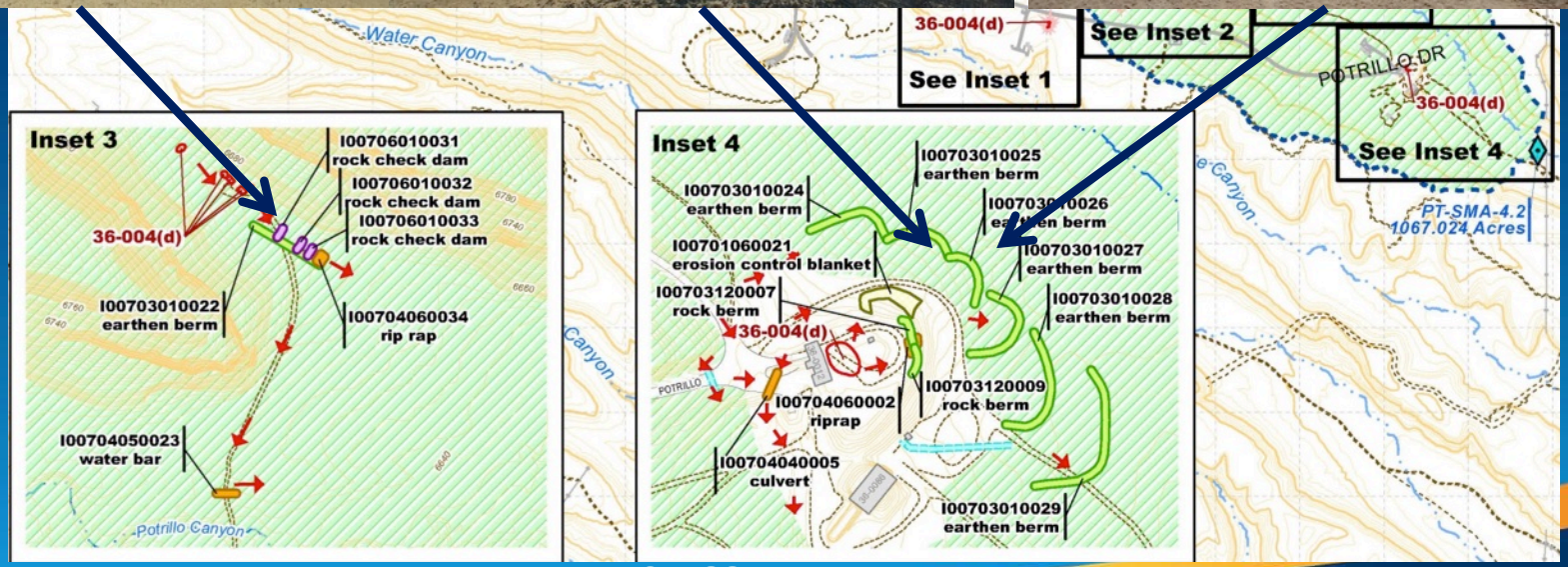
PT-SMA-4.2



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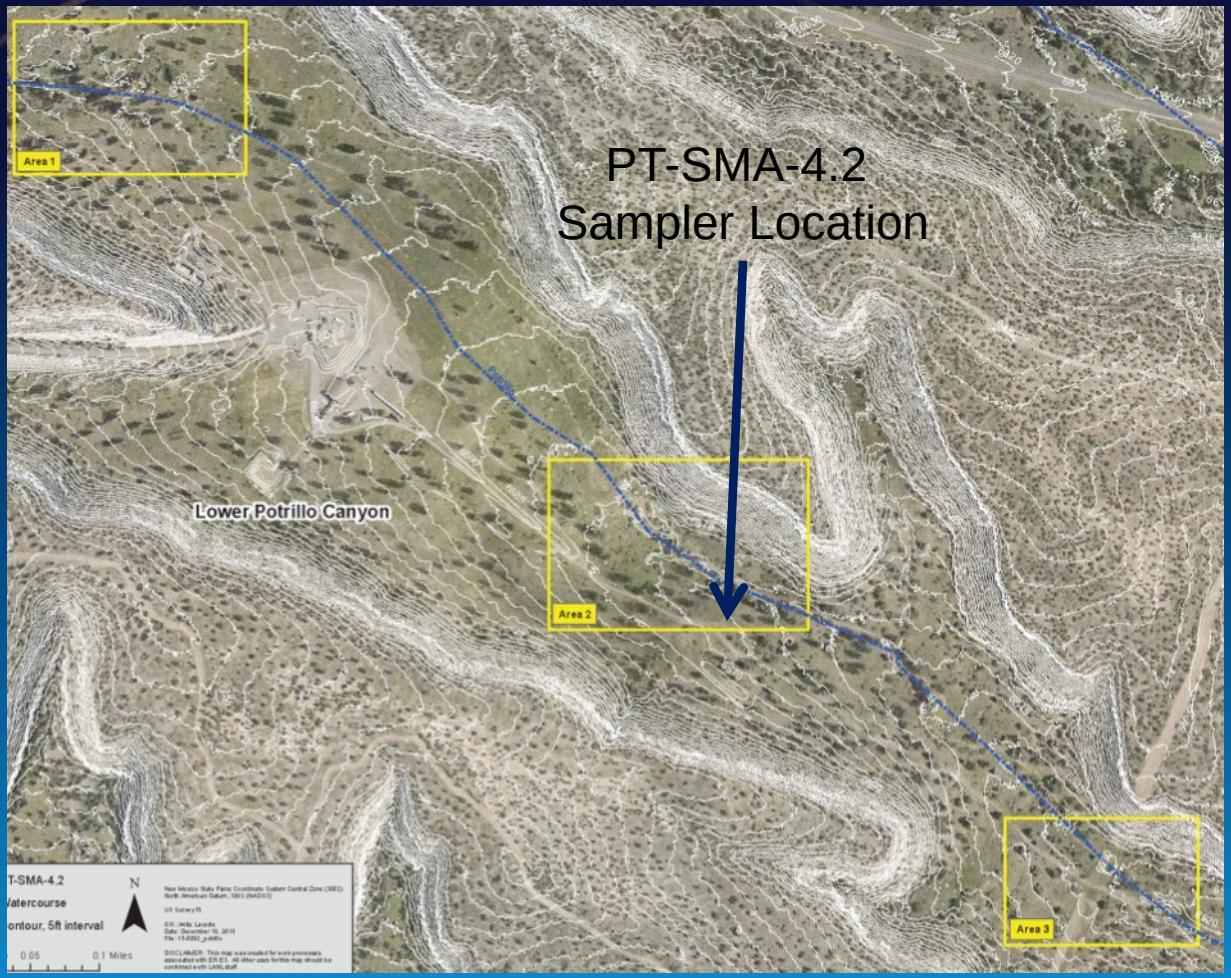
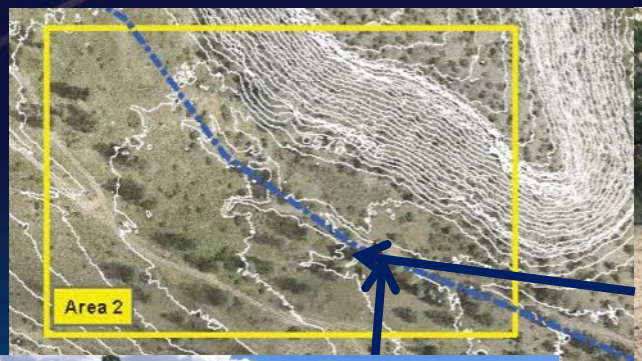
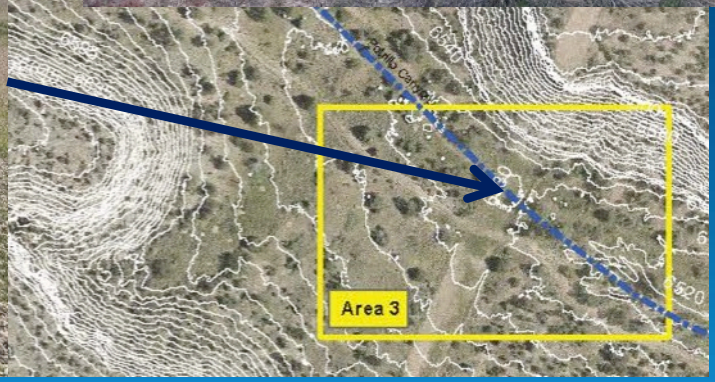

PT-SMA-4.2
Sampler Location
Area 1
Area 2
Area 3
Lower Potrillo Canyon
T-SMA-4.2
Watercourse
ontour, 5ft interval
N
0.05
0.1 Miles

PT-SMA-4.2

PT-SMA-4.2
Sampler Location

PT-SMA-4.2





Supplemental Environmental Projects

Sarah Holcomb

New Mexico Environment Department

Surface Water Quality Bureau

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Communities for Clean Water