

# API/PLA

## ADAPTIVE MANAGEMENT – CONCEPT PAPER

### Proposed Definition:

“Adaptive management” is a science-based approach to natural resource management wherein the effects of policies, plans and practices are monitored for the purpose of evaluating and adjusting management actions.

### Background:

Adaptive management is an evolving concept with a variety of definitions as applied to resource management on federal lands. The proposed model (above) of adaptive management is based upon the definition of adaptive management used by the United States Forest Service (“USFS”) in its planning regulations at 36 C.F.R. § 219.36 (2000) which defines adaptive management as “an approach to natural resource management wherein the affects of policies, plans and actions are monitored for the purpose of learning and adjusting their future management actions.” The definition emphasizes a science-based approach to management consistent with the Federal Land Policy & Management Act (“FLPMA”) and National Forest Management Act (“NFMA”).<sup>1</sup> The model also reflects adaptive management concepts developed by ecologists in the 1970’s as follows:

**Adaptive management** is a systematic process for continually improving management policies and practices by learning from the outcomes of operational programs. The key characteristics of adaptive management include:

- Acknowledgement of uncertainty about what policy or practice is “best” for the particular management issue;
- Thoughtful selection of the policies or practices to be applied
- Careful implementation of a plan of action designed to reveal the critical knowledge;
- Monitoring of key response indicators;
- Analysis of the outcome in consideration of the original objectives; and
- Incorporation of the results into future decisions.<sup>2</sup>

### Goals of Adaptive Management:

<sup>1</sup> § 6(b) Forest and Rangeland Renewable Resources Planning Act, 16 U.S.C. § 1604(b) provides, “[I]n the development and maintenance of land management plans for use on units of the National Forest, System, the Secretary [of Agriculture] shall use a systematic interdisciplinary approach to achieve integrated consideration of physical, biological, economic and other sciences;” § 202(c) FLPMA, 43 U.S.C. § 1712(c) provides, “[I]n the development and revision of land use plans, the Secretary [of the Interior] shall - . . . (2) use a systematic interdisciplinary approach to achieve integrated consideration of physical, biologic, economic, and other sciences.”

<sup>2</sup> Vera Sit and Brenda Taylor, editors, “Statistical Methods for Adaptive Management Studies,” British Columbia, Ministry of Forest Research program (1998) at 2.

Industry supports the use of adaptive management as a means to assist agencies to develop science-based monitoring protocols to assess and validate the effectiveness of federal land management actions regulating oil and gas development, such as lease stipulations and conditions of approval (“COAs”) and to adjust management decisions in response to this monitoring. Adaptive management assists land managers to monitor implementation and compliance with mitigation plans, validate whether the assumptions underlying the mitigation are met and adjust management actions accordingly. Industry encourages land managers to adjust its policies in response to monitoring and assess whether mitigation requirements are necessary to meet multiple use objectives applying the least restrictive management action to protect the resource.<sup>3</sup> This application is consistent with I. M. No. 2003-137, Integration of EPCA Inventory Results into Land Use Planning and Energy Use Authorizations (Apr. 13, 2003).<sup>4</sup>

#### **Appropriate Use and Funding of Adaptive Management Work Groups:**

Federal land managers remain responsible for determining whether oil and gas development proceeds on federal lands and in setting the conditions of approval including modifications in response to monitoring. Therefore, adaptive management teams must be managed and controlled by agencies ultimately responsible for making land management decisions. Consistent with FLPMA and NFMA, mitigation plans should be science-based and developed and monitored by technically trained individuals or work groups. The function and composition of work groups must be carefully constructed and managed to prevent improper delegation of governmental authority and prevent undue influence by stakeholders, consistent with the Federal Advisory Committee Act (“FACA”). In addition, an adaptive management strategy must clearly identify funding sources and a fair means of cost allocation.

#### **Application:**

Industry is developing a proposal for a pilot project to coordinate with federal land managers and a technical management team to test this definition of adaptive management by developing a science-based protocol to assess the effectiveness of seasonal restrictions to protect sage grouse habitat on public lands.

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<sup>3</sup> BLM Handbook H-1624-1, Planning for Fluid Mineral Resources, instructs the agency to apply “the least restrictive stipulation that effectively accomplishes the resource objectives or uses for a given alternative. ...” (May 7, 1990) III.B.7.d. (1) at III-11.

<sup>4</sup> See Energy Policy and Conservation Act Report, “Scientific Inventory of Onshore Federal Lands Oil and Gas Resources and Reserves and the Extent and Nature of Restrictions or Impediments to Their Development.” (DOI Jan. 2003).