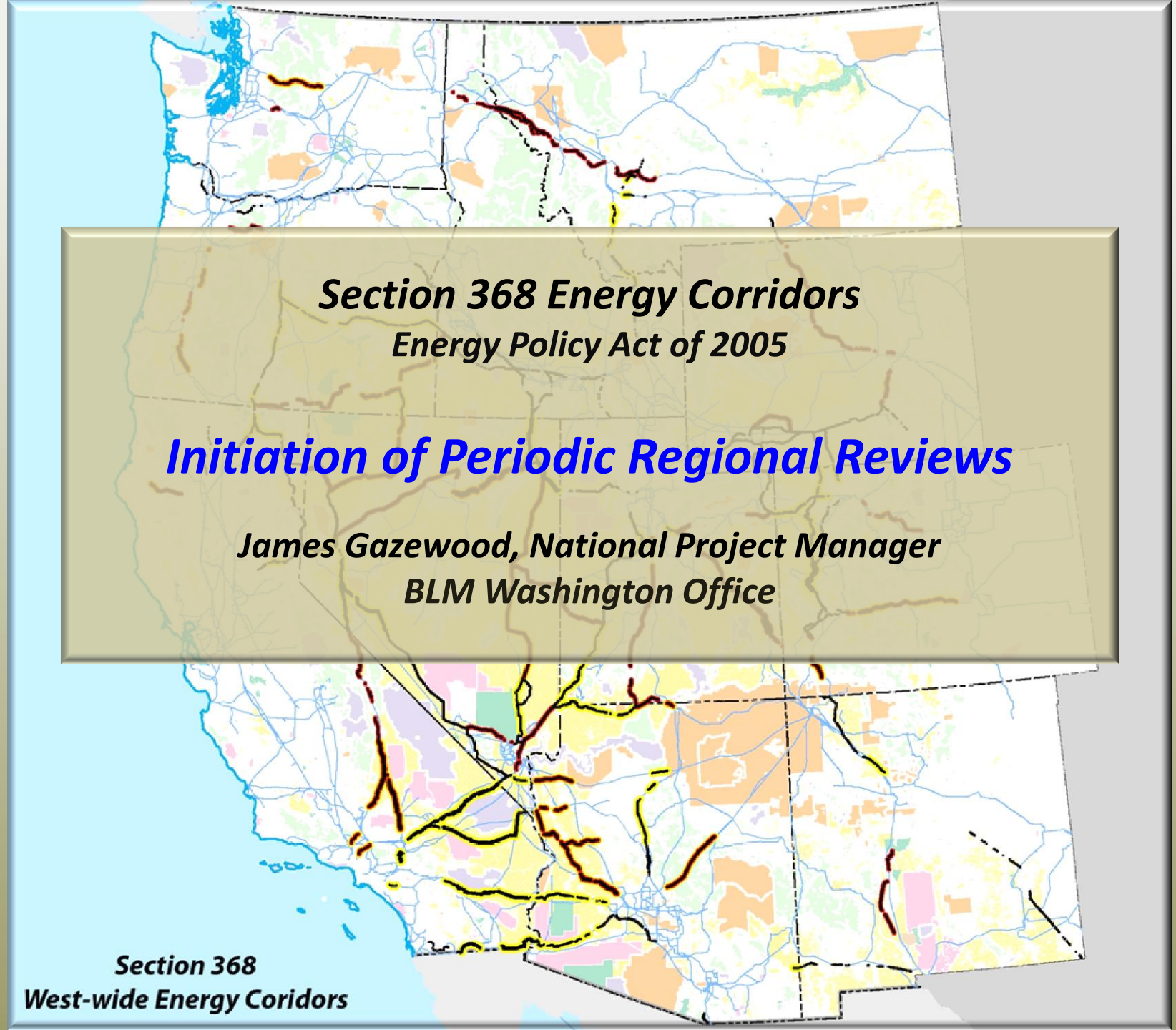


Section 368 Energy Corridors

Energy Policy Act of 2005

Initiation of Periodic Regional Reviews

James Gazewood, National Project Manager
BLM Washington Office

Section 368
West-wide Energy Coridors

Energy Corridors – Public Lands

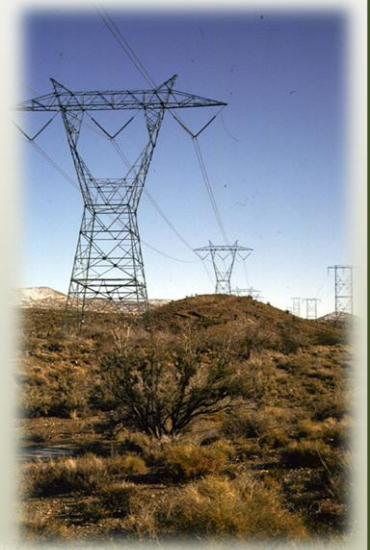
Presentation Outline

- Background: The Section 368 Energy Corridors
- Three Year Schedule to Conduct the Six Regional Reviews
- Overview of a Regional Review: The Two Public Input Phases
- Our End Product: Land Use Plan Recommendations
- Tools to Facilitate Stakeholder Understanding & Critical Input
- BLM & USFS Desire for Robust Stakeholder Engagement

Background: Section 368 Energy Corridors

Established under the 2005 Energy Policy Act:

- ✓ Energy Corridors in AZ, CA, CO, ID, MT, NV, NM, OR, UT, WA and WY
- ✓ For BLM: 5,000 Miles / 92 Land Use Plan Amendments
- ✓ For USFS: 990 Miles / 38 Land Use Plan Amendments

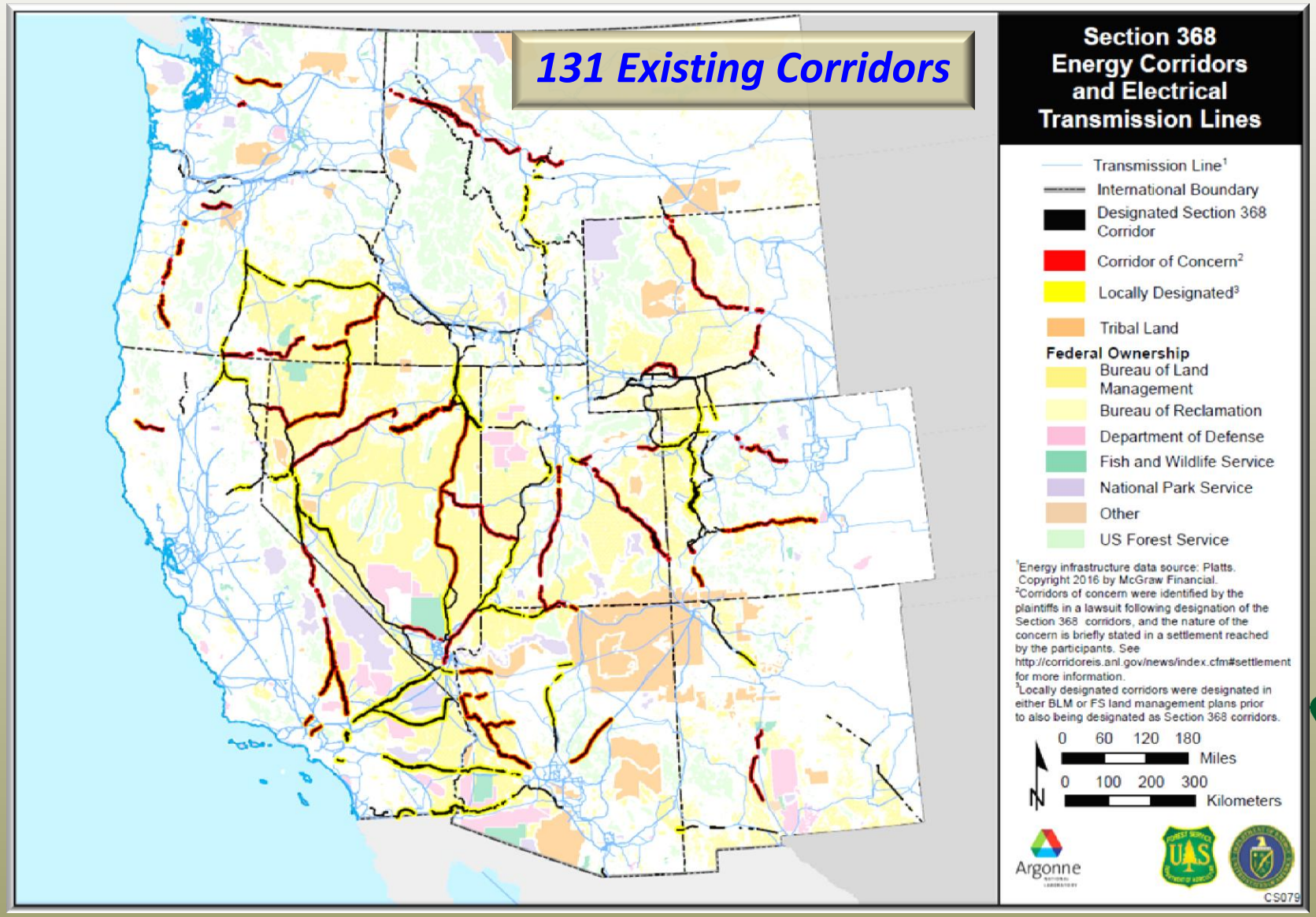


Energy Corridors – Public Lands

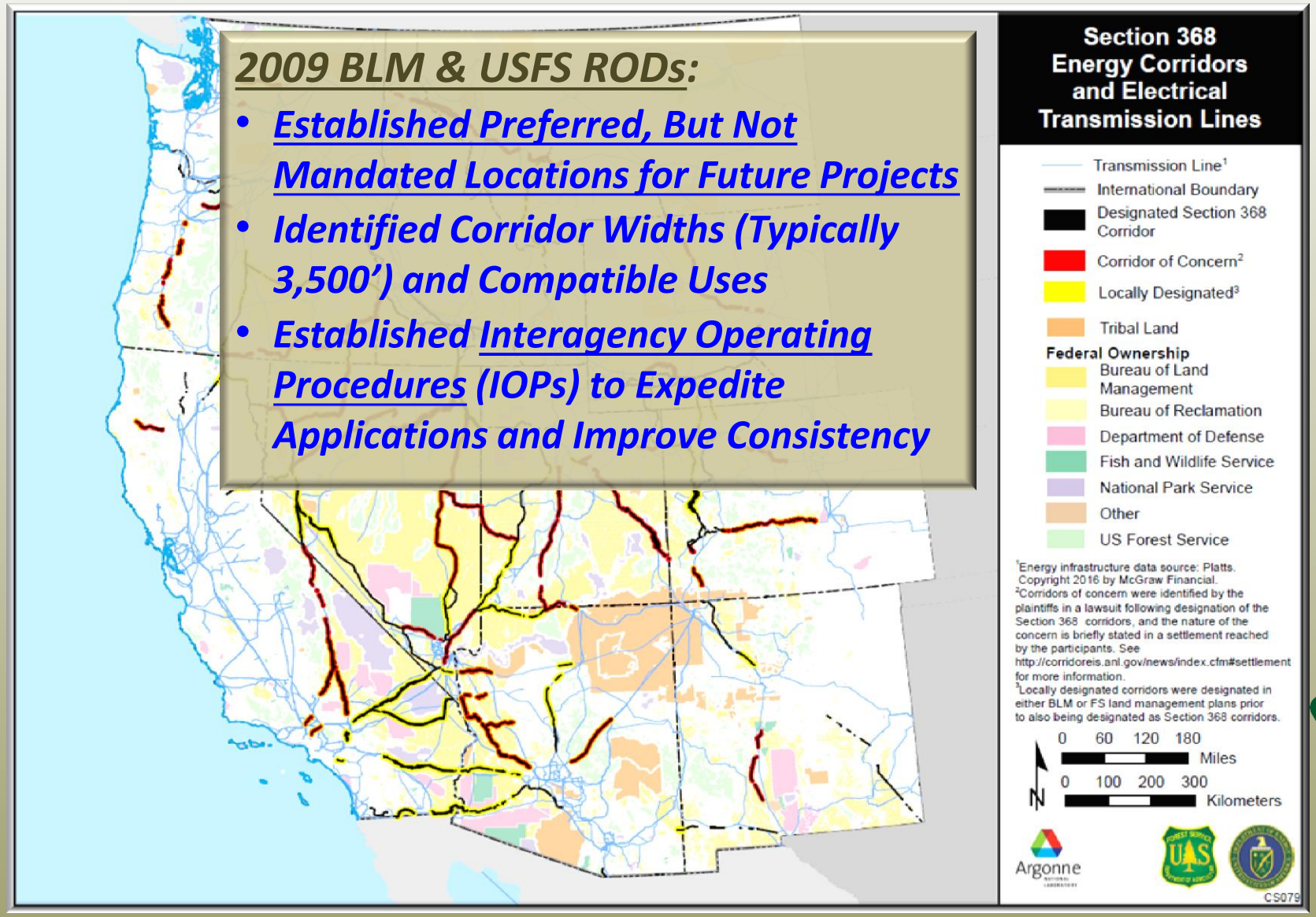
Background: 2012 Settlement Agreement Requirements

- ✓ Established Interagency Workgroup (BLM, USFS, DOE)
- ❑ Remaining Settlement Requirements:
  - ✓ Release of Corridor Study by Argonne National Lab (May 2016)
  - ✓ Initiation of Periodic Regional Reviews of the Corridors

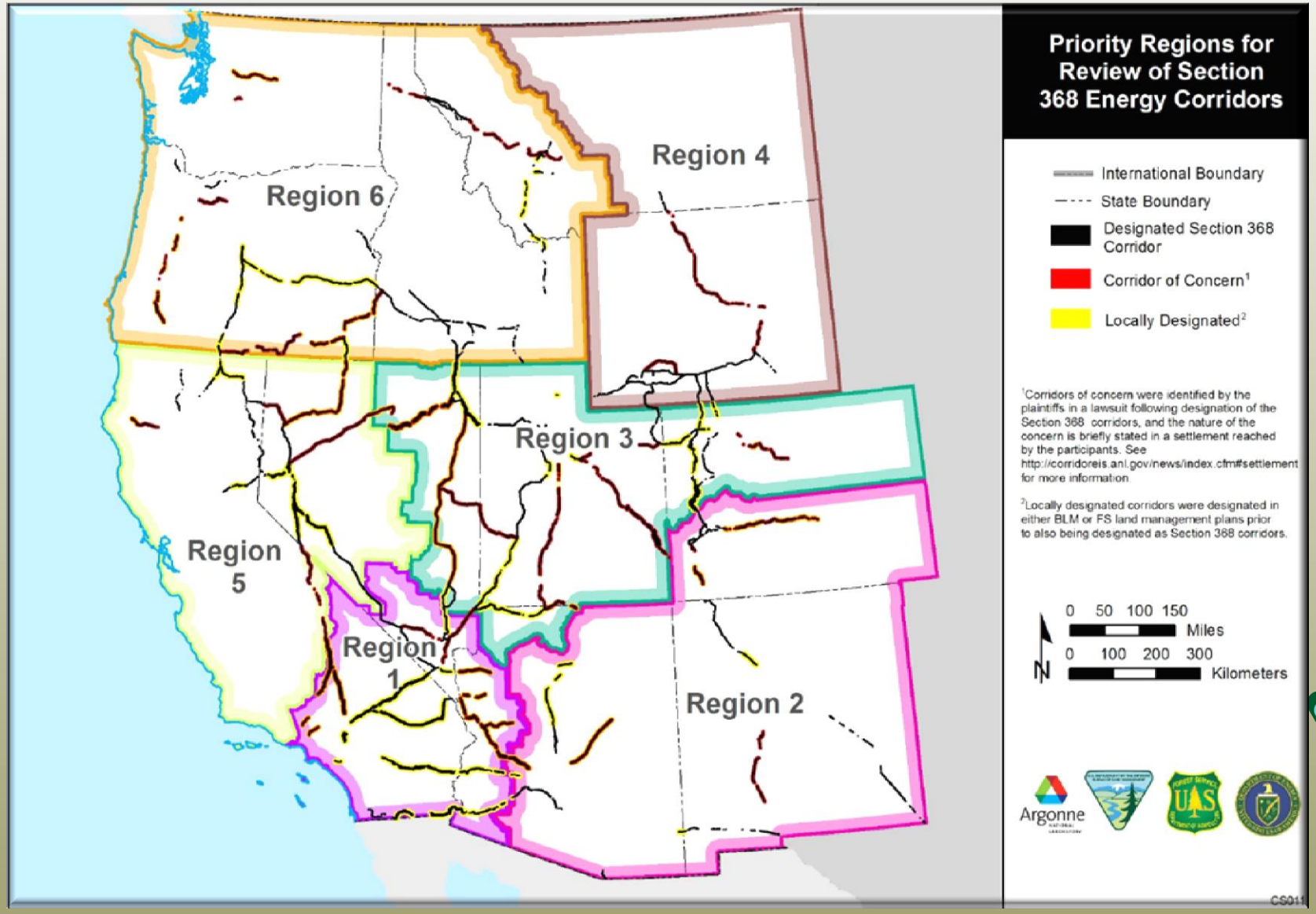
Background: Section 368 Energy Corridors



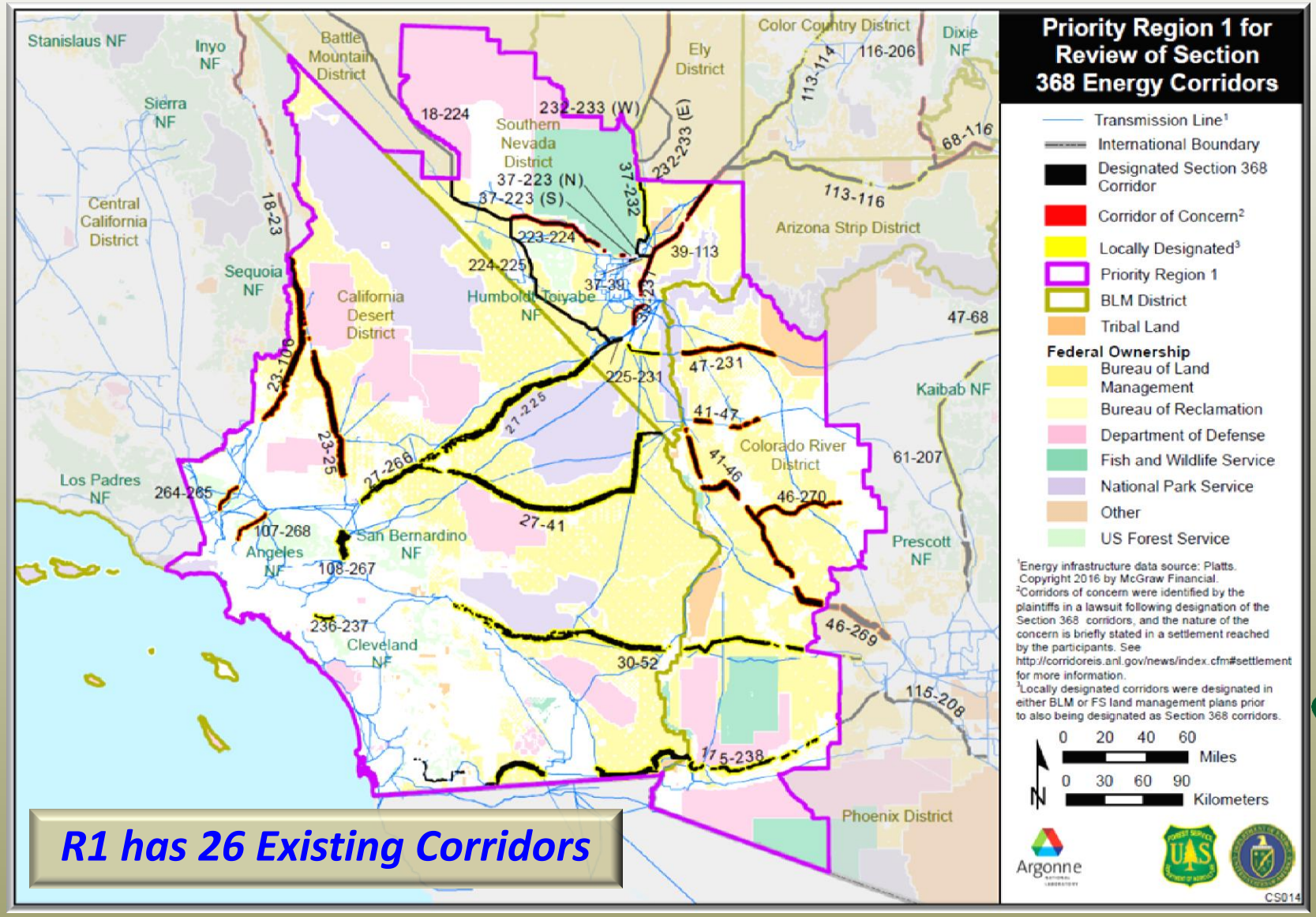
Background: Section 368 Energy Corridors



The Six Regional Reviews to be Conducted

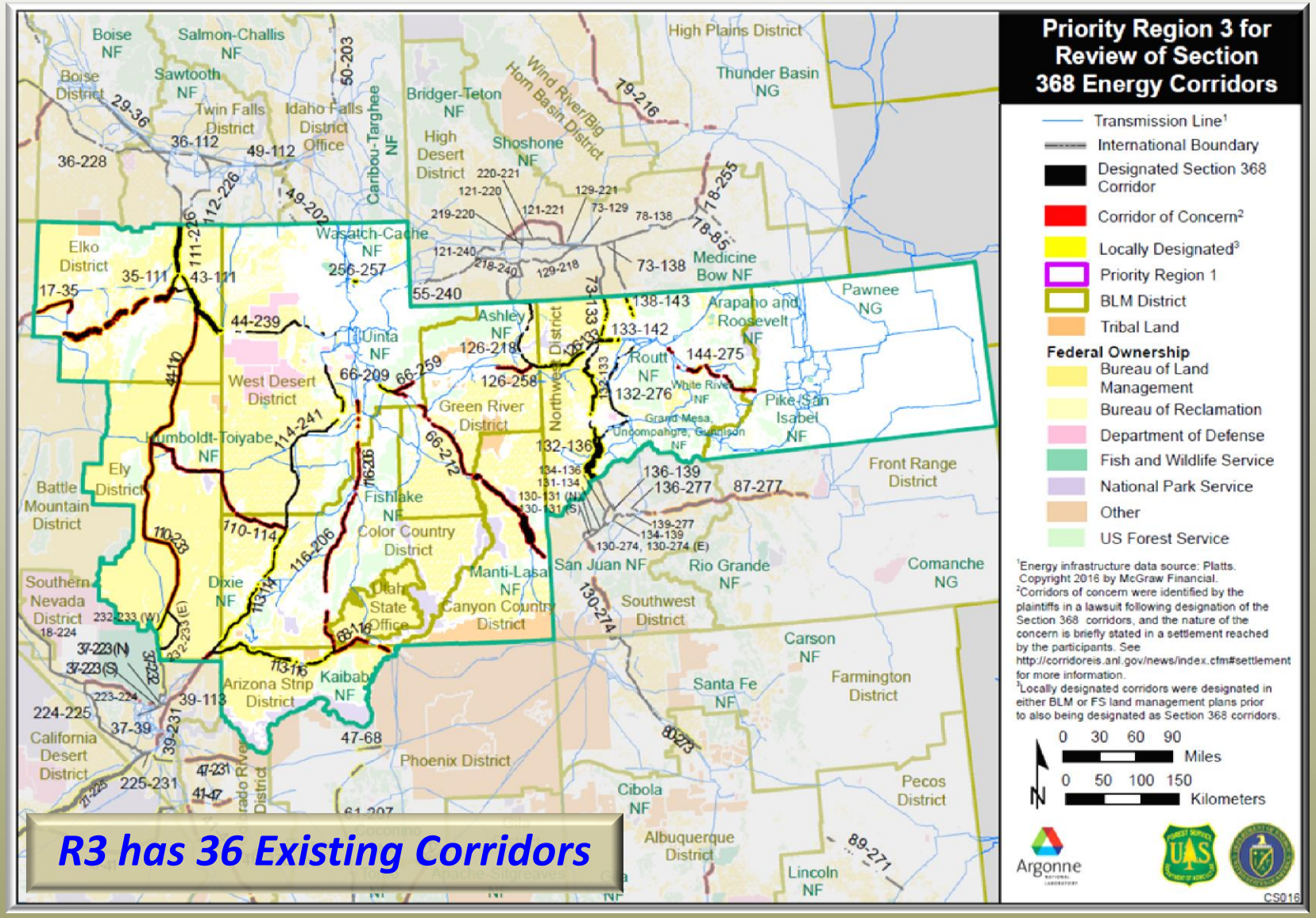


Six Regional Reviews to be Conducted – Region 1 Corridors



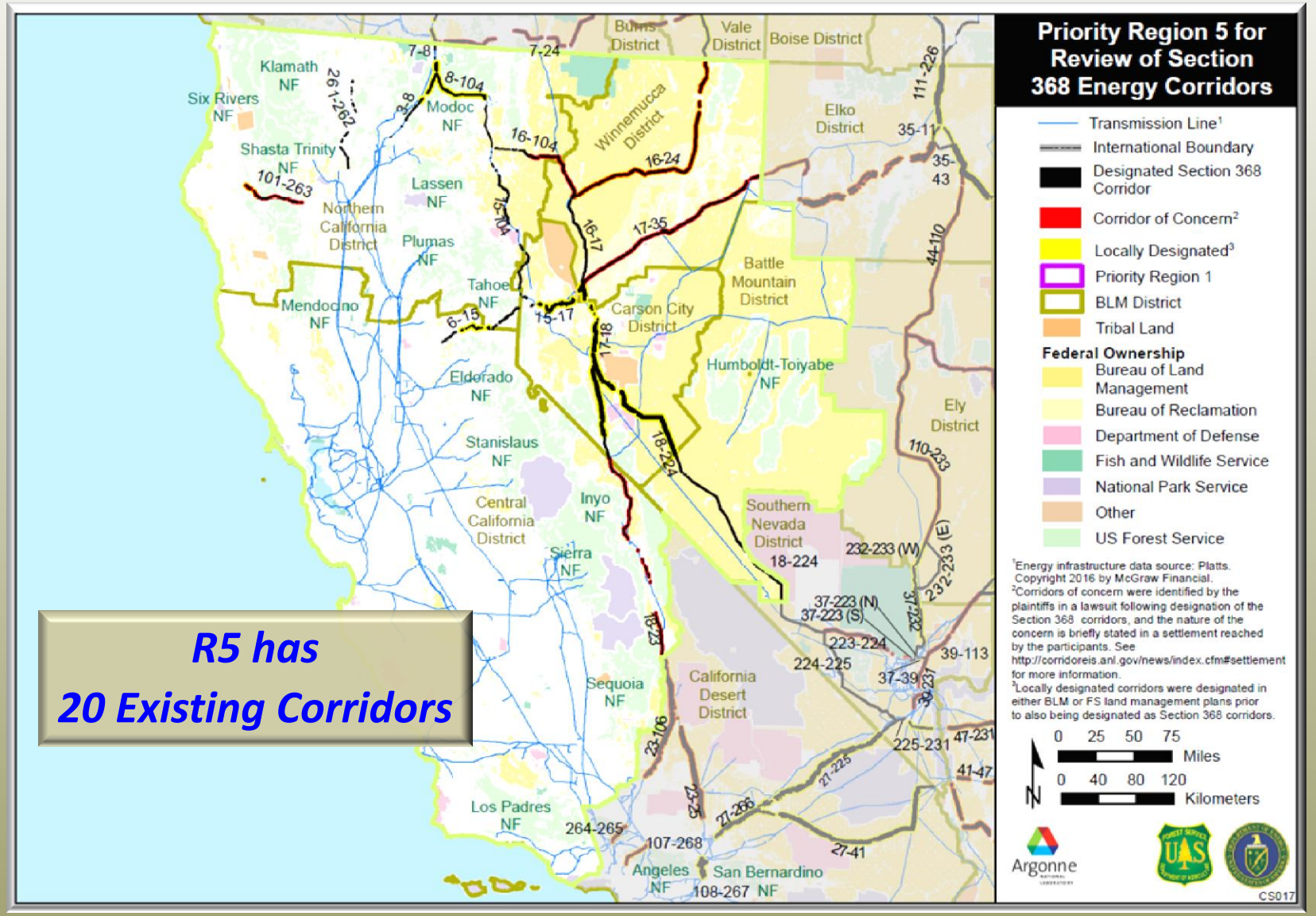
Energy Corridors – Public Lands

Six Regional Reviews to be Conducted – Region 3 Corridors



Energy Corridors – Public Lands

Six Regional Reviews to be Conducted – Region 5 Corridors

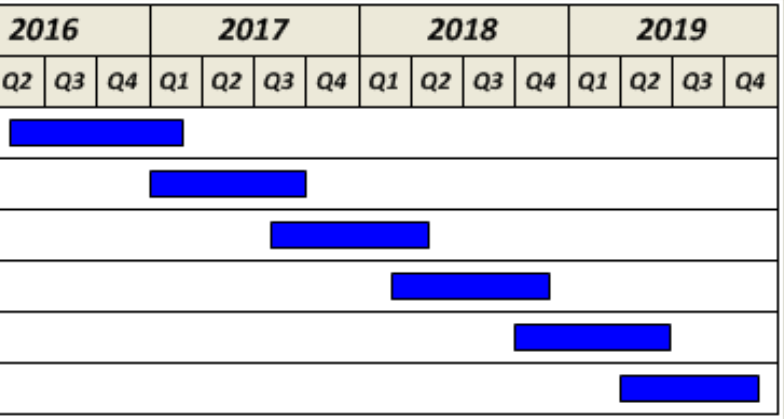


R5 has
20 Existing Corridors

Energy Corridors – Public Lands

Three+ Year Schedule: For Phased Reviews of Regions 1 - 6

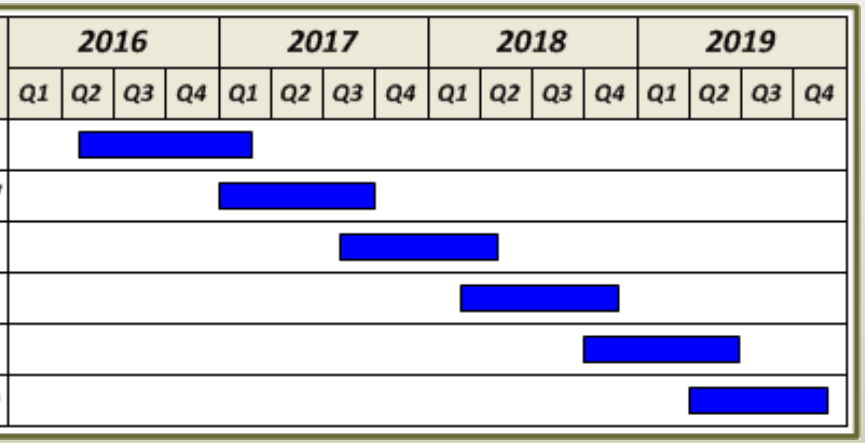
No	Regional Review	Start	Finish
1	S. CA, S. NV, W. AZ	May 2016	February 2017
2	E. AZ, NM, S. CO	January 2017	September 2017
3	N. CO, UT, E. NV, NW. AZ	August 2017	March 2017
4	WY, E. MT	February 2018	October 2018
5	N. CA, W. NV	September 2018	April 2019
6	W. MT, ID, OR, WA	March 2019	November 2019



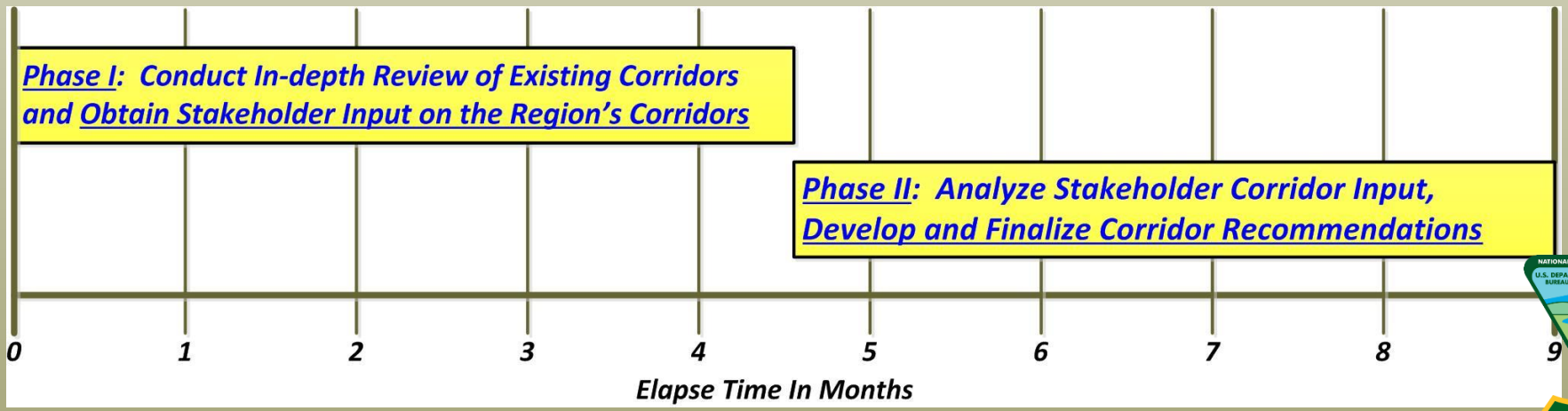
Energy Corridors – Public Lands

Three+ Year Schedule: For Phased Reviews of Regions 1 - 6

No	Regional Review	Start	Finish
1	S. CA, S. NV, W. AZ	May 2016	February 2017
2	E. AZ, NM, S. CO	January 2017	September 2017
3	N. CO, UT, E. NV, NW. AZ	August 2017	March 2017
4	WY, E. MT	February 2018	October 2018
5	N. CA, W. NV	September 2018	April 2019
6	W. MT, ID, OR, WA	March 2019	November 2019



Overview of a Regional Review: The Two Public Input Phases



Energy Corridors – Public Lands

Our End Product: Land Use Plan Recommendations

- ✓ Provide Recommendations to Add, Alter or Delete Corridors to be Carried out through Subsequent Land Use Planning Actions
  - ✓ Reviews are not NEPA-based. NEPA occurs during LUP Action
  - ✓ Stakeholder Input during Reviews will result in Recommendations for Potential Land Use Plan Amendments
  - ✓ Recognize Corridor Influence from Ongoing LUP Action
    - For BLM Nevada, Ongoing Las Vegas RMP Corridor Work is a Good Example
    - For BLM California, the DRECP Did Not Address Corridors – Placed Constraints
  - ✓ Recently Authorized or Pending Major Transmission / Pipeline Project Applications will Provide Insight on Further Corridor Additions or Alterations
  - ❖ Reviews Provide Geospatial-based Corridor Siting Information Intended to Best Meet Future BLM and USFS Planning Needs

Tools to Facilitate Stakeholder Understanding & Critical Input

✓ Developing Corridor Abstracts to Document Known Concerns

Corridor 30-52

Palo Verde - Palm Springs

Introduction

Corridor 30-52 extends west-east along Interstate 10 (I-10) from Palm Springs in southern California to the Palo Verde Nuclear Generating Station and the western suburbs of Phoenix in central Arizona. Federally-designated portions of this corridor are entirely on BLM-administered land, with a 10,560-ft width over most of its extent in California, and 5,280 ft-width in Arizona. It is designated as a multi-modal corridor that can accommodate both electrical transmission and pipeline projects. The corridor spans a 199.7-mile distance, with 97.7 designated centerline miles. The designated area is 949,793 acres/148.4 square miles. This corridor is in Riverside County in California, and La Paz and Maricopa Counties in Arizona. BLM jurisdictions include the California Desert District in California and the Lake Havasu, Lower Sonoran, Hassayampa, and Yuma Field Offices in Arizona. This corridor is primarily in Priority Region 1, but extends into Priority Region 2 between mileposts (MP) 174.0 and 199.7.

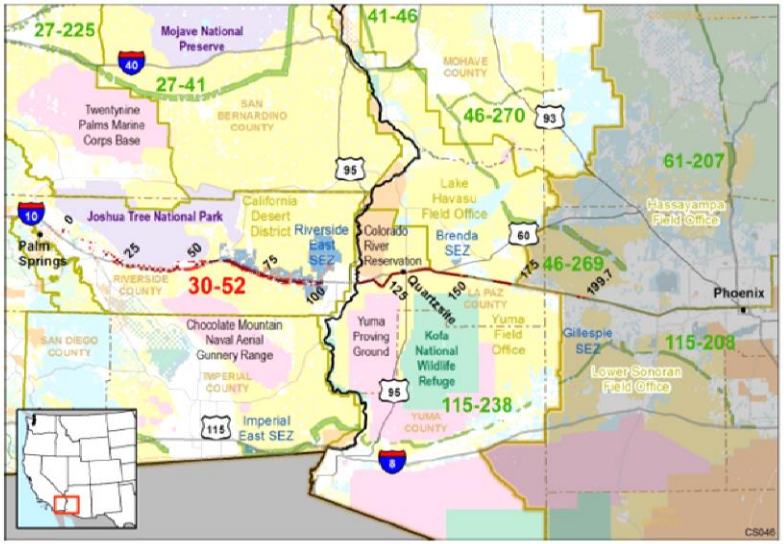


Figure 1. Corridor 30-52 *(Key for Figures 1-3 can be found on the last page of the abstract)*

1

Tools to Facilitate Stakeholder Understanding & Critical Input

✓ Developing Corridor Abstracts to Document Known Concerns

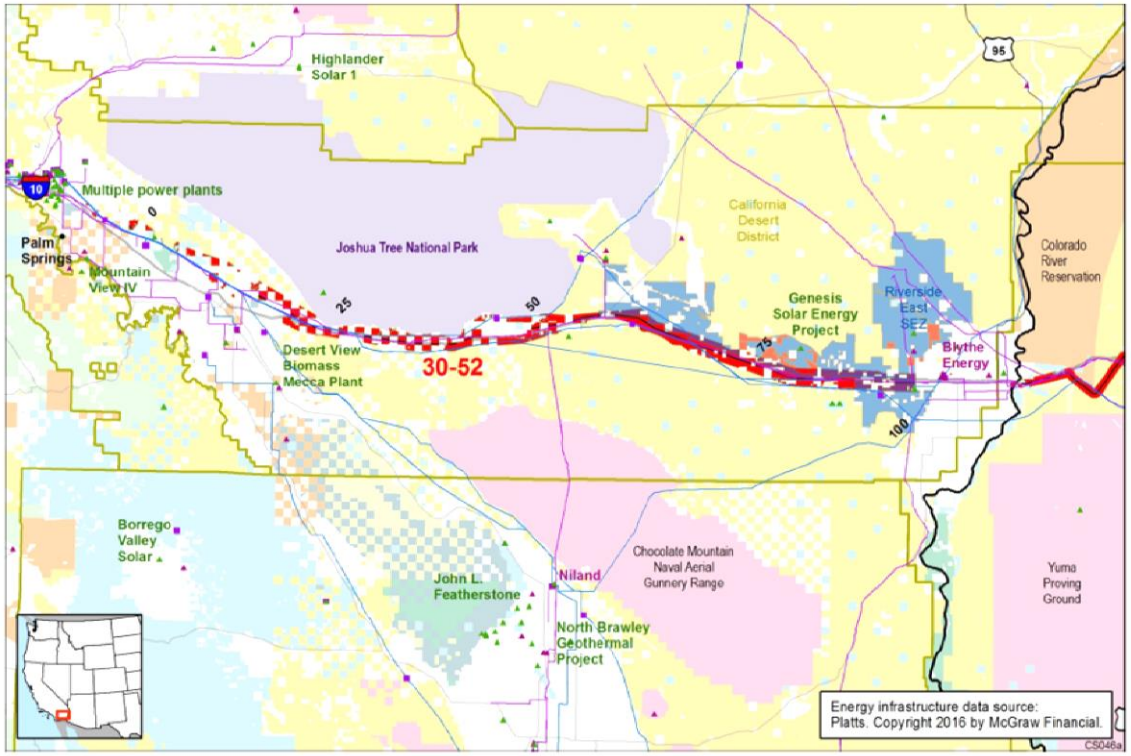


Figure 2. West portion of Corridor 30-52, including existing energy infrastructure

2

Tools to Facilitate Stakeholder Understanding & Critical Input

✓ Developing Corridor Abstracts to Document Known Concerns

Figure

Corridor Rationale

During scoping for the WWEC PEIS, routes generally following this route were suggested by the American Wind Energy Association; New Mexico Energy, Minerals, and Natural Resources Department; and the Western Utility Group. Current infrastructure occupying parts of the corridor includes I-10, transmission lines operated by the Metropolitan Water District (230 kV), and the Southern California Edison Company (115 to 500 kV); and natural gas pipelines operated by El Paso, and Southern California Gas Company. Southern California Edison Company recently completed a 500-kV project within parts of the corridor in California between the Devers and Colorado River substations.

Within the California Desert District, the BLM Palm Springs-South Coast Field Office has received 24 ROW applications using Corridor 30-52 since publication of the PEIS. Two of the applications were entirely in the corridor, while the others were partly within it.

Several new applications were filed for energy storage or production within the corridor and adjacent to substations that are between 5 and 25 Megawatts. Given that many of the utility companies are on target or exceeding their target for providing a percentage of the energy portfolio with renewable energy, not many new, large power purchase agreements are being issued. However, the utility companies are going out with smaller PPAs, which have modified the types of projects being proposed on public lands.

Five major transmission lines and several major natural gas pipelines run through the corridor. Many of the energy production projects along the I-10 and Riverside East Solar Energy Zone have generation-tie lines that use the corridors, which create congestion near the major substations (Red Bluff and Colorado River). This congestion is compounded by the Mecca Hills and Orocopia Wilderness and Joshua Tree National Park reducing the size of and potential for increasing the size of the corridor.

Corridor of Concern Status

This corridor was not identified in the Settlement Agreement as a Corridor of Concern.

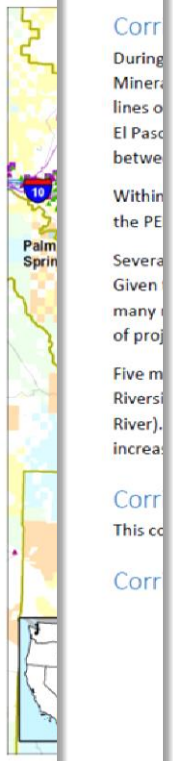
Corridor Analysis

- ☒ **Energy Planning Opportunities**
  - ☒ Appropriate and acceptable uses
  - ☒ WWEC Purpose (e.g., renewable energy)
  - ☐ Transmission and pipeline capacity opportunity
- ☒ **Energy Planning Concerns**
  - ☒ Physical barrier
  - ☒ Jurisdictional concern
  - ☒ Corridor alignment and spacing
  - ☒ Transmission and pipeline capacity concern
- ☒ **Land Management Responsibilities and Environmental Concerns**
  - ☐ Acoustics
  - ☒ Air quality
  - ☐ Climate change
  - ☐ Cultural resources
  - ☒ Ecological resources
  - ☐ Environmental Justice
  - ☒ Hydrological resources
  - ☒ Lands and Realty
  - ☐ Lands with wilderness characteristics
  - ☐ Livestock Grazing
  - ☐ Paleontology
  - ☒ Public Access and Recreation
  - ☐ Socioeconomics
  - ☐ Soils/erosion
  - ☒ Specially designated areas
  - ☒ Tribal concerns
  - ☒ Visual resources
  - ☐ Wild horses and burros
- ☒ **Interagency Operating Procedures**

4

Tools to Facilitate Stakeholder Understanding & Critical Input

✓ Developing Corridor Abstracts to Document Known Concerns

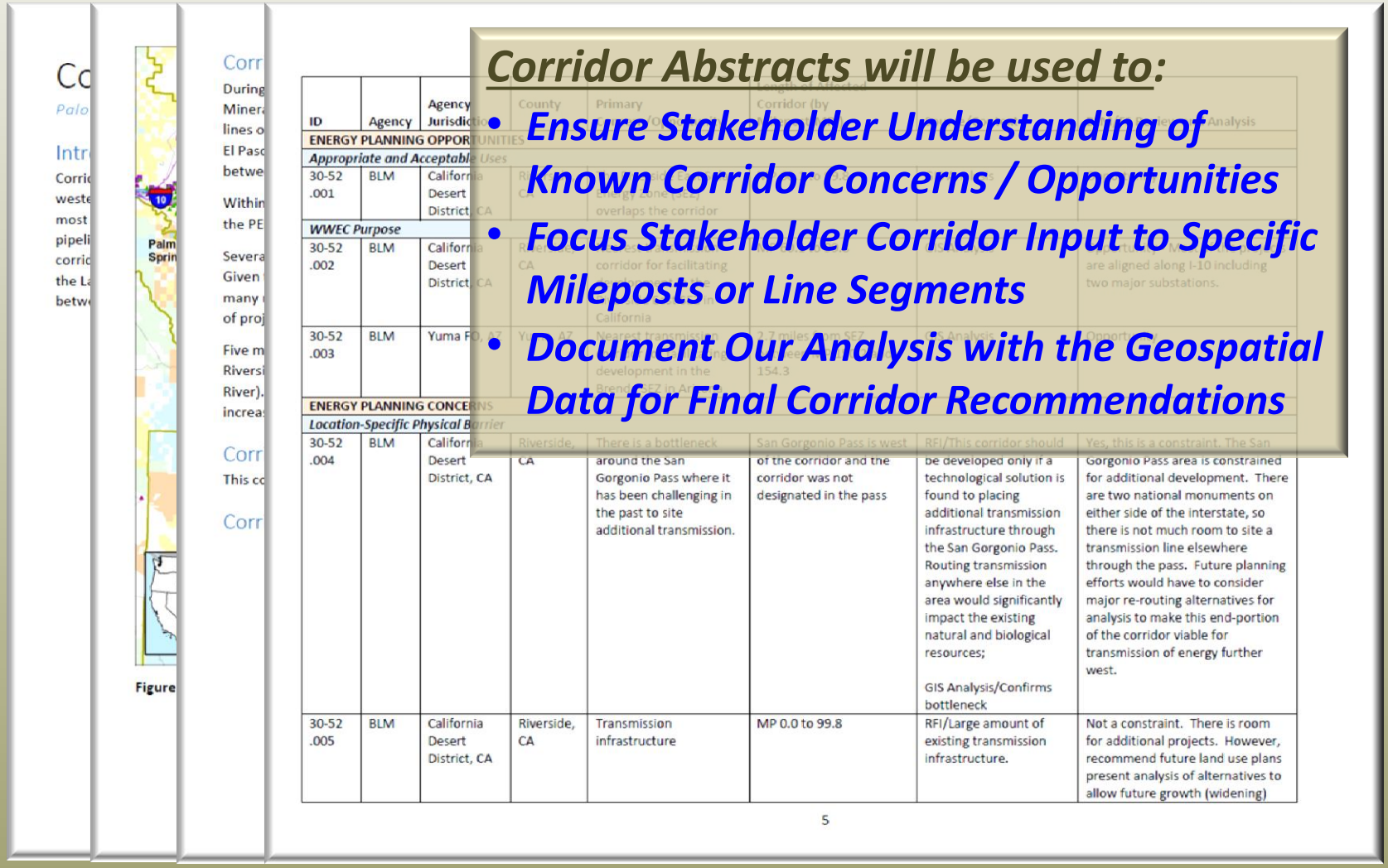


ID	Agency	Agency Jurisdiction	County	Primary Concern/Opportunity	Length of Affected Corridor (by Milepost[MP])	Source/Context	BLM/FS Review and Analysis
ENERGY PLANNING OPPORTUNITIES							
Appropriate and Acceptable Uses							
30-52 .001	BLM	California Desert District, CA	Riverside, CA	The Riverside East Solar Energy Zone (SEZ) overlaps the corridor	MP 60.1 to 99.8	GIS Analysis	Opportunity
WWEC Purpose							
30-52 .002	BLM	California Desert District, CA	Riverside, CA	Nearest transmission corridor for facilitating development in the Riverside East SEZ in California	MP 60.1 to 99.8	GIS Analysis	Opportunity - Most of the projects are aligned along I-10 including two major substations.
30-52 .003	BLM	Yuma FO, AZ	Yuma, AZ	Nearest transmission corridor for facilitating development in the Brenda SEZ in Arizona	2.7 miles from SEZ between MP 150.2 and 154.3	GIS Analysis	Opportunity
ENERGY PLANNING CONCERNS							
Location-Specific Physical Barrier							
30-52 .004	BLM	California Desert District, CA	Riverside, CA	There is a bottleneck around the San Gorgonio Pass where it has been challenging in the past to site additional transmission.	San Gorgonio Pass is west of the corridor and the corridor was not designated in the pass	RFI/This corridor should be developed only if a technological solution is found to placing additional transmission infrastructure through the San Gorgonio Pass. Routing transmission anywhere else in the area would significantly impact the existing natural and biological resources; GIS Analysis/Confirms bottleneck	Yes, this is a constraint. The San Gorgonio Pass area is constrained for additional development. There are two national monuments on either side of the interstate, so there is not much room to site a transmission line elsewhere through the pass. Future planning efforts would have to consider major re-routing alternatives for analysis to make this end-portion of the corridor viable for transmission of energy further west.
30-52 .005	BLM	California Desert District, CA	Riverside, CA	Transmission infrastructure	MP 0.0 to 99.8	RFI/Large amount of existing transmission infrastructure.	Not a constraint. There is room for additional projects. However, recommend future land use plans present analysis of alternatives to allow future growth (widening)

5

Tools to Facilitate Stakeholder Understanding & Critical Input

✓ Developing Corridor Abstracts to Document Known Concerns



Figure

ID	Agency	Agency Jurisdiction	County	Primary	Length of Selected Corridor (by MP)		Analysis
ENERGY PLANNING OPPORTUNITIES							
Appropriate and Acceptable Uses							
30-52 .001	BLM	California Desert District, CA	Riverside, CA	Energy Zone (SEZ) overlaps the corridor			
WWEC Purpose							
30-52 .002	BLM	California Desert District, CA	Riverside, CA	corridor for facilitating development in the California			are aligned along I-10 including two major substations.
30-52 .003	BLM	Yuma FO, AZ	Yuma, AZ		2.7 miles from 557	GIS Analysis	
ENERGY PLANNING CONCERNS							
Location-Specific Physical Barrier							
30-52 .004	BLM	California Desert District, CA	Riverside, CA	There is a bottleneck around the San Gorgonio Pass where it has been challenging in the past to site additional transmission.	San Gorgonio Pass is west of the corridor and the corridor was not designated in the pass	RFI/This corridor should be developed only if a technological solution is found to placing additional transmission infrastructure through the San Gorgonio Pass. Routing transmission anywhere else in the area would significantly impact the existing natural and biological resources; GIS Analysis/Confirms bottleneck	Yes, this is a constraint. The San Gorgonio Pass area is constrained for additional development. There are two national monuments on either side of the interstate, so there is not much room to site a transmission line elsewhere through the pass. Future planning efforts would have to consider major re-routing alternatives for analysis to make this end-portion of the corridor viable for transmission of energy further west.
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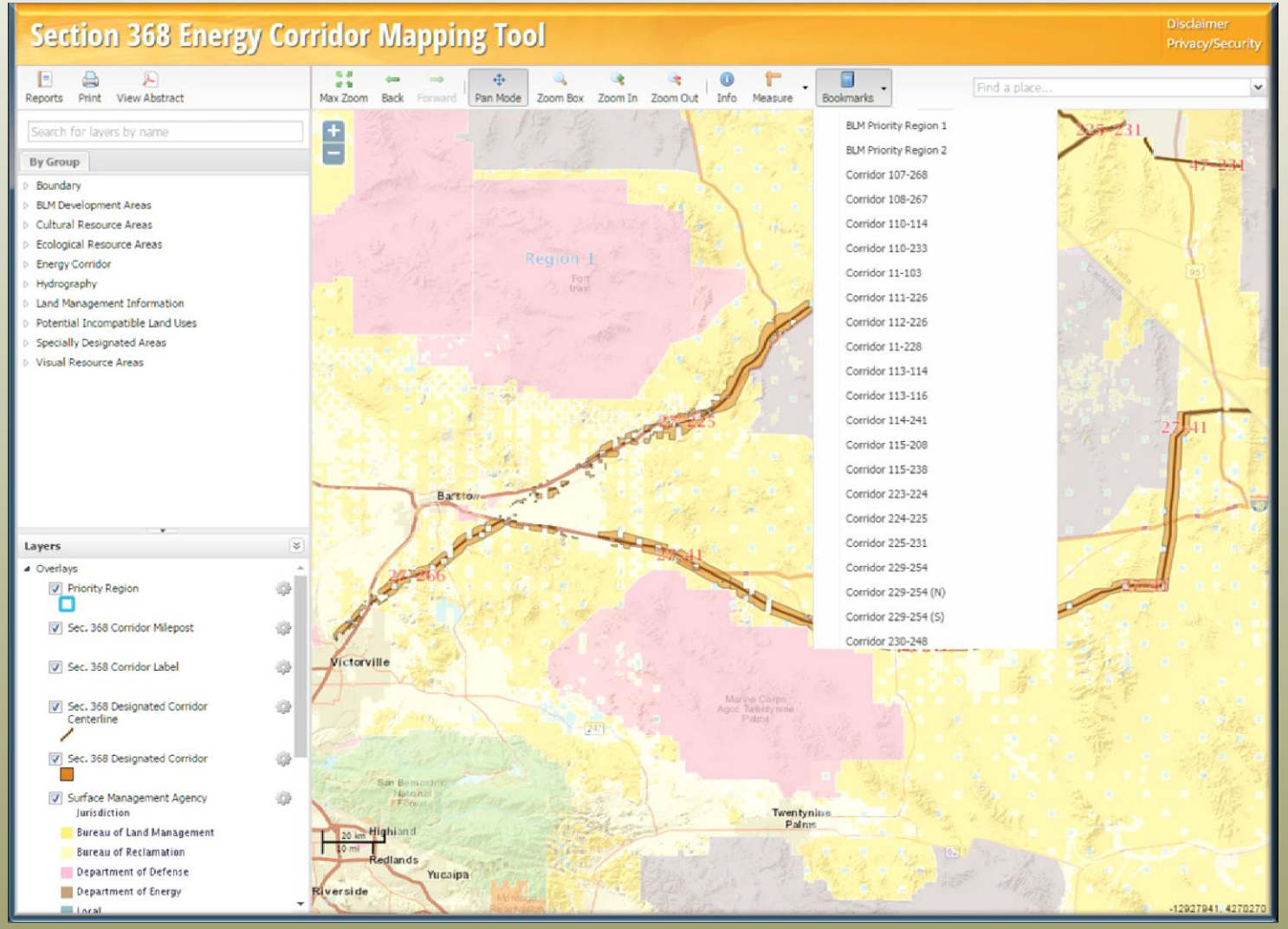
5

Corridor Abstracts will be used to:

- *Ensure Stakeholder Understanding of Known Corridor Concerns / Opportunities*
- *Focus Stakeholder Corridor Input to Specific Mileposts or Line Segments*
- *Document Our Analysis with the Geospatial Data for Final Corridor Recommendations*

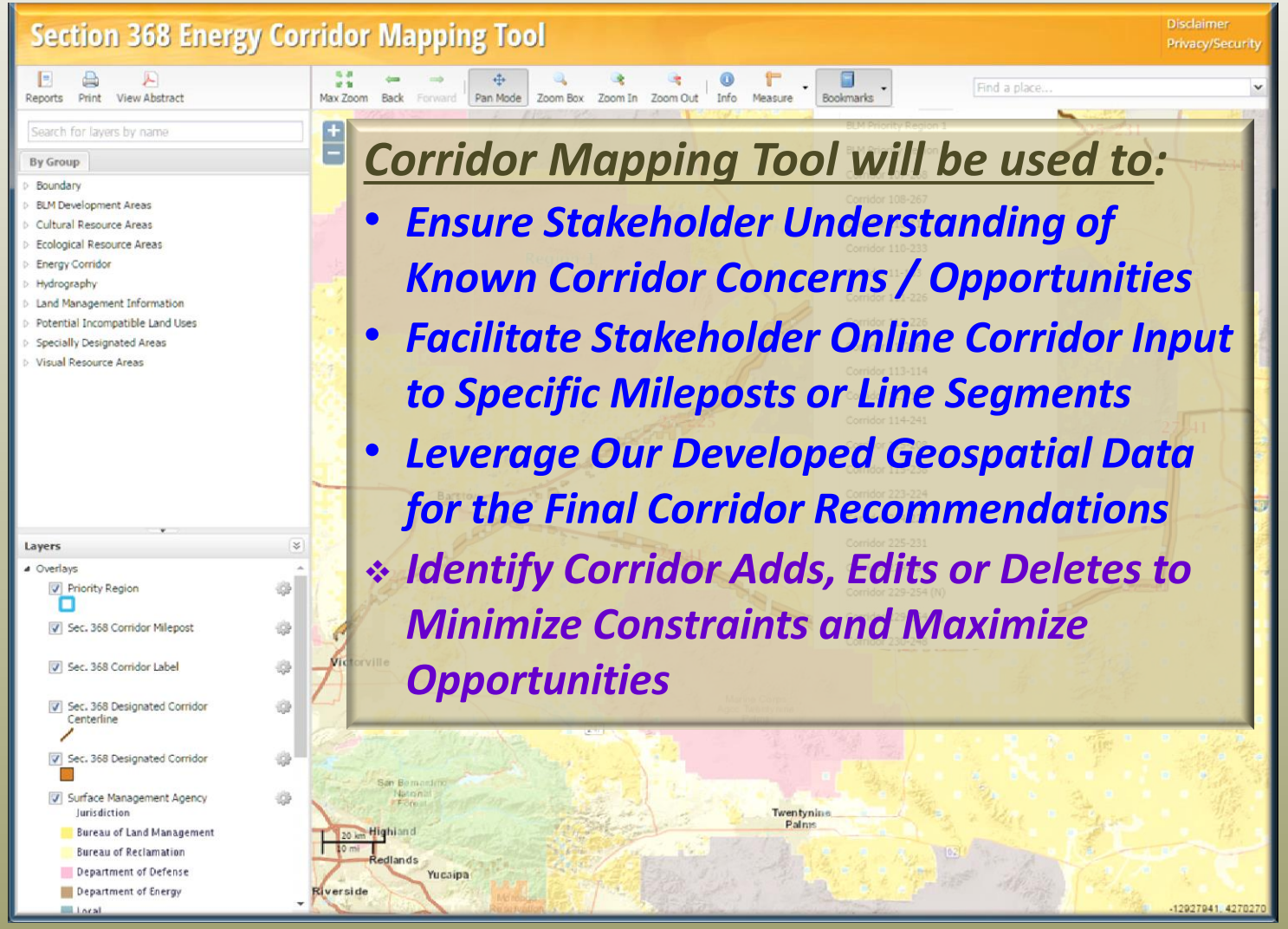
Tools to Facilitate Stakeholder Understanding & Critical Input

✓ *Standing-up a Sec. 368 Energy Corridor Internet Mapper Tool*



Tools to Facilitate Stakeholder Understanding & Critical Input

✓ *Standing-up a Sec. 368 Energy Corridor Internet Mapper Tool*



Corridor Mapping Tool will be used to:

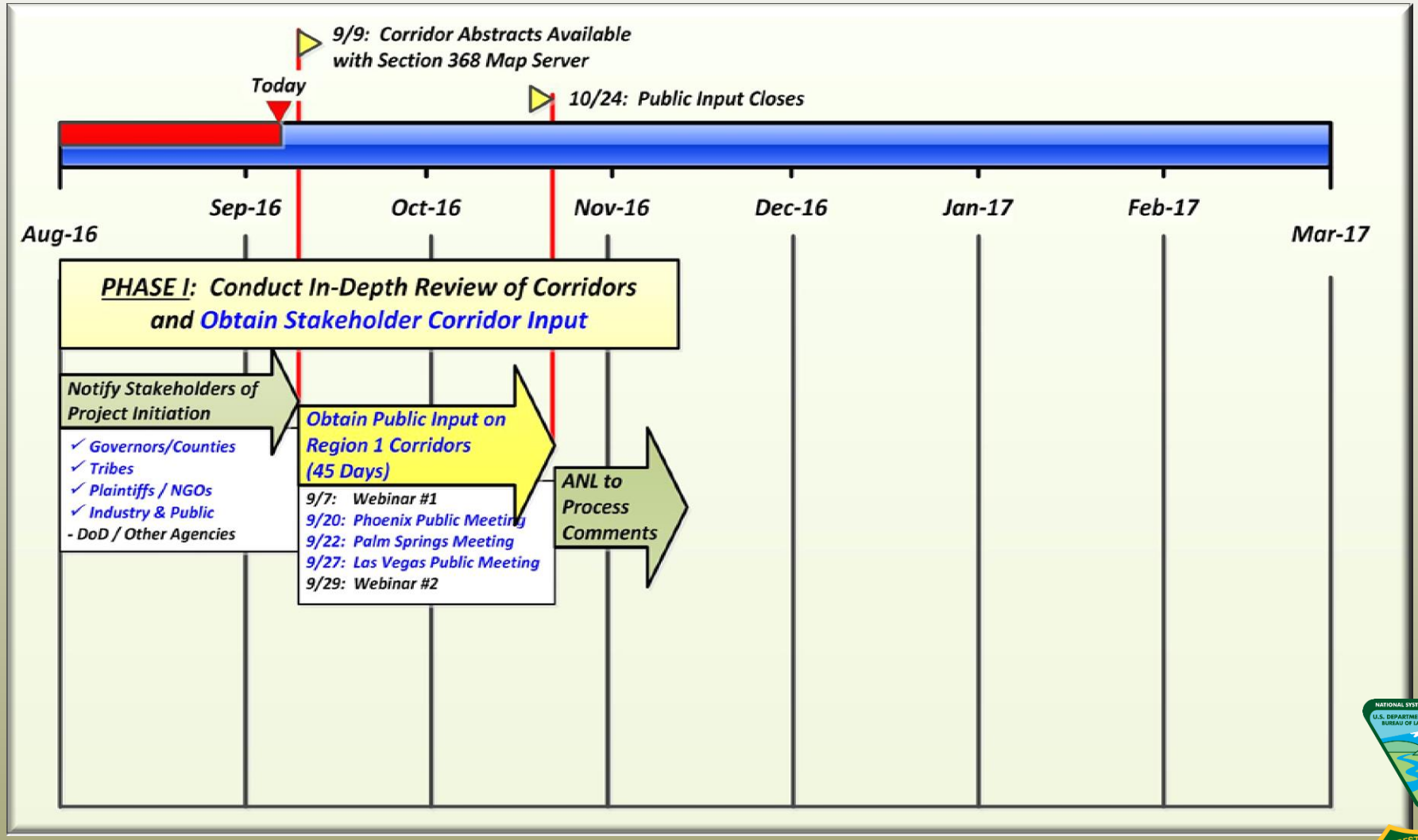
- ***Ensure Stakeholder Understanding of Known Corridor Concerns / Opportunities***
- ***Facilitate Stakeholder Online Corridor Input to Specific Mileposts or Line Segments***
- ***Leverage Our Developed Geospatial Data for the Final Corridor Recommendations***

❖ ***Identify Corridor Adds, Edits or Deletes to Minimize Constraints and Maximize Opportunities***

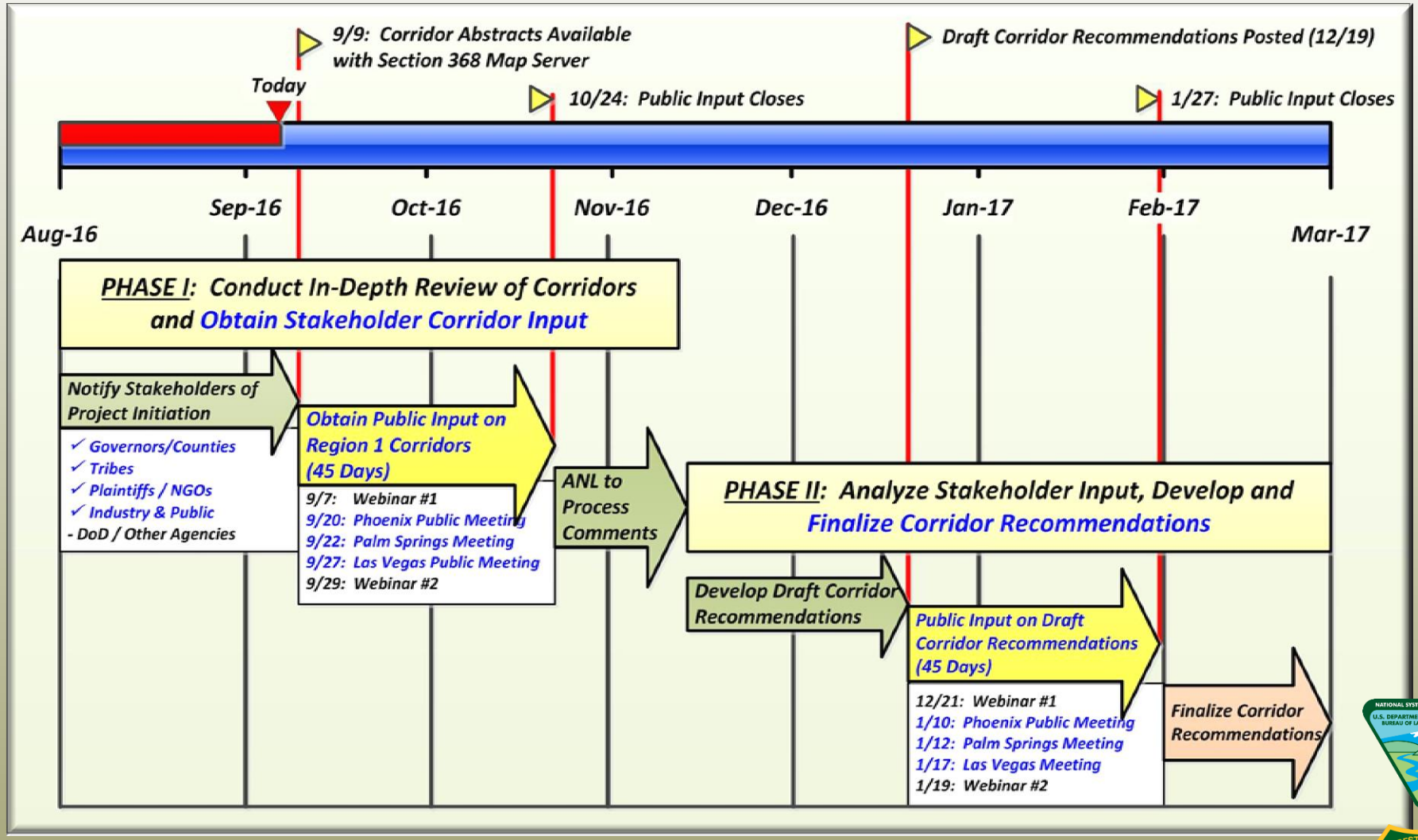
BLM & USFS Desire for Robust Stakeholder Engagement

- ✓ *Initiated Formal Region 1 Stakeholder Notification with*
  - ✓ *Governors of AZ, CA and NV*
  - ✓ *County Commissioners*
  - ✓ *Tribes and BIA*
  - ✓ *BLM Resource Advisory Councils*
  - ✓ *Settlement Plaintiff's / NGOs*
  - ✓ *Western Electrical Coordinating Council (WECC) [2024/2026 Study Program Spatial Assessment] and the California RETI 2.0 Project*
- ❑ *Initiating Contact with*
  - *The Department of Defense*
  - *Industry: Utilities, Transmission / Pipeline Companies, Power Project Generators & Regional Transmission Planning Entities*
  - *The General Public*

Region 1 Stakeholder Input Schedule: Phases I & II



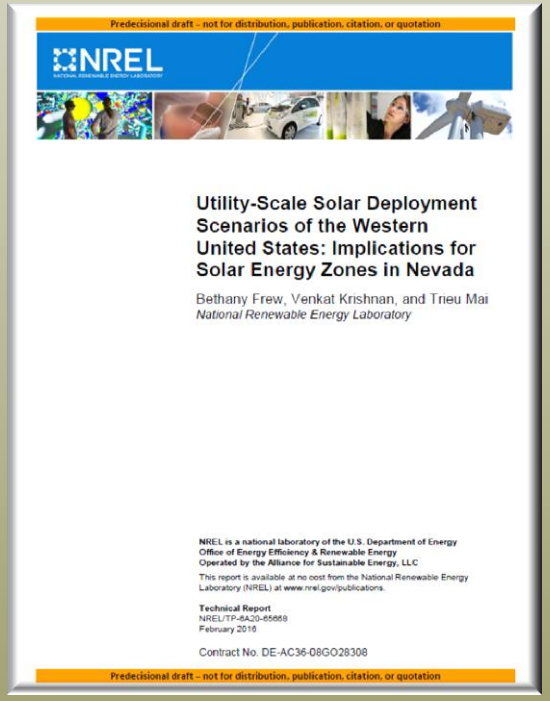
Region 1 Stakeholder Input Schedule: Phases I & II



- ***The Same Stakeholder Input Process will be Used for Regions 2-6***

Bodies of Work of Potential Importance to NV Grid TAC

- ✓ BLM Technical Studies
  - ✓ Argonne National Lab's Sec. 368 Corridor Study
  - ✓ WECC 2014 Study Case on BLM Solar Energy Zones (In CA/Out CA)
  - ✓ NREL's Utility-Scale Solar Deployment Study for Western US & NV
  - ❑ WECC 2016 Special Study for Sec. 368 Energy Corridors. Identify High Utilization WECC Pathways in Proximity to 368 Corridors for
    - ➢ High RPS
    - ➢ Low & High Natural Gas Price
    - ➢ High Distributed Generation (PV)
    - ➢ Coal Retirements
    - ➢ 2026 Common Case


Predecisional draft – not for distribution, publication, citation, or quotation

NREL

Utility-Scale Solar Deployment Scenarios of the Western United States: Implications for Solar Energy Zones in Nevada

Bethany Frew, Venkat Krishnan, and Trieu Mai
National Renewable Energy Laboratory

NREL is a national laboratory of the U.S. Department of Energy
Office of Energy Efficiency & Renewable Energy
Operated by the Alliance for Sustainable Energy, LLC

This report is available at no cost from the National Renewable Energy Laboratory (NREL) at www.nrel.gov/publications.

Technical Report
NREL/TP-6A20-65668
February 2016

Contract No. DE-AC36-08GO28308

Predecisional draft – not for distribution, publication, citation, or quotation

Energy Corridors – Public Lands

Sec. 368 Energy Corridor - Information Resources

Points of Contact:

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- Stephen Fusilier, Branch Chief, Rights-of-Way, BLM WO sfusilie@blm.gov
- Lucas Lucero, Senior Advisor to AD-300, BLM WO llucero@blm.gov
- Reggie, Woodruff, Lands Program Manager, USFS WO rwoodruff@fs.fed.us

Corridor Study Release / 368 Information:

- http://www.blm.gov/wo/st/en/prog/energy/transmission.html
- www.blm.gov/so/st/en/prog/energy/transmission.html

Section 368 Comments to:

- blm_wo_368corridors@blm.gov

West-wide Energy Corridors Information Center Website:

- http://www.corridoreis.anl.gov

Questions or Comments?