

**NPC Natural Gas Study**  
**Access / Environmental Issues**

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- **NPC -- Oil and Natural Gas Advisory Committee to the Secretary of Energy**
  - Sole purpose is to advise, inform and make recommendations to the Secretary of Energy on any matter requested by the Secretary
  
- **Previous NPC reports**
  - 1992 Potential Gas Report
  - 1999 Meeting the Challenges of the Nation's Growing Natural Gas Demand
  
- **Scope of 2003 study and report, *Balancing Natural Gas Policy***
  - Complement January 2003 EPCA report
  - New supplies, technologies, perceptions of risk, and evolving market conditions that may affect demand, supplies and delivery through 2025
  - North America: AK, Canada, onshore & offshore US, Mexico
  - Capture effects of Conditions of Approval
  
- **NPC on the Internet <[www.npc.org](http://www.npc.org)>**
  - Summary of Findings and Recommendations
  - Integrated report
  - Task Group Reports and Appendices

- **Clearly articulate the complexities of the regulatory and environmental issues**
- **Quantify the impacts these issues have on access to and recovery of natural gas resources**
- **Recommend actions which could be taken to support environmentally sound gas resource development**

# NPC Natural Gas Study

## Access Challenges

### Access / Environmental Issues

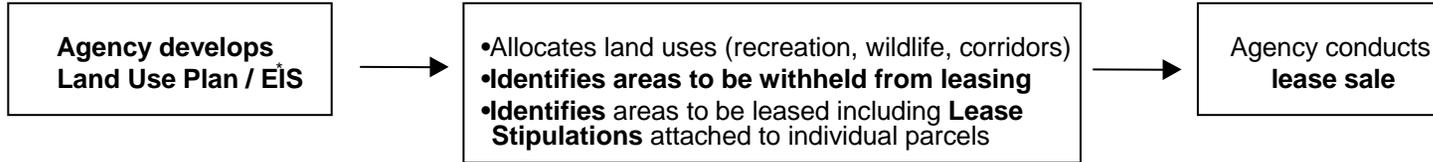
Issues	Effects	Comments
<ul style="list-style-type: none"> <li>Statutory Restrictions</li> </ul>	<ul style="list-style-type: none"> <li>Designated areas inaccessible by law</li> </ul>	<ul style="list-style-type: none"> <li>Possible future additions</li> </ul>
<ul style="list-style-type: none"> <li>Administrative Restrictions</li> </ul>	<ul style="list-style-type: none"> <li>Areas inaccessible due to interpretations by administrative authorities</li> </ul>	<ul style="list-style-type: none"> <li>Not clearly defined; likely to continue.</li> </ul>
<ul style="list-style-type: none"> <li>Threatened/Endangered Species</li> </ul>	<ul style="list-style-type: none"> <li>Areas effectively inaccessible due to extreme regulatory requirements.</li> </ul>	<ul style="list-style-type: none"> <li>Habitats not well defined. List of species may be expanded in future.</li> </ul>
<ul style="list-style-type: none"> <li>Sensitive Species</li> </ul>	<ul style="list-style-type: none"> <li>Range of outcomes for each State and species</li> </ul>	<ul style="list-style-type: none"> <li>Requirements will likely become more stringent in the future.</li> </ul>
<ul style="list-style-type: none"> <li>Archaeological and Cultural Resource Requirements</li> </ul>	<ul style="list-style-type: none"> <li>All surface disturbances subject to survey, then various requirements imposed based upon survey findings; sites usually remain accessible.</li> </ul>	<ul style="list-style-type: none"> <li>Outcomes based upon industry experience to date.</li> </ul>
<ul style="list-style-type: none"> <li>Environmental Assessments</li> </ul>	<ul style="list-style-type: none"> <li>All federal decisions require environmental analysis but costs and delays vary considerably depending on situation.</li> </ul>	<ul style="list-style-type: none"> <li>Average per-well cost and delays developed from actual experience by basin.</li> </ul>
<ul style="list-style-type: none"> <li>Environmental Impact Statements</li> </ul>	<ul style="list-style-type: none"> <li>Statements required for all significant developments; very expensive and time consuming.</li> </ul>	<ul style="list-style-type: none"> <li>Average per-well cost and delays developed from actual experience by basin.</li> </ul>
<ul style="list-style-type: none"> <li>Range of outcomes when the above Considerations are combined in realistic scenarios</li> </ul>	<ul style="list-style-type: none"> <li>w% minimum cost and delay</li> <li>x% high cost and delay</li> <li>y% directional drilling</li> <li>z% well site inaccessible</li> </ul>	<ul style="list-style-type: none"> <li>Cost and delay outcomes based upon industry experience to date. Likely to become more stringent in future.</li> </ul>

# Comparison of Lease Stipulations and Conditions of Approval

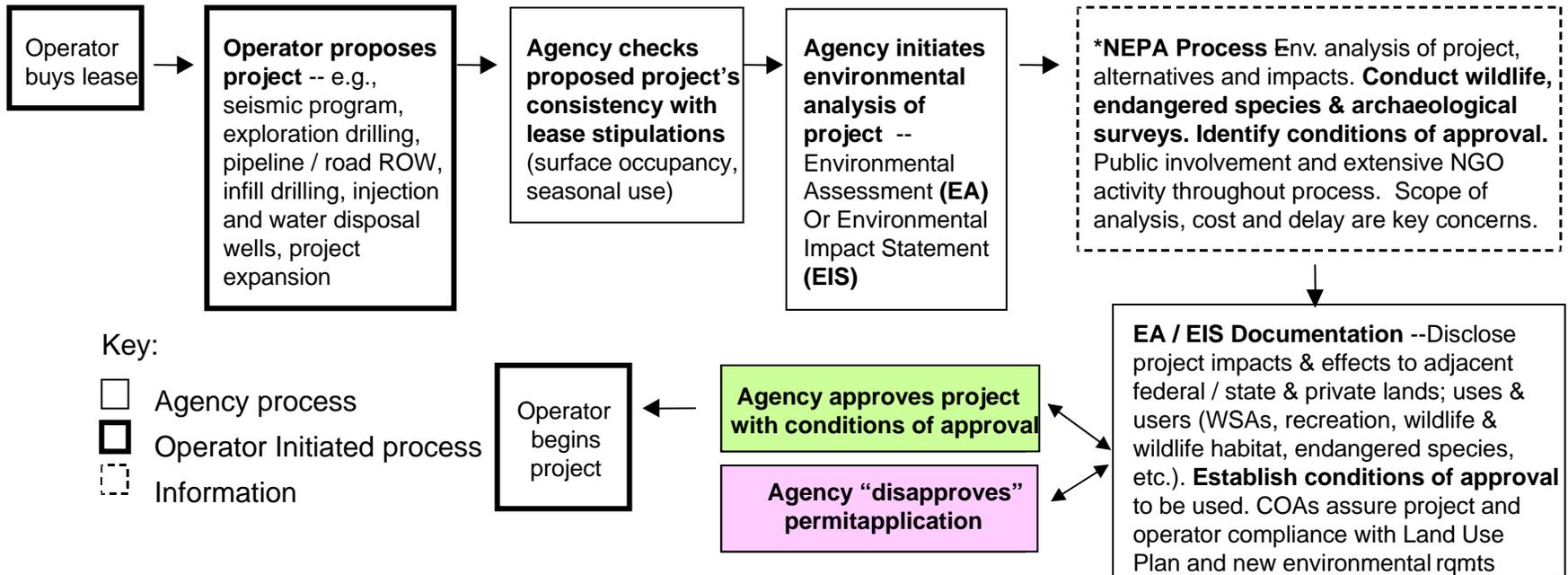
*Access / Environmental Issues*

## Leasing

1999 NPC Report  
2003 EPCA Report



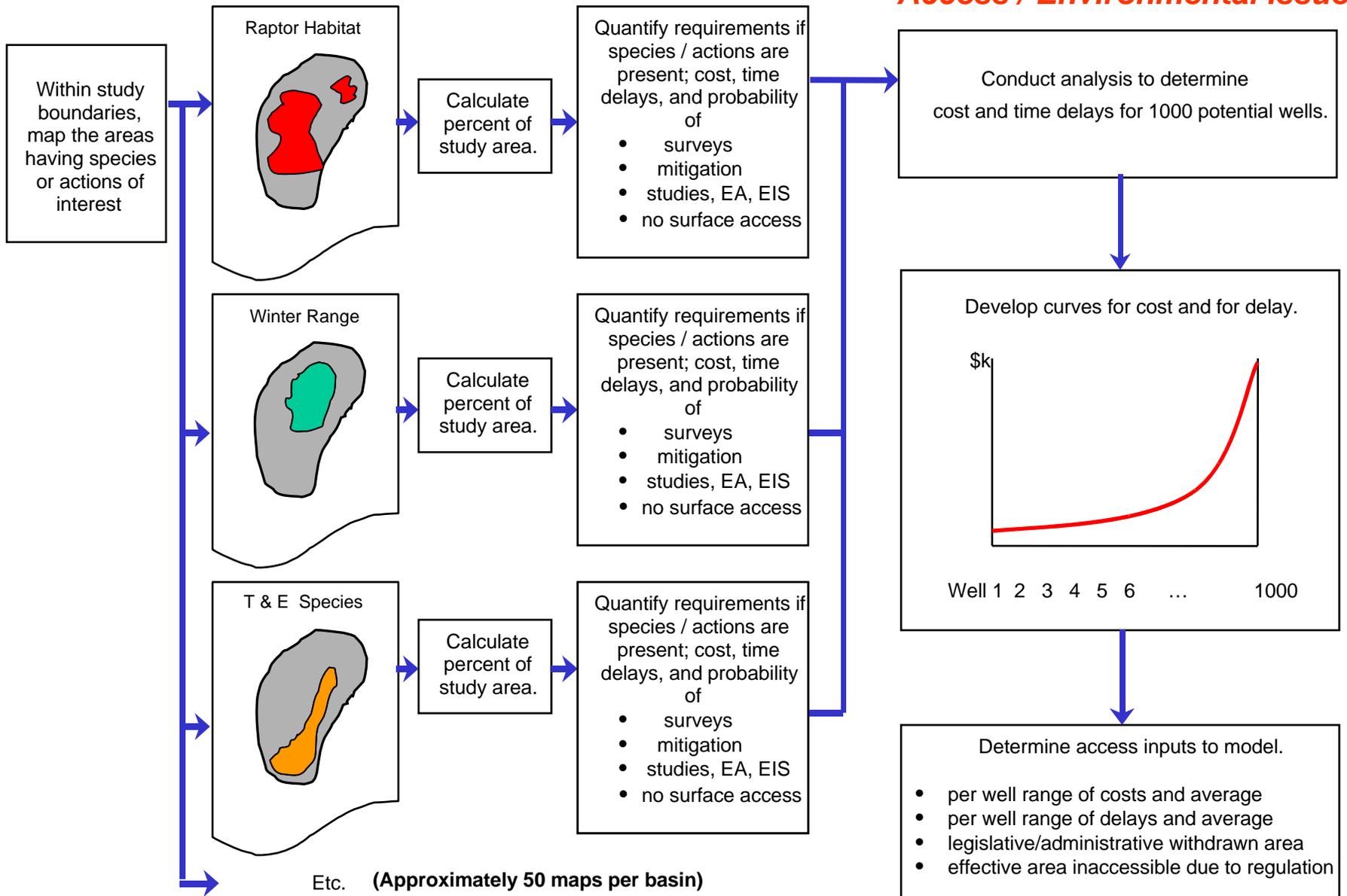
## Conditions of Approval (Permitting)



Key:

- Agency process
- ▣ Operator Initiated process
- ⋯ Information

# Quantification Process



# Sample Analysis Matrix -- Rockies

Item Number	Item	Surface Authority			Activity Sequence, Probability, and Grouping					Wildcat Wells		Development Wells		No Access
		Federal Action	State Lands	Private Lands	Contingent on Item X Happening First	Probability or Contingent Probability %	Correlation with Item X	Correlation Factor	Item Numbers of Common Group	Added cost (\$)	Time Delay (mos)	Added cost (\$)	Time Delay (mos)	
1	Raptor Survey General	1	1	0		99.4				700	1			
2	Raptor Nest Survey	1	1	0		28.1			1	3500	1	350	1	
3	Active Raptor Nests Found: No Access	1	1	1	2	5.7								X
4	Active Raptor Nests Found: Mitigation	1	1	1	2	30.0	3	-1	3	106,000	3	106,000	3	
5	Big Game Survey	1	1	0		40.0				1200		360		
6	Big Game Found: Relocate/Directional	1	1	0	5	10.0				150,000	3	150,000	3	
7	Big Game Found: Mitigation	1	1	0	5	90.0	6	-1	6	5280	3	5280	3	
8	Blackfooted Ferret Survey	1	1	0		54.5				7500	6	7500	6	
9	Blackfooted Ferret Found: No Access	1	1	0	8	1.0								X
10	Blackfooted Ferret Found: Mitigation	1	1	0	8	10.0	9	-1	9	106,000	3	106,000	3	
...	etc													

Approximately 60 key items per basin.

**Findings - Rockies Access Restrictions**

<b>Category</b>	<b>Green River</b>	<b>Uinta/ Piceance</b>	<b>Powder River</b>	<b>San Juan</b>
<b><u>Resources Off-Limits:</u></b>				
<b>Federal Statutory/Administrative No Leasing</b>	<b>8.7%</b>	<b>4.1%</b>	<b>4.6%</b>	<b>2.3%</b>
<b><u>Prohibitive Conditions of Approval:</u></b>				
<b>12 Months Off-Limits</b>	<b>24.5%</b>	<b>15.2%</b>	<b>5.7%</b>	<b>6.2%</b>
<b>9-11 Months Off-Limits</b>	<b>6.9%</b>	<b>1.8%</b>	<b>20.3%</b>	<b>0.1%</b>
<b>Total Restricted Percentage</b>	<b>40.1%</b>	<b>21.1%</b>	<b>30.6%</b>	<b>8.6%</b>
<b><u>Average Added Costs per Well Due to Conditions of Approval:</u></b> (\$k)				
<b>Federal/State Exploratory</b>	<b>240-250</b>	<b>146-152</b>	<b>103-108</b>	<b>63-68</b>
<b>Federal/State Development</b>	<b>90-95</b>	<b>104-108</b>	<b>57-61</b>	<b>53-57</b>
<b>Weighted Average</b>	<b>103</b>	<b>107</b>	<b>62</b>	<b>55</b>
<b>Fee Exploratory</b>	<b>48-52</b>	<b>54-56</b>	<b>15-20</b>	<b>30-34</b>
<b>Fee Development</b>	<b>54-58</b>	<b>68-70</b>	<b>17-21</b>	<b>30-35</b>
<b>Weighted Average</b>	<b>56</b>	<b>69</b>	<b>19</b>	<b>33</b>
<b><u>Average Time Delay:</u></b> (Months)				
<b>Federal/State Exploratory</b>	<b>12-14</b>	<b>9-11</b>	<b>2-4</b>	<b>5-7</b>
<b>Federal/State Development</b>	<b>20-22</b>	<b>7-9</b>	<b>13-15</b>	<b>6-8</b>
<b>Fee Exploratory</b>	<b>2</b>	<b>2</b>	<b>6</b>	<b>1</b>
<b>Fee Development</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>1</b>

*Note: Percentages refer to new field and nonconventional resources only.*

- **Recommend actions which could be taken to support environmentally sound gas resource development in the Rockies**
- **Focus on streamlining processes, reducing time lags, lowering costs for both industry and the governing agencies**
- **Do not involve roll-back of protections for the environment, wildlife, and cultural resources**

## Federal Land Use Planning (LUP)

**Issue:** Lengthy and cumbersome land use planning process is becoming an impediment to industry's ability to access public resources.

**Impact:** Leases cannot be issued, and potential projects face high risk and uncertainty in areas where LUPs are deemed inadequate.

**Recommendations:** Reinforce land management planning process to demonstrate BLM and Forest Service commitment to viable oil and gas program in accordance with the President's National Energy Policy as described in Executive Orders 13211 and 13212. Urge agencies to:

- Develop LUPs that ensure leasing and development of resources located in known high potential areas (Wyoming and Montana Overthrust Belts).
- Strengthen process used to incorporate relevant or new information from inventory, monitoring, and research activities in LUPs and project-specific NEPA documents.
- Seek adequate and stable funding from Congress.
- Eliminate duplicative NEPA analyses.

**Federal Land Use Planning (LUP), continued**

- **Incorporate “net effects” in the land use planning process to recognize:**
  - **More wells can be drilled in many areas without triggering cumulative effects concerns; and,**
  - **Value of wildlife habitat associated with restored well sites, construction staging areas, roads, and other facilities that are no longer in use.**
- **Require use of sound science principles to justify lease stipulations and conditions of approval in planning and permitting documents.**
- **Maximize Forest Service land use planning and cost efficiencies by including both the 36 CFR 228 Part 102 (d) & (e) leasing decisions in LRMPs.**
- **Ensure availability of BLM and Forest Service minerals staff with the requisite expertise necessary to implement LUP directives and facilitate leasing decisions and project permitting.**

**Reasonably Foreseeable Development Scenario (RFDS)**

**Issue:** During land use planning, both BLM and Forest Service prepare a RFDS to assess potential future activity.

**Impact:** Use of RFDS during planning is endorsed by industry but RFDS should not be used to establish well count thresholds. Focus on well counts ignores effectiveness of reclamation and O&G compatibility with other multiple uses and users. Well count metric is inflexible and inconsistent with sound science and land management principles.

**Recommendations:**

- **Measurable management objectives must be clearly identified in land use plans and project related NEPA documentation.**
- **Review current mitigation measures and conditions of approval to determine their need and effectiveness.**
- **Conduct annual inventories of surface disturbance and reclamation for all activities to determine net effects.**
- **Prioritize monitoring activities to reach short and long term management objectives.**
- **Develop and fully fund system for tracking monitoring efforts and reporting results.**

## Coalbed Natural Gas Management (CBNG)

**Issue:** Public concern about level of CBNG activity, coupled with disposal of produced water has created controversy and long delays in the Rockies. Strong public concern about surface discharge and downhole injections methods even though each option is approved by state and federal regulators.

**Impact:** CBNG projects are often delayed due to public's lack of familiarity with CBNG operations and regulatory framework used to manage the resource.

### **Recommendations:**

- **Governing agencies must maintain regulatory flexibility for beneficial use of water.**
- **Maintain flexibility for oversight of water management plans to meet specific needs of landowners and CBNG producers.**
- **Support peer reviewed technical research to develop viable management options.**
- **Develop financial incentives to encourage water management innovation.**
- **Facilitate dialogue and education about the regulatory framework among interested parties.**
- **Improve coordination among state and federal agencies and eliminate overlaps and duplication in the permitting processes.**

**Issue: Severed Mineral Estate and Surface Owner Rights**

**Impact: Negotiation tactics being used by some landowners add significant delays, create impediments to orderly and reasonable development of federal resources, and impose unreasonable risks to conduct operations.**

**Recommendations:**

- **Support development consistent with mineral rights retained by the federal government and operator compliance with surface owner protections.**
- **No new federal legislation is needed to protect surface owner interests. Stock-Raising Homestead Act of 1916 and 38 CFR 3814 regulations have proven to be effective.**
- **BLM and industry need to increase public understanding of severed estates and importance of federal revenues, economic security, and independence from foreign supplies.**
- **In order to maintain equity throughout a region or development area, BLM and states should allow suspension of mineral and surface leases until a surface owner agreement can be reached.**

## Endangered Species Act (ESA)

**Issue:** Because ESA has no qualification requirements, any group or individual can file a petition to list a species without providing scientific justification. Agencies have 90 days to determine whether proposed listing may be warranted. Due to short timeframe and lack of detailed information, agencies treat proposed and candidate species as if they are listed, before fulfilling the ESA's specific requirements for species status, distribution and habitat information.

**Impact:** Species are being proposed for the express purpose of procuring ESA as a tool to hinder land management planning and project permitting. Further impacts include:

- Creation of uncertainty and risk for lessees, states, private landowners with respect to lease and property rights as well as project permitting requirements.
- Cost, complexity and delay are increased for land use plan preparation and project-level environmental analysis.
- The importance of identifying species that deserve protection under the ESA is lost, resulting in needless effort and waste of federal and taxpayer resources.

## Endangered Species Act, continued

### Recommendations: Amend ESA to include:

- **Scope of Protection -- Prohibit imposition of the same level of protection for proposed species that is afforded listed threatened and endangered species.**
- **Listing and Designation of Critical Habitat**
  - **Require listing and critical habitat decisions to be based on the best available scientific and commercial information.**
  - **Require independent scientific peer review of proposed listings and designations of critical habitat by a non-governmental panel.**
  - **Streamline the de-listing process to emphasize the importance of removing recovered species from the endangered species list.**

**Endangered Species Act, continued**

**• Private Property Rights**

– Require compensation to private property owners in cases where significant loss of fair market value or other economic use of private property occurs as a result of ESA implementation.

**• Judicial Review**

– Allow affected parties to seek remedies in court to challenge listing and other ESA decisions.

– Require parties opposing activities to demonstrate immediate, irreparable harm to species will result from a proposed project before granting injunctive relief.

## Compliance with Cultural Resource Requirements

**Issue:** Cultural resource clearance delays and costs are major impediments.

**Impact:** 30 day delay if no resources are found at a cost of \$1,500 to \$4,000. If there is a significant discovery and project impacts cannot be avoided, expenses range from > \$100k to > \$1000k for an interstate pipeline.

### **Recommendations:**

- Amend NHPA to restore its original intent. Section 106 should be amended as follows (**deletions in red**, additions in **bold**):

“Section 106. The head of any Federal agency having direct or indirect jurisdiction over a proposed Federal or federally assisted undertaking . . . shall . . . take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register. The **head of any such Federal** agency **official** **shall** **may** afford the Advisory Council on Historic Preservation established under Title II of this Act a reasonable opportunity to comment with regard to such undertaking.”

Compliance with Cultural Resource Requirements, continued

Recommendations:

- Rewrite current Condition of Approval language attached to project permits.

Current language reads:

**“The operator shall be responsible for the cost of any mitigation required by the authorized officer. The authorized officer will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the authorized officer that the required mitigation has been completed, the operator shall be allowed to resume operations.”**

The above language should be re-written as follows:

***“If archaeological, historical, or vertebrate fossil materials are discovered during construction, the operator shall suspend all operations that further disturb the discovered materials and immediately contact the authorized officer. The operator shall be responsible for the cost of locating a site by cadastral survey, and, in the absence of an agency archaeologist, for the cost of an authorized contract archaeologist to preliminarily identify the discovery . Operations shall not resume until written authorization to proceed is issued by the authorized officer.”***

**Compliance with Cultural Resource Requirements, continued**

**Recommendations:**

- **Establish statewide multi-agency cultural resource databases to catalog current information.**
- **Independent review of agency practice and interpretation of criteria for determining site significance is critically needed. Criterion “D” of the Secretary’s Standards and Guidelines is being used to extend potential eligibility to common sites when comparable sites are known to be locally prevalent.**
- **Timely and effective fulfillment of Native American government to government consultation and coordination under Sections 106 and 110 of the NHPA.**