

Geothermal Development and the Use of Categorical Exclusions

Aaron Levine and
Katherine R. Young

CATEGORICAL EXCLUSIONS

Action that the agency or Congress has determined does not have a significant effect¹ on the quality of the human environment² (individually or cumulatively).

The ability to apply a CXs for a particular project may be limited by an agency-defined list of extraordinary circumstances.

EXTRAORDINARY CIRCUMSTANCES

- Definition** Set of federal agency criteria/resource impacts which can limit the use of CXs (Varies by agency)
- Requirements** Usually requires some level of nexus between the resource and the activity (i.e. BLM requires a "significant impact") and the inability to modify the activity to avoid the impact.
- Example Effect** Cultural/historical site and endangered species/habitat
Can require the Completion of an EA or EIS even if a CX applies to the proposed activity.
- Application** **Administrative CX:** ECs always applies
Statutory CX: Can vary based on statute



Fort Craig
Historic Site, New Mexico
Courtesy: BLM New Mexico

TYPES OF CATEGORICAL EXCLUSIONS

ADMINISTRATIVE CXs

- Created By** BLM Rulemaking
- Description** Specific activities that federal agencies have identified, that based on past experience, do not have a significant effect on the environment.
- Notes** Must establish an administrative record and complete rulemaking process to establish new or revised CX
- Example** DOE CX for infill wells (for O&G and Geothermal)

- Advantages**
 - Provides each agency with more control when applying the CX
 - Allows each agency to apply agency procedures for extraordinary circumstances

- Challenges**
 - Coordination between agencies
 - Revisions to address public comments
 - Time-consuming if completed sequentially

STATUTORY CXs

- Created By** Legislative Process
- Description** Specific activities that Congress has identified to not have a significant effect on the environment
- Notes** Can apply to multiple agencies (depending on statutory language)
- Example** EPAct of 2005; § 390 (Oil and Gas)

- Each agency would have to:
 - develop the same CX and
 - complete rulemaking process separately (each must develop their own justification for the CX)
- Could complete concurrently and independently or sequentially and rely on the first agency's justification for the CX when creating its own administrative record through "benchmarking."
- Applies equally to all agencies included in the statute
- Advantages**
 - Provides consistency among agencies without the need for agency coordination in drafting
 - Could allow extraordinary circumstances
- Challenges**
 - Limits agency control
 - Legislative process is subject to prevailing political climate
 - May be difficult to pass
 - Potential for repeal

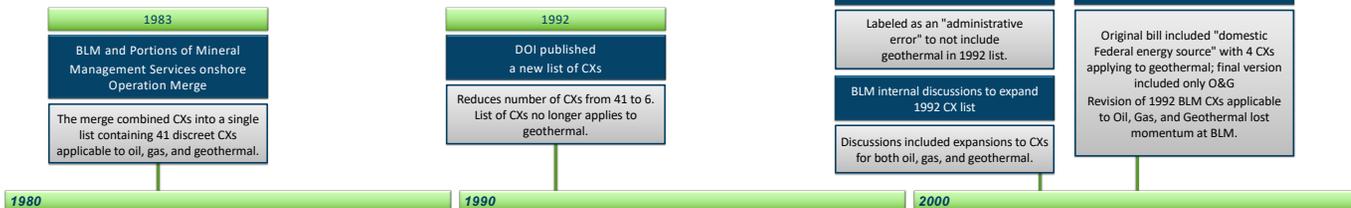
2003 NEPA TASK FORCE REPORT to the Council on Environmental Quality (CEQ)

Highlighted Findings for Categorical Exclusions:

- Some federal agencies perceived CXs as difficult to develop and revise, which resulted in federal agencies continuing to prepare EAs where a CX was sufficient.
- Most agencies use information from past actions to determine whether a CX is appropriate.
- Most agencies stated that an adequate basis for developing a new CX was based on all past actions in the category resulting in a FONSI.
- "Improving and modernizing categorical exclusions should be addressed through both immediate and long-term actions."

GEOTHERMAL CX TIMELINE

Important Milestones for BLM Oil, Gas, and Geothermal Categorical Exclusions



OIL, GAS, AND GEOTHERMAL CXs

Activity	BLM		USFS		DOE	USGS
	O&G	Geothermal	O&G	Geothermal	Geothermal	--
Agency Activities						
Land Use Planning		EIS		EIS	---	---
Leasing		EA/DNA		EA/DNA	---	---
Geophysical Exploration (including TGWs)						
No new roads		CXs		CXs	CXs	CXs
Up to 1 mile of new roads		EA/DNA		CXs	EA/DNA	EA/DNA
Drilling Permits (into the reservoir)						
Exploration wells	CXs	EA/DNA	CXs	EA/DNA	EA	---
Development wells	CXs	EA/DNA	CXs	EA/DNA	NA	---
Infill wells	CXs	EA/DNA	CXs	EA/DNA	CXs	---
Other Activities						
Off-lease Pipeline	CXs	EA/DNA	CXs	EA/EIS	---	---
Utilization/Operation	EA/EIS	EA/EIS	EA/EIS	EA/EIS	CXs	---
Minor Maintenance	CXs	EA/EIS	CXs	EA/EIS	---	---

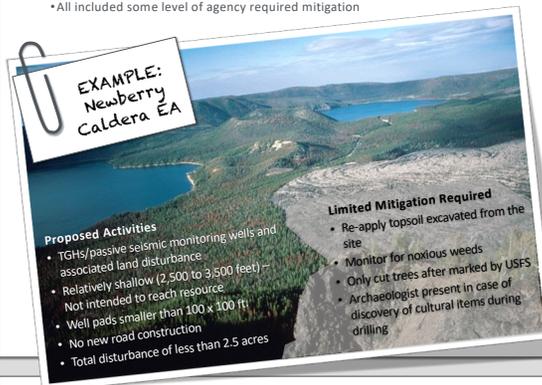
POTENTIAL FOR ESTABLISHING A CX FOR EXPLORATION DRILLING

Primary Research Required for Establishing New CX

Review previous activities with similar class of actions to see whether the actions have significant environmental effects

NREL Research:

- Searched NEPA Database produced 20 exploration drilling-related activities
 - Included a wide range of exploration drilling activities
 - TGHs, observation wells, full-sized exploration wells
 - Development of well pads and access roads
- Reviewed EA and related FONSI documents (when available)
 - All 20 EAs resulted in FONSI
 - All included some level of agency required mitigation



FOR MORE INFORMATION

Levine, Aaron and Katherine R. Young, *Geothermal Development and the Use of Categorical Exclusions Under the National Environmental Policy Act of 1969*, GRC 2014