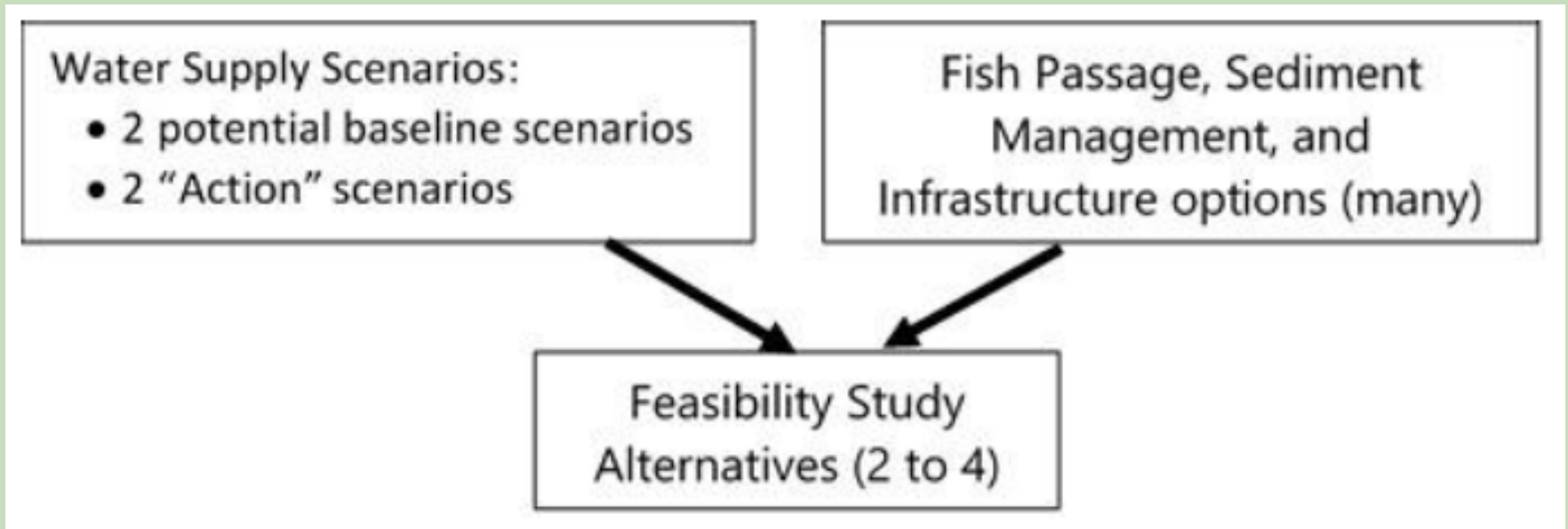


Overview of Proposed Water Supply Scenarios, Infrastructure Options, and Alternatives



February 19, 2020 Ad Hoc Committee



McBain Associates
APPLIED RIVER SCIENCES

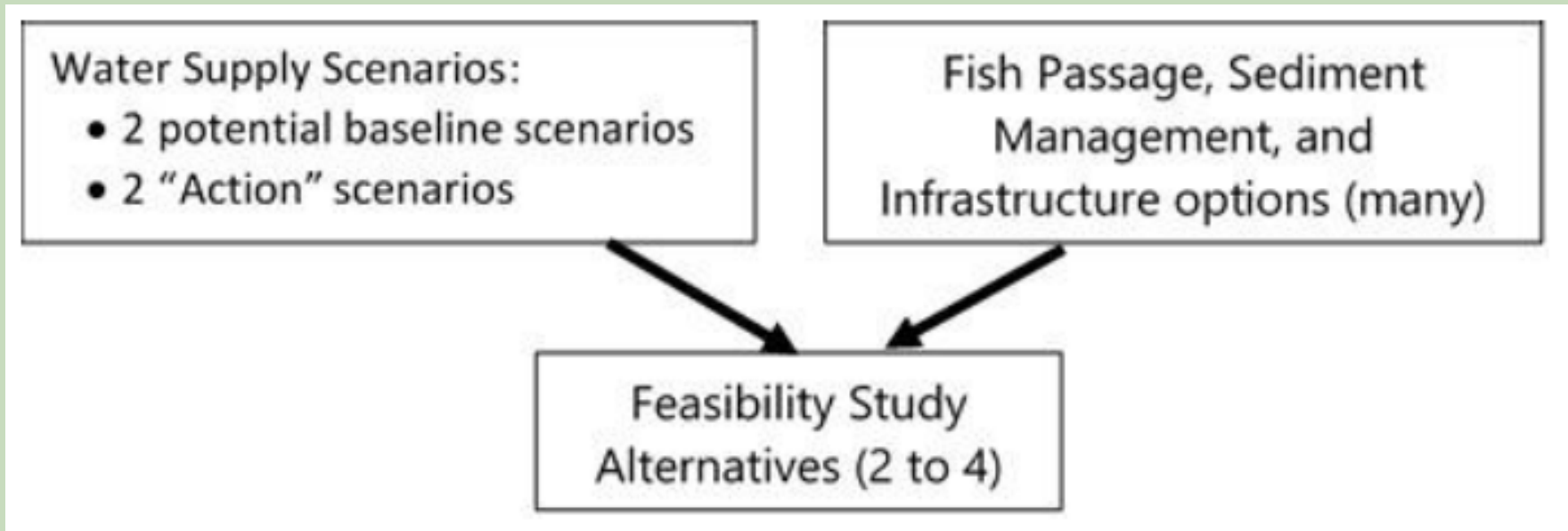
Scope of Work requirement

- Dam(s) Removed
- Dam(s) Remain

Modeling Scenarios Updated 4/16/19		Russian River & Lake Mendocino Alternatives		
		Current Operations	Lake Mendocino FIRO (Hybrid) with Fish Flow EIR Operations ⁵	Raise Coyote Valley Dam ⁶
Potter Valley Project Alternatives	Current Operations ¹	Baseline: Existing Climate (n=1)		
		Baseline FC: Future Climate (n=4)		
	PVP Revised Operations ²	Scenario 4: Existing Climate (n=1)	Scenario 4B: Existing Climate (n=1)	
	Run-of-the-River ³		Scenario 2: Existing Climate (n=1)	
			Scenario 2FC: Future Climate (n=4)	
PVP Decommission ⁴	Scenario 1: Existing Climate (n=1)	Scenario 3: Existing Climate (n=1)	Scenario 5: Preliminary analysis with Existing Climate	

Scope of Work requirement

- Dam(s) Removed: Water Supply Scenario 2+ “Options”
- Dam(s) Remain: Water Supply Scenario 4B+ “Options”



Fish Passage and Habitat Improvement OPTIONS

- **Adult and juvenile fish passage at Cape Horn Dam**
 - Volitional passage if CHD removed and replaced with alternative instream diversion
 - Rehabilitate CHD and fish passage facilities
 - Replace CHD with new dam facility (rubber bladder dam, Olbermeyer weir)
- **Adult and juvenile fish passage at Scott Dam**
 - Various fish ladders and trap-n-haul if Scott Dam remains
 - Various juvenile collectors if Scott Dam remains
 - Volitional passage if Scott Dam removed
 - During transition for phased Scott Dam removal
- **Habitat Restoration in watershed**

Sediment Management OPTIONS (for Dam(s) Removed Alternative)

- **Lake Pillsbury Sediment Management**
 - Excavation and stockpiling of all reservoir sediment (19,000,000 cu yds)
 - Excavation and stockpiling of mobile reservoir sediment (12,000,000 cu yds)
 - Excavation and stockpiling of minor reservoir sediment (1,500,000 cu yds)
 - No excavation and stockpiling of any reservoir sediment, let it route downstream (12,000,000 cu yds)
- **Van Arsdale Reservoir sediment management**
 - Let sediment naturally erode (smaller volume, ~1,000,000 cu yds)
- **Phasing and diversion considerations**
 - Sediment deposition impacts to diversion facilities?
 - Sediment deposition impacts to bridges, water intakes, flooding risks?
 - Phasing of Scott Dam demolition (phased versus rapid removal, corresponding sediment management implications)

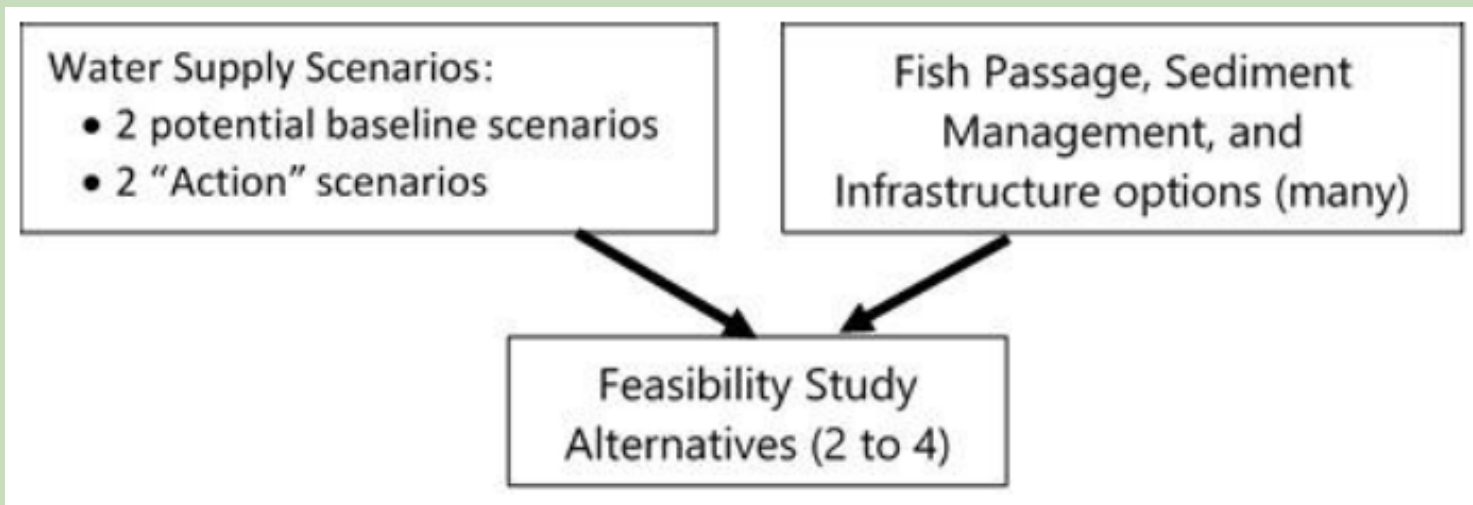
Infrastructure OPTIONS

- PVID water supply replacement (Dam(s) Removed alts)
 - Increase storage in valley via tributary dams and cumulative ponds
 - Improve water conveyance and delivery efficiency
 - Lake Mendocino pumpback
- Alternative diversion dam options at Cape Horn Dam
 - Refurbish Cape Horn Dam
 - Rebuild Cape Horn Dam with variable head dam (bladder dam or Obermeyer weir)
- Alternative “no-head” diversion options instead of Cape Horn Dam
 - Ranney Wells, infiltration galleries, cone screen diversion, lateral diversion
- Habitat Restoration in watershed

Combining into Alternatives

Action Alternatives:

- Scenario 2 + logical OPTIONS
- Scenario 4B + logical OPTIONS



- Baseline Alternatives (if Parties do not pursue project)
- Existing Conditions (first 5-10 years)
- PVP Decommissioning (~10-20 years)