

# Drought Contingency Planning in the Colorado River Basin: Thinking Outside the Box

Sustaining the New West  
Conference

Bozeman, Montana

June 5, 2019

Lain Leoniak

Assistant Attorney General  
State of Colorado



The views expressed in this presentation are solely those of the presenter, and not the official position of the Colorado Department of Law.

"If You Want To Go Fast, Go Alone.  
If You Want To Go Far, Go Together."

- African Proverb

# The Box: Things to Consider About **Your** Water Supply

(individual, local, state, regional levels)

## ❖ Availability

- ✓ Geography-where is the source of my water and where am I?
- ✓ Quantity and Quality

## ❖ Flexibility

- ✓ Local, state, federal- laws, regulations, policies, agreements (compacts) governing water development and management

## ❖ Reliability

- ✓ Climate-what are current and future impacts on my water supply?

## ❖ Adaptability

- ✓ What do I need to do to secure my water supply now and for the future?

- ❖ Begins in RMNP
- ❖ Flows 1,400 miles to Mexico
- ❖ 250,000 sq. miles
- ❖ 40 million people
- ❖ 5.5 million acres of irrigated agriculture
- ❖ 11 National Parks
- ❖ \$1.4 trillion economy annually



# Background Context (Legal)

## Colorado River Compact, 1922

### \*Apportionment - Article III(a)

- ✓ The exclusive beneficial use of 7.5 MAF per year of water from the Colorado River System is apportioned to the Upper and Lower Basin respectively which includes all water needed for the supply of any future water rights. (Note: LB gets additional 1 MAF under Art. III (b)).

### \*Non-Depletion Clause - Art III(d)

- ✓ Upper Basin states will not cause the flow at Lee Ferry to be depleted below an aggregate of 75,000,000 acre-feet for any period of ten consecutive years. ***THIS IS NOT A DELIVERY OBLIGATION***



# Context - Upper Colorado River Compact 1948

\* **Article III(a)** - apportions “in perpetuity” the Upper Basin’s share of the consumptive use of water under the Colorado River Compact to individual states.

- Arizona gets 50,000 AF annually.
- The other states may use the following percentages:

State	Percentage of available supply	% of 7.5 MAF (full supply)
Colorado	51.75	3,855,375
New Mexico	11.25	838,125
Utah	23	1,713,500
Wyoming	14	1,043,000

# Context - Upper Colorado River Compact cont'd

\* **Article IV** - in the event **curtailment of use shall become necessary** to not deplete the flow at Lee Ferry below that required by Art. III of the Colorado River Compact, the extent of curtailment by each state shall be determined in such amounts and at such times **as determined by the Upper Colorado River Commission**.

UCRC does NOT have authority to determine how to administer water within an individual state

❖ We never have been in curtailment, and under historical hydrologic conditions, we will not face a curtailment in foreseeable future.

# Context - 2007 Interim Guidelines

## \* Set criteria for shortages in the Lower Basin.

- ✓ Below elevation 1075 feet - 333,000 AF
- ✓ Below elevation 1050 feet - 417,000 AF
- ✓ Below elevation 1025 - 500,000 AF

*\* Assumes Mexico will provide additional shortage savings*

## \* Creates option to bank water in LB = *Intentionally Created Surplus (ICS)*.

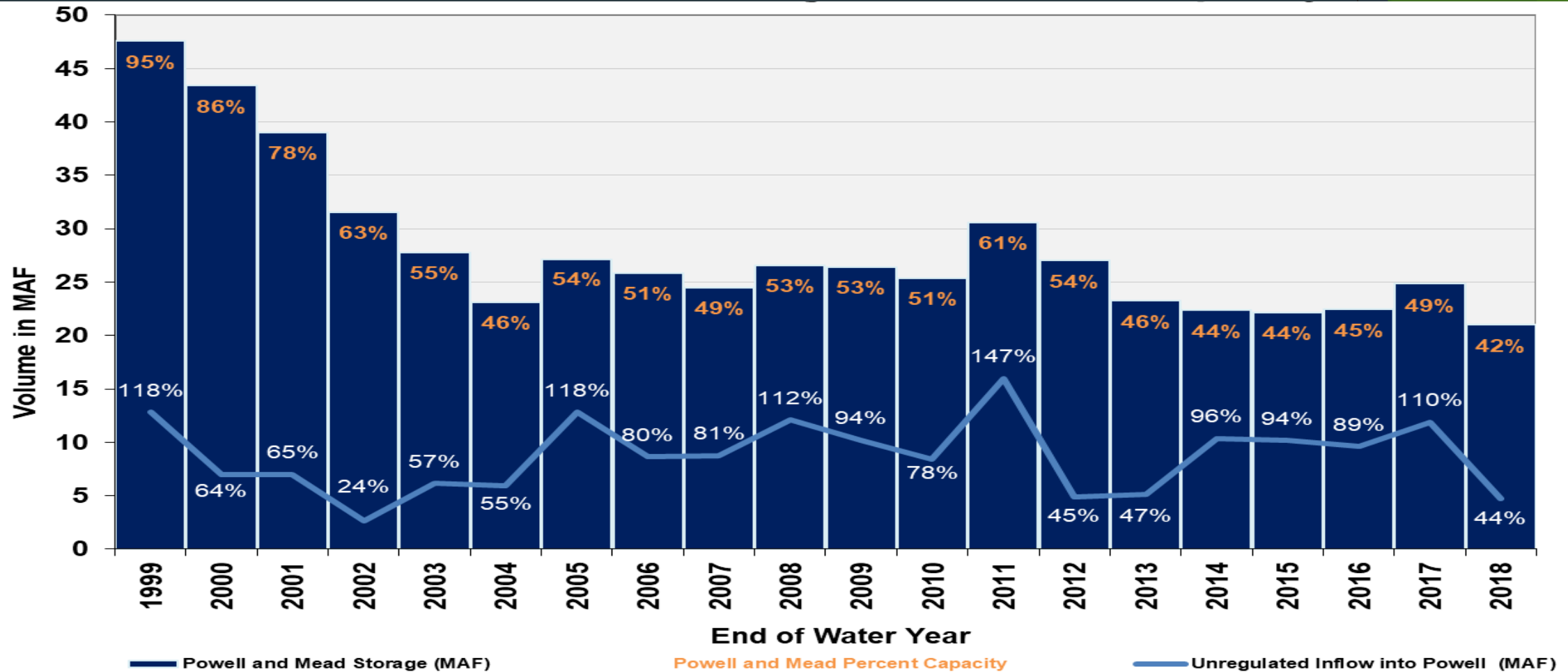
- ✓ Extraordinary conservation
- ✓ System efficiency improvements
- ✓ Tributary conservation
- ✓ Importation of non-System water

## \* Specifies coordinated operating criteria for Lake Powell and Lake Mead

- ✓ To avoid UB curtailment and reduce impact of LB shortages under low water supplies.



# Lake Powell & Mead Storage and Percent Capacity and Inflow into Lake Powell



<sup>1</sup>Values for Water Year 2018 are projected. Unregulated inflow is based on the latest CBRFC forecast dated September 17, 2018. Storage and percent capacity are based on the September 2018 24-Month Study.

<sup>2</sup>Percentages on the light blue line represent percent of average unregulated inflow into Lake Powell for a given water year. The percent of average is based on the period of record from 1981-2010.

# Compact Administration

## *\*Reactive - waiting until crisis occurs*

- ✓ Imposed Involuntary Curtailment
  - ▶ High level of uncertainty
  - ▶ Inefficient allocation of natural and economic resources
  - ▶ Drinking water supplies
  - ▶ Litigation
  - ▶ Economic ramifications
- ✓ **Increased risk of federalization of the Upper Basin**

## *\*Proactive - control our own destiny*

- ✓ Voluntary actions to conserve
  - ▶ Plan ahead to mitigate impacts
  - ▶ Reduce the risk of uncertainty with curtailment avoidance (risk will never be zero)
  - ▶ Explore and develop position for employing mechanisms that manage risk level within Colorado and Upper Basin

# Outside the Box: Interstate Drought Contingency Planning

## What is it?

- ✓ Interstate planning for drought response to reduce risks associated with reaching critical reservoir elevations at Lake Powell and Lake Mead.



# Interstate Drought Contingency Planning

## \*Why are we doing it?

- ✓ If critical elevations are breached, the system faces threats to ability to control our own destiny - drinking water supply, irrigation, natural resource preservation and hydropower production, economic stability, and overall sustainability.

## \*Low probability but High Risk in Upper Basin.

- ✓ Sensible to plan for the worst case scenarios to avoid potential controversy, conflict, and uncertainty.
- ✓ Preparation for but not predicting need for implementation.



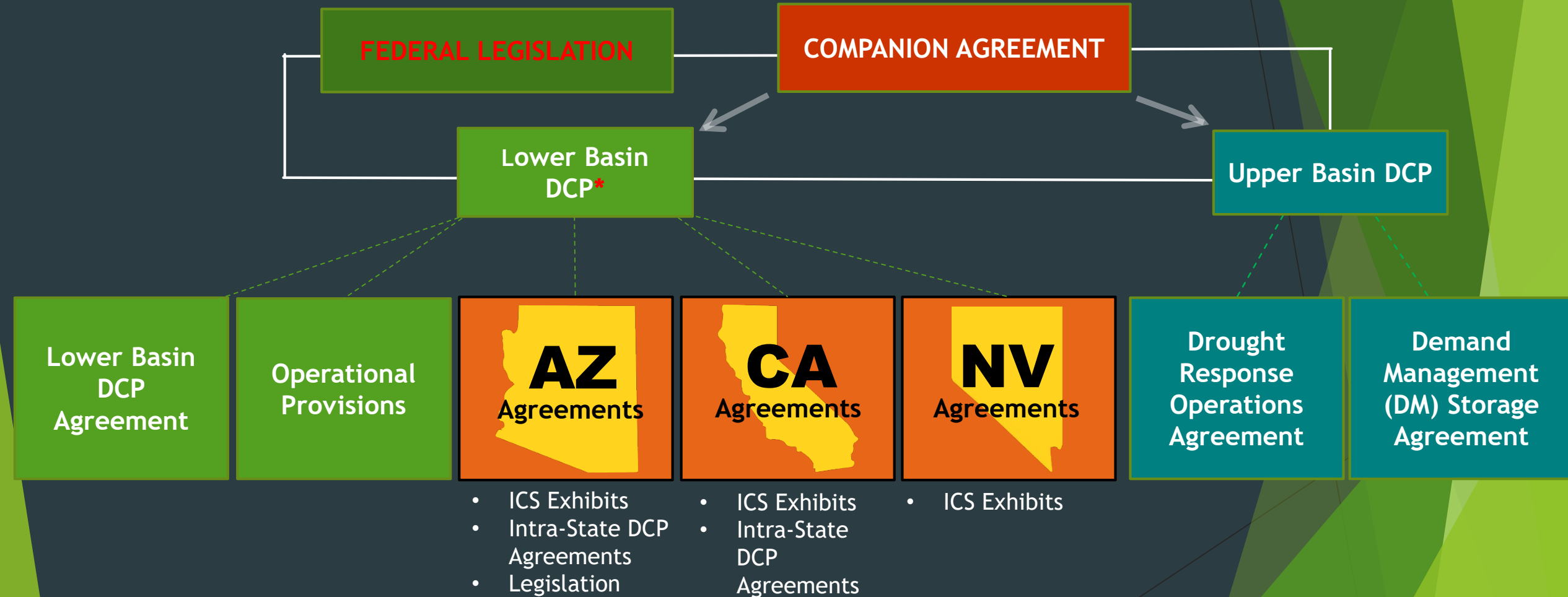
# Interstate Drought Contingency Planning

## GOALS

- ✓ Identify methods for providing additional flexibility and security in the Colorado River System in times of ongoing or extended drought
- ✓ Avoid unilateral and uncoordinated efforts that could provoke or lead to litigation or conflict.



# COLORADO RIVER BASIN DROUGHT CONTINGENCY PLAN (DCP) DOCUMENTS AND AGREEMENTS



*\*Activates Section IV of Minute 323 (Binational Water Scarcity Plan)*



# Upper Basin DCP

## Drought Response Operations Agreement (DROA)

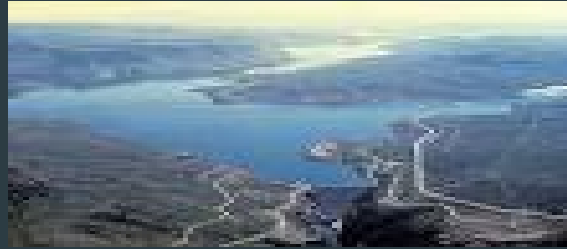
Navajo  
Reservoir



Flaming Gorge  
Reservoir



Blue Mesa Reservoir



Lake Powell

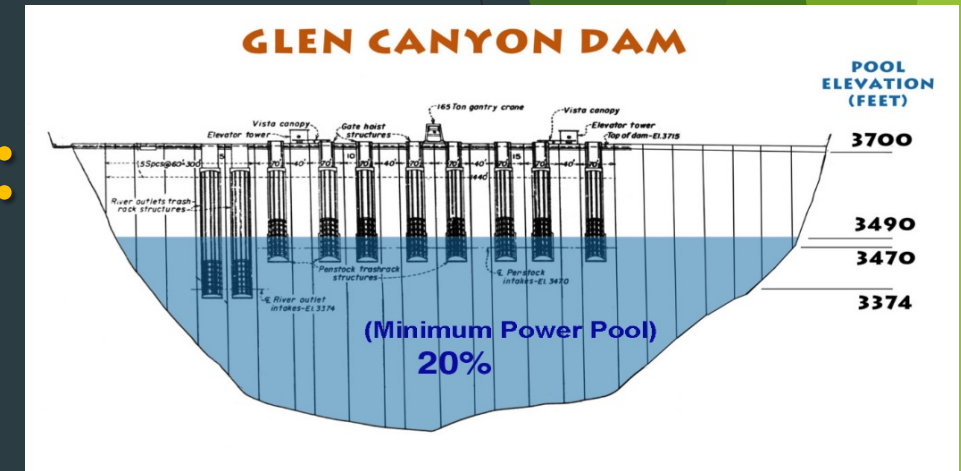
- Agree on process for developing operational plans to implement based on specific triggers to help maintain minimum power pool elevation at Lake Powell
- By conserving water (temporarily) in Lake Powell or moving water (and subsequently recovering the storage) from upper CRSPA Units

# Upper Basin DCP - DROA

## Why Minimum Power Pool?

### Loss of power generation impacts:

- ✓ Clean power supply
  - ✓ Funding for:
    - Repayment for construction of CRSPA projects.
    - Operations and Maintenance of Glen Canyon, Aspinall, Flaming Gorge, Navajo, reservoirs.
  - Threat to maintaining compact compliance-hydraulics
- ❖ Directly implicates ability to utilize existing water supplies.



# UB DCP Demand Management Storage Agreement

## \*Purpose

- ✓ Secure unfilled storage space in CRSPA Units for continued compliance with **compact obligations** in times of extended drought.

## \* Need

- ✓ For any demand management to be effective, **multi-year storage is required.**
  - ✓ There is little incentive to investigate the issues related to demand management without assurances to justify time and resources.
- ❖ The Agreement does not authorize, mandate or guarantee that an Upper Basin Demand Management Program will be developed.

# What is Demand Management?

- ▶ UCRC Resolutions in 2014 and 2018 - explore **feasibility** of:
  - ▶ Temporary
  - ▶ Voluntary
  - ▶ Compensated
  - ▶ Reduction in diversions to conserve water that is otherwise consumptively used
- ▶ To help avoid potential need for **involuntary curtailment** of Colorado River uses. Specifically **geared to ensure compact compliance**.
- ▶ 2<sup>nd</sup> line of defense

# Demand Management Considerations

- ▶ Consistency with prior appropriation and state water laws
- ▶ Preservation of water rights and way of life
- ▶ Economic and environmental considerations
- ▶ Tribal interests
- ▶ Monitoring and verification of water conservation
- ▶ Administration and accounting
- ▶ Sideboards/limitations to consider
- ▶ Parity - benefits and burdens shared (ag v. muni)
- ▶ Funding - who funds the program?



# Moving Forward

\*Protect Upper Basin interests in reliability and availability of water supply

- ✓ Work cooperatively with interstate partners to implement DCP.
- ✓ Prepare for longer-term negotiations
- ✓ UCRC and Intrastate Colorado Work Plan for 2019

Success of the DCP will require water users and stakeholders to be actively engaged, involved, and informed as we move forward.





# THANK YOU

*Lain Leoniak, Assistant Attorney General  
Colorado Dpt. of Law  
[Lain.Leoniak@coag.gov](mailto:Lain.Leoniak@coag.gov)*