

Adaptive Limits Workgroup Meeting September 22, 2011

Adaptive Limits Background

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- Adaptive limits
 - Why do we need them?
 - What are they?
 - How will they work?
 - How can we define the limits and the process to reach them?

Why do we need Adaptive Limits?

- “No Surprises” Assurances = A “deal is a deal”
 - Principal incentive to pursue an HCP and NCCP
 - Limits obligations to HCP and NCCP as long as plan implemented properly
 - “Implemented properly” includes using adaptive management process to improve effectiveness of conservation measures

Why do we need Adaptive Limits? (cont'd)

- We assume conservation strategy will achieve the biological goals and objectives
 - To be verified by effects analysis
- Adaptive limits are a “backup plan”
 - When significant uncertainty in effectiveness of conservation measure
- Adaptive limits define additional conservation if needed to achieve biological goals and objectives
- Avoids need for complex and time consuming permit amendment

Why apply Adaptive Limits to CM-1?

- Relatively high degree of uncertainty in effectiveness
- Relatively high degree of reliance on conservation measure

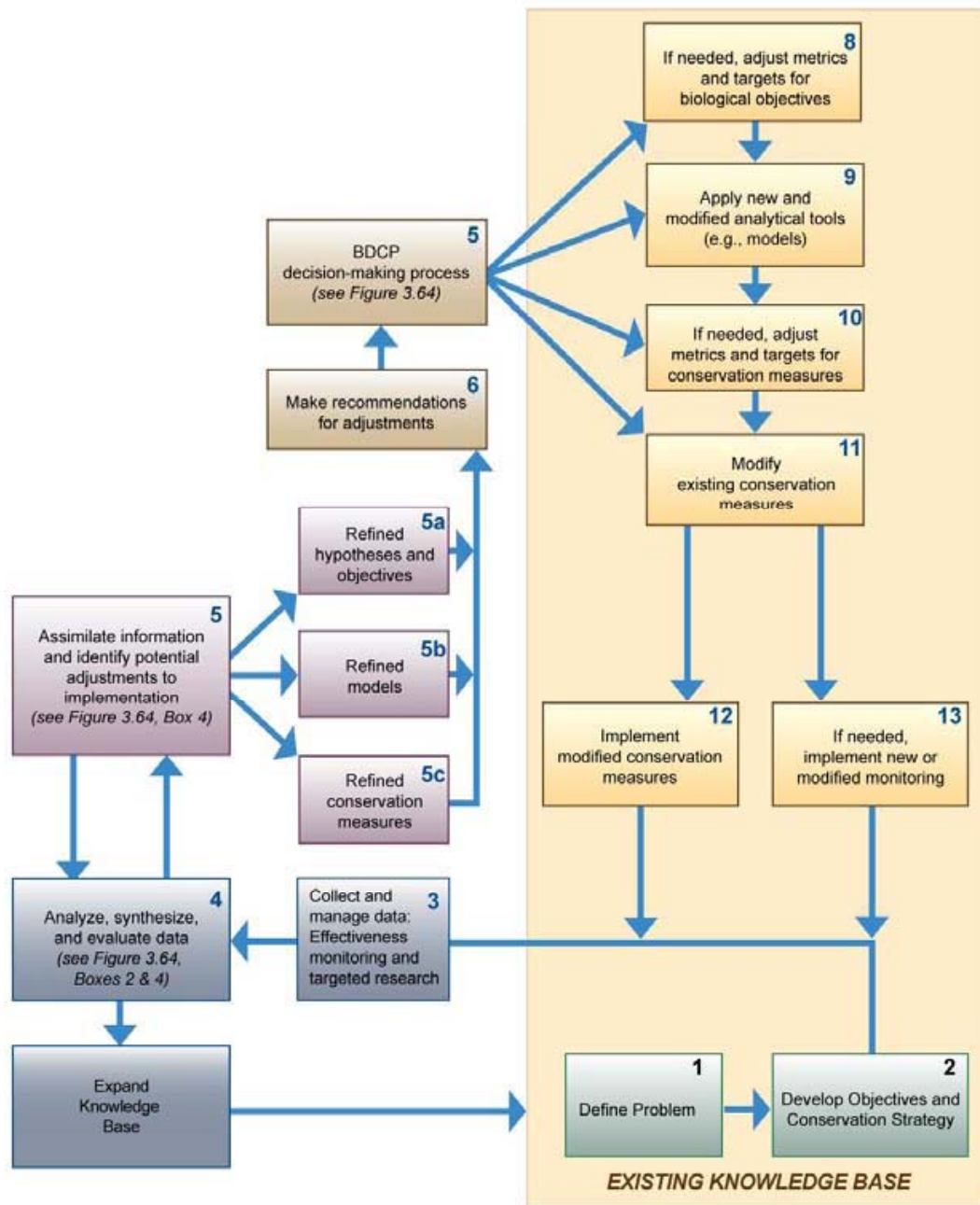
What are Adaptive Limits?

- Adaptive limit =
 - “Upper and lower boundaries of adjustments that can be made to a conservation measure within the context of permits and the regulatory assurances pursuant to State and Federal law.”
- Voluntary changes can be made beyond limits

How Adaptive Limits Work

- Adaptive management program
 - 2009 Science Advisors review, 2011 NAS review
 - Key elements:
 - Structured decision making
 - Learning from new information
 - Flexibility to implement better solutions
- Month-to-month and year-to-year adjustments
- Adaptive limits = limits to range of adaptive management responses

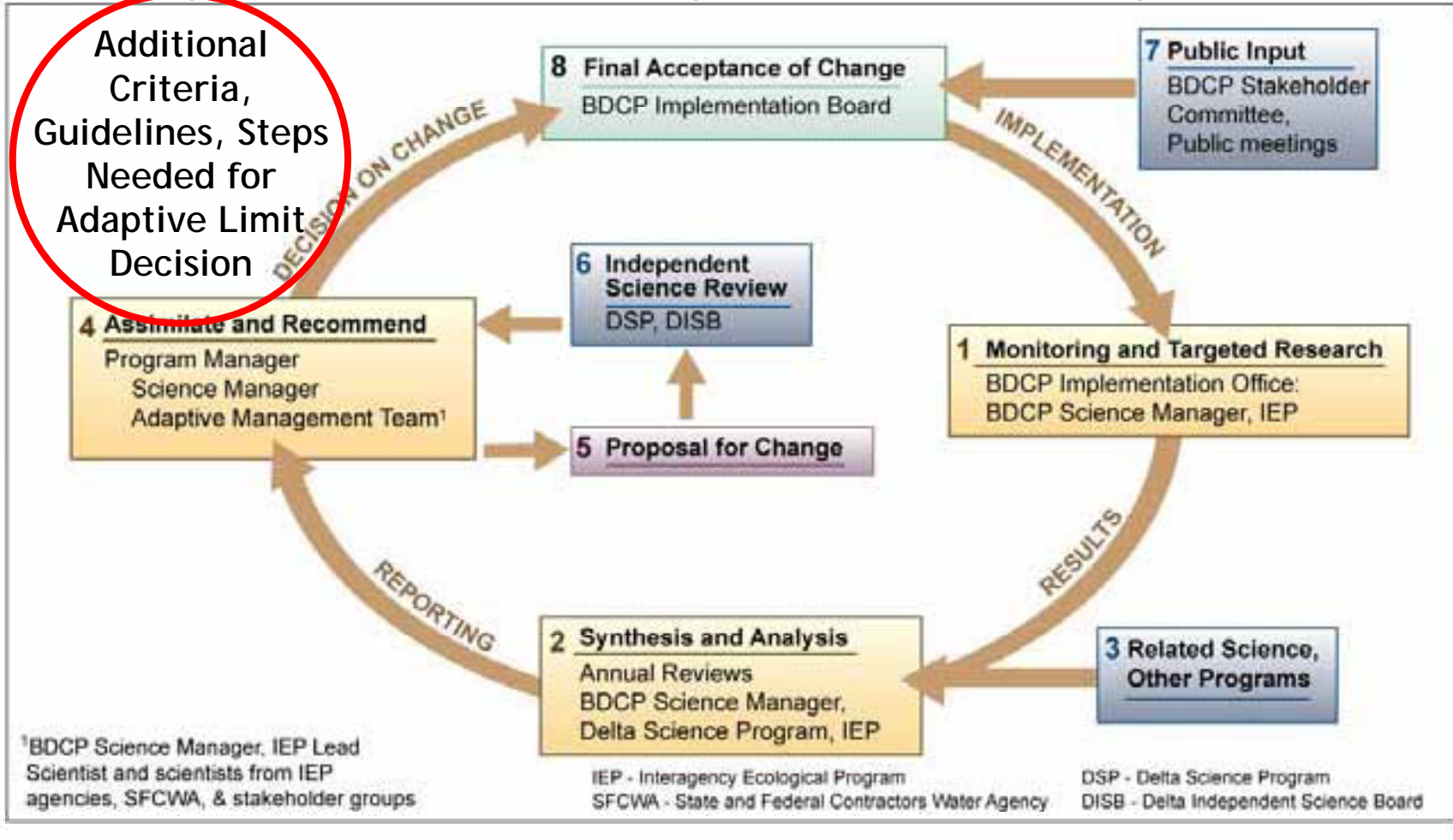
Figure 3-63: Adaptive Management Framework



How Adaptive Limits Work (cont'd)

- Adaptive limits are both:
 - Limits to CM-1 (how much, when, where)
 - A decision-making process (who decides and on what basis)
- Adaptive limit implemented:
 - If adequate progress is not being made towards key biological goals and objectives based on monitoring data or other new information
 - Changed circumstance occurs (defined in Plan)

DRAFT Figure 3-64: Adaptive Management Decision-Making Framework



How to establish adaptive limits? (con't)

- Recommended principles for **decision-making process**
 - Consistent with adaptive management decision-making structure
 - Acknowledge trade-off between ease of entering adaptive limits and level of change once door is open

How to establish adaptive limits? (con't)

- **Information standards** to trigger adaptive limits:
 - Multi-year data that objective will likely not be met
 - Failing multiple metrics, even with robust monitoring
 - Substantial new information on species or ecological system that changes understanding of effects
 - Changed circumstance has occurred
 - Evidence of causal link to BDCP
 - Cost-benefit analysis
 - Peer reviewed by independent scientists

How to establish adaptive limits?

- Recommended principles for the **metrics**
 - Change likely to benefit target species
 - Change consistent with co-equal BDCP goals
 - Practicable and financially feasible
 - Proportional to impacts of covered activities
 - Avoid adverse effects on other covered species
 - Maximize flexibility
- One or a few **simple metrics** are more likely to provide flexibility to help achieve biological goals and objectives in implementation