PIKE AND SAN ISABEL NATIONAL FORESTS AND CIMARRON AND COMANCHE NATIONAL GRASSLANDS (PSICC)

Oil and Gas Leasing Analysis

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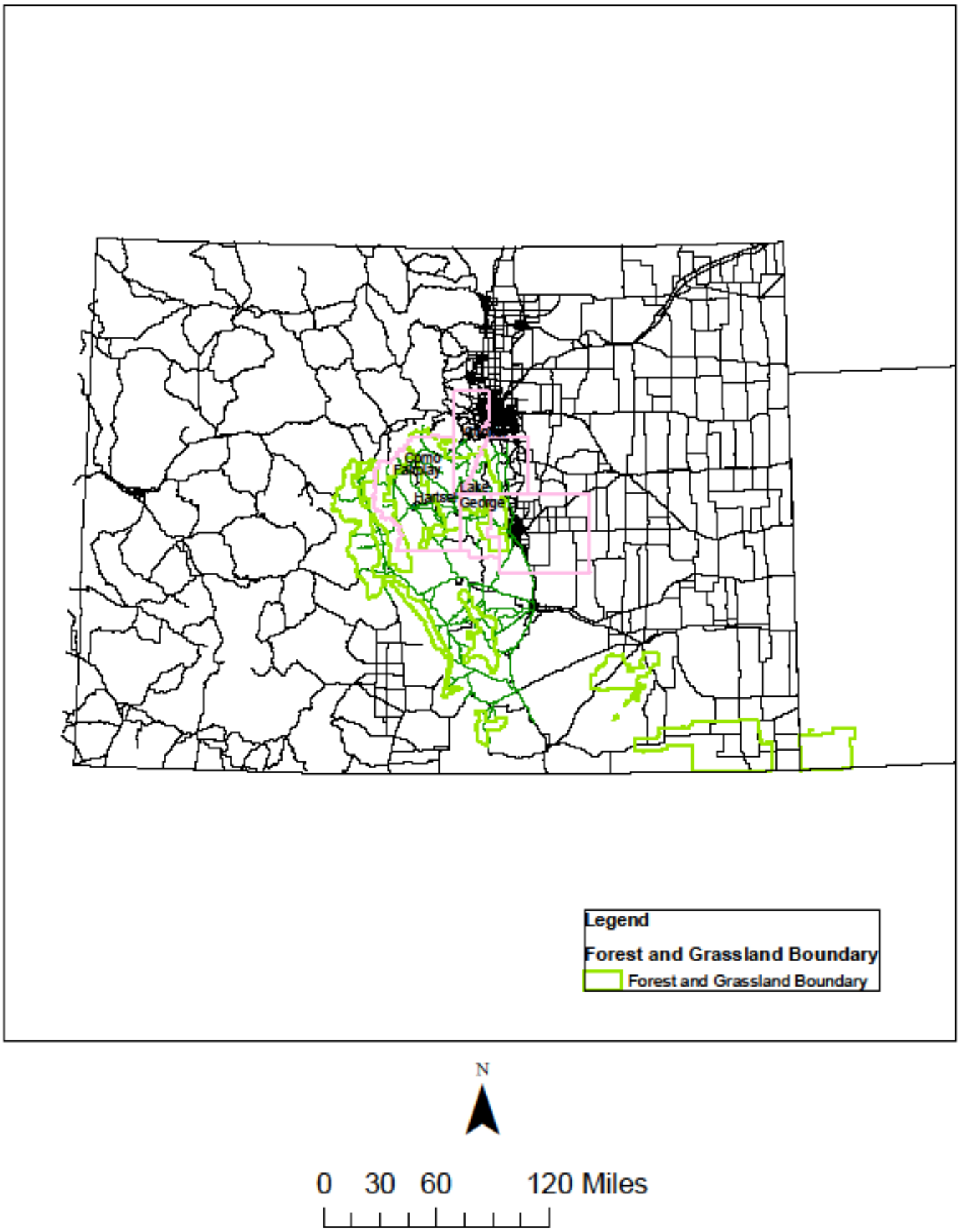
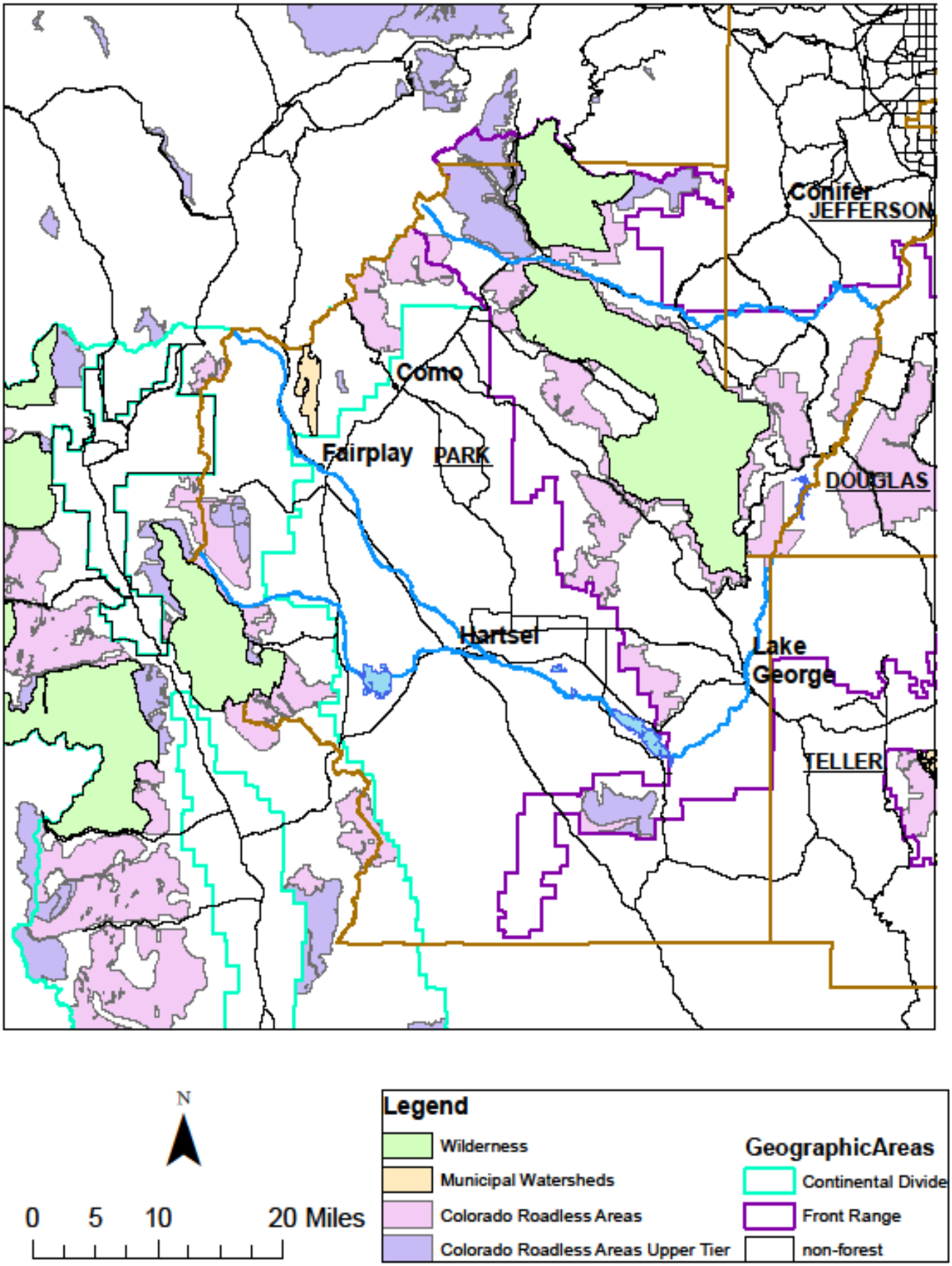
PSICC Oil and Gas Leasing Analysis

- Project Area
- USFS Substantive Requirements
- Reasonable Foreseeable Development Scenario
- Leasing Analysis vs. Well Leasing and Development Analysis
- How the PSICC Approached the Analysis
- Water Resource Protection Stipulations
- Comparison of the No Action Alternative (current zoning/mitigations) with Proposed Action
- Project Timeline

PSICC Project Area



Forest Geographic Areas in the Upper South Platte Watershed



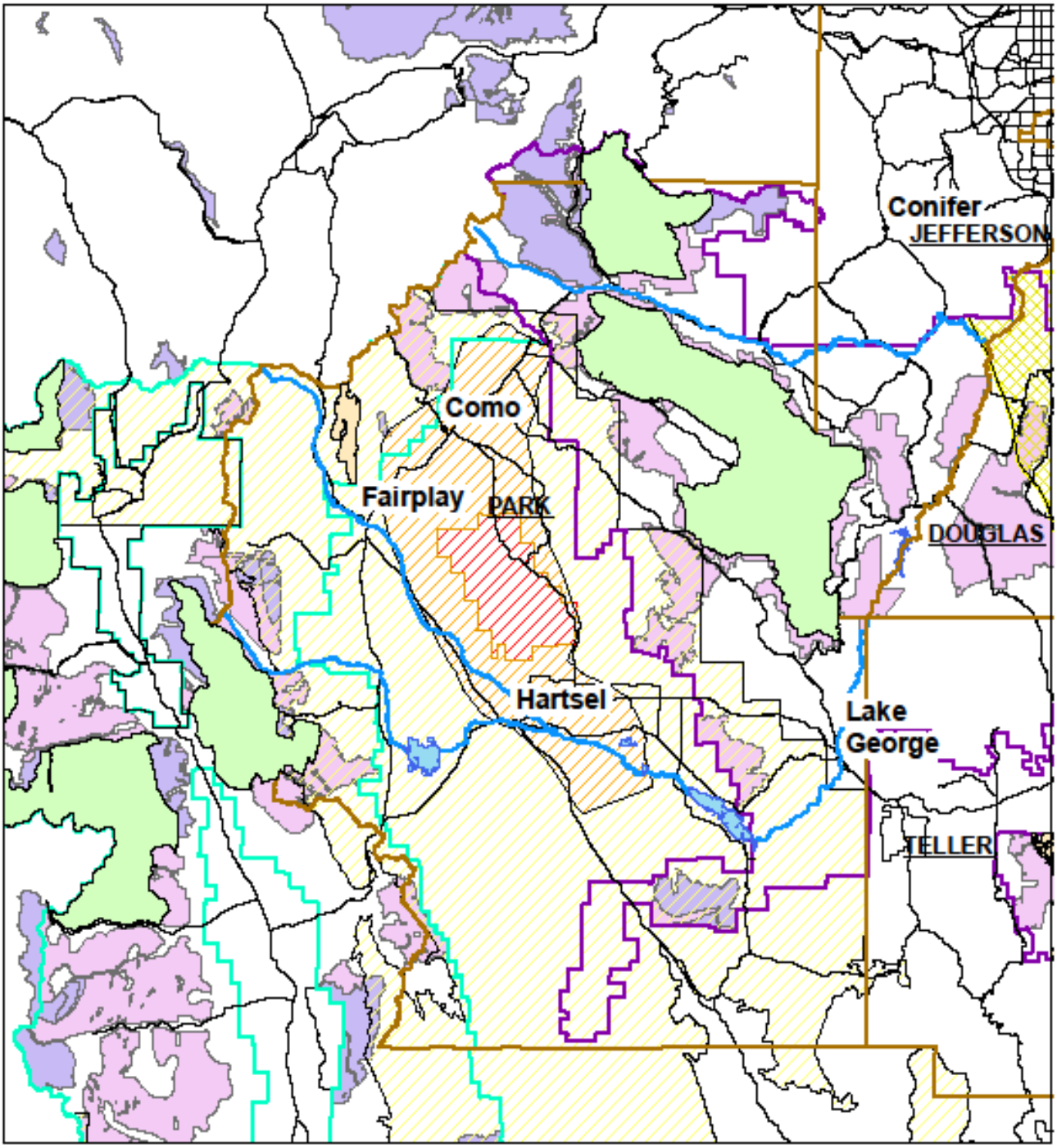
USFS Requirements for Oil and Gas Leasing Analyses

- The USFS is required to identify on maps
  1. Lands open to development subject to standard oil and gas leasing stipulations
  2. Lands open to development but subject to constraints from lease stipulations
  3. Lands closed to development
  4. Project the type and amount of future development (RFD)
  5. Identify alternatives to the areas identified in numbers 1 and 2
  6. Analyze the impacts from each selected leasing analysis alternative

Reasonable Foreseeable Development Scenario

- Geological and current operator information
- Prediction of potential future development
  - Number of and type (coalbed methane or conventional oil and gas) potential wells by township
  - Acres of disturbance created by each well

Conventional Oil and Gas Potential in the Upper South Platte Watershed



N

0 5 10 20 Miles

Legend

- Forest Service Wilderness
- Municipal Watersheds
- Colorado Roadless Areas
- Colorado Roadless Areas Upper Tier

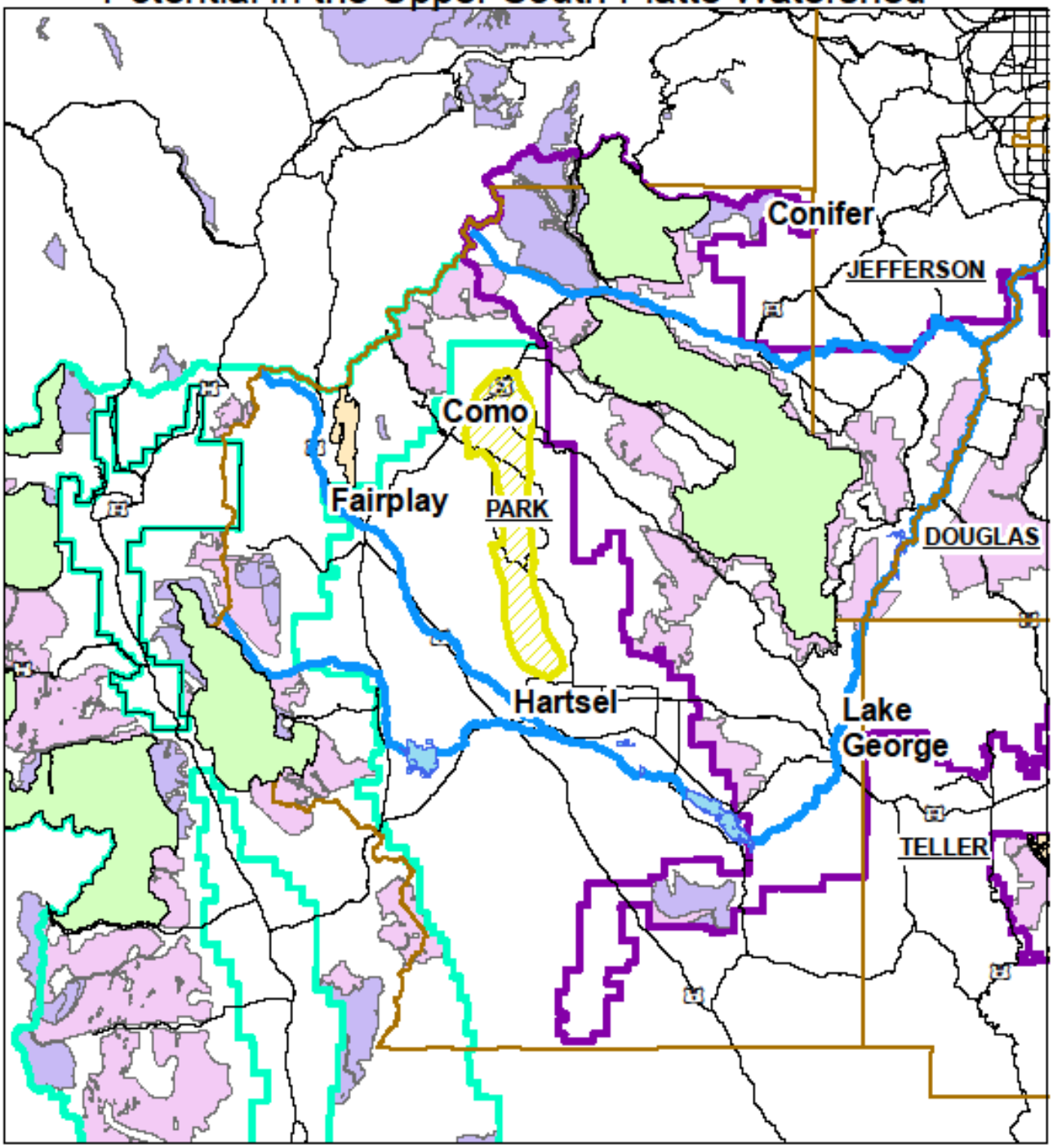
GeographicAreas

- Continental Divide
- Front Range
- non-forest

Conventional Oil and Gas Potential

- High-More than 10 Wells per TWP
- Moderate-More than 5-10 Wells per TWP
- Low-More thant 1-5 Wells per TWP
- Very Low-Less than 1 Well per TWP
- None

Coalbed Methane Development Potential in the Upper South Platte Watershed



Legend

- Forest Service Wilderness
- Municipal Watersheds
- Colorado Roadless Areas
- Colorado Roadless Areas Upper Tier

GeographicAreas

- Continental Divide
- Front Range
- non-forest

Coalbed Methane Potential

- Very High=>30 Wells per TWP
- High=>10 t0 30 Wells per TWP
- Moderate = 5 to 10 Wells per TWP
- Low = 1 to < 5 Wells per TWP
- Very Low = < 1 Well per TWP
- None = No wells

N

0 5 10 20 Miles

Leasing Analysis vs. Well Leasing and Development

- Leasing Analysis
  - Broad Scale (3,000,000 acres)
  - Generally On USFS lands from South Western Kansas to the Continental Divide and from South West Denver to Walsenberg
  - Township level based
    - Number of potential wells per township from RFD
  - Wells are evenly distributed across township
  - Specialist use even well distribution to determine potential impact
  - Also use well distribution and frequency to determine type and number of Stipulations

Leasing Analysis vs. Well Leasing and Development

- Well Leasing and Development
  - Usually know specifically where development will occur
  - Review current stipulations (zoning/mitigation) to determine effectiveness
  - Can negotiate additional mitigations but cannot mandate unless required by law

Leasing Analysis vs. Well Leasing and Development

- Well Leasing and Development
  - Usually know specifically where development will occur
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  - **Can negotiate additional mitigations but cannot mandate unless required by law**

How the PSICC Approached the Analysis

- Reviewed Current Forest Plan Standards and Guidelines (1984 Plan)
- Reviewed and Brought Forward Existing Mitigations From Current Oil and Gas Leasing EIS Where and When Applicable.
- Reviewed Similar More Recent EISs (Roan Plateau, White River and Dixie National Forest)
- Reviewed New Requirements for Each Resource
  - Ex. Source Water Protection is a New Stipulation Category

How the PSICC Approached the Analysis

- Reviewed On the Ground Changes Since 1992 (new municipal watersheds)

- Created Proposed New Stipulations to Fill in Gaps Between Old and New Policies and Protect Landscape Changes Since 1992 (new infrastructure for example)

Water Resource Protection Stipulations

- Watershed Protection
  - Municipal Watersheds
  - Water Influence Zones (WIZ)
  - Public or Community Source Water Protection Zones
  - Ground Water Resources

Water Resource Protection Stipulations

- Municipal Watersheds
  - No Surface Occupancy Stipulation
    - Municipal Watersheds are defined as watersheds with a formal agreement between the water provider and USFS or
    - Congressionally Designated municipal watershed like on Pikes Peak
    - Gathered data on current Municipal Watersheds.

Water Resource Protection Stipulations

- Water Influence Zones (WIZ)
  - No Surface Occupancy Stipulation
    - The delineated floodplain
    - Plus an additional 100 meters (330 feet) beyond the identified and delineated floodplain

Water Resource Protection Stipulations

- Public or Community Source Water Protection Zones
  - Controlled Surface Use Stipulation
    - No oil and gas facility may be placed within 200 meters (660 feet) of a surface water facility
    - No oil and gas facility may be placed within 200 meters (660 feet) of a groundwater source
    - This stipulation allows us to move proposed facilities beyond 200 meters for Source Water Protection

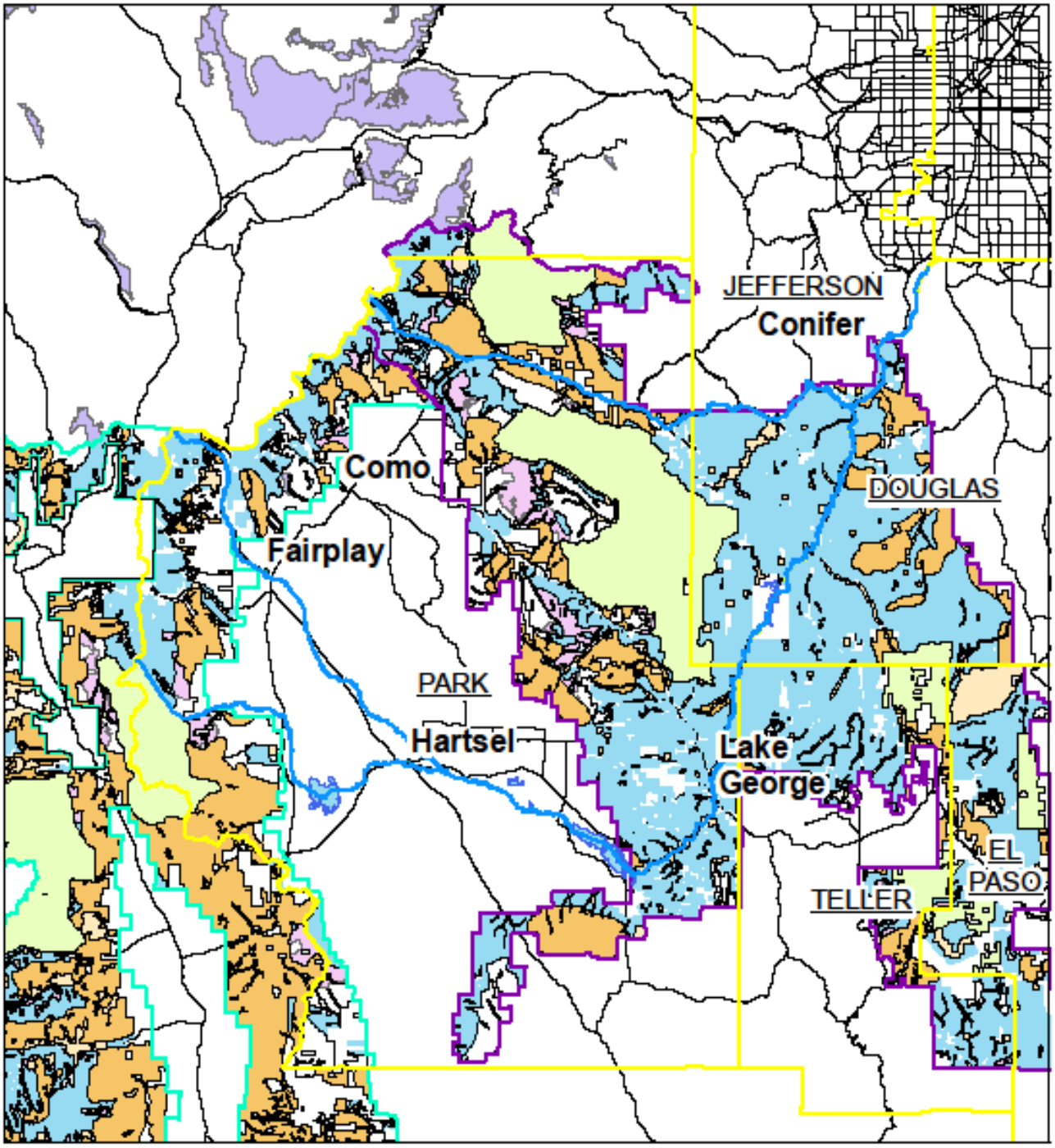
Water Resource Protection Stipulations

- Ground Water Resources
  - Controlled Surface Use Stipulation
    - Special design, construction, operation, mitigation, monitoring and/or relocation by more than 200 meters (660 feet)
    - Mitigation may include use of contained drilling systems, specific design of fuel storage, spill plans and specific design of water handling facilities

Water Resource Protection Stipulations

- Why CSU and Not NSO
  - Not sure exactly where these areas are
  - New ones may crop up in the future
  - Not sure the impacts of an NSO if we are unsure where they exist on the landscape
  - CSU allows surface occupancy with specified mitigations
  - NSO disallows any surface occupancy

Current PSICC Oil and Gas Stipulations in the Upper South Platte Watershed



N

0 5 10 20 Miles

Legend

- Colorado Roadless Areas
- Colorado Roadless Areas Upper Tier

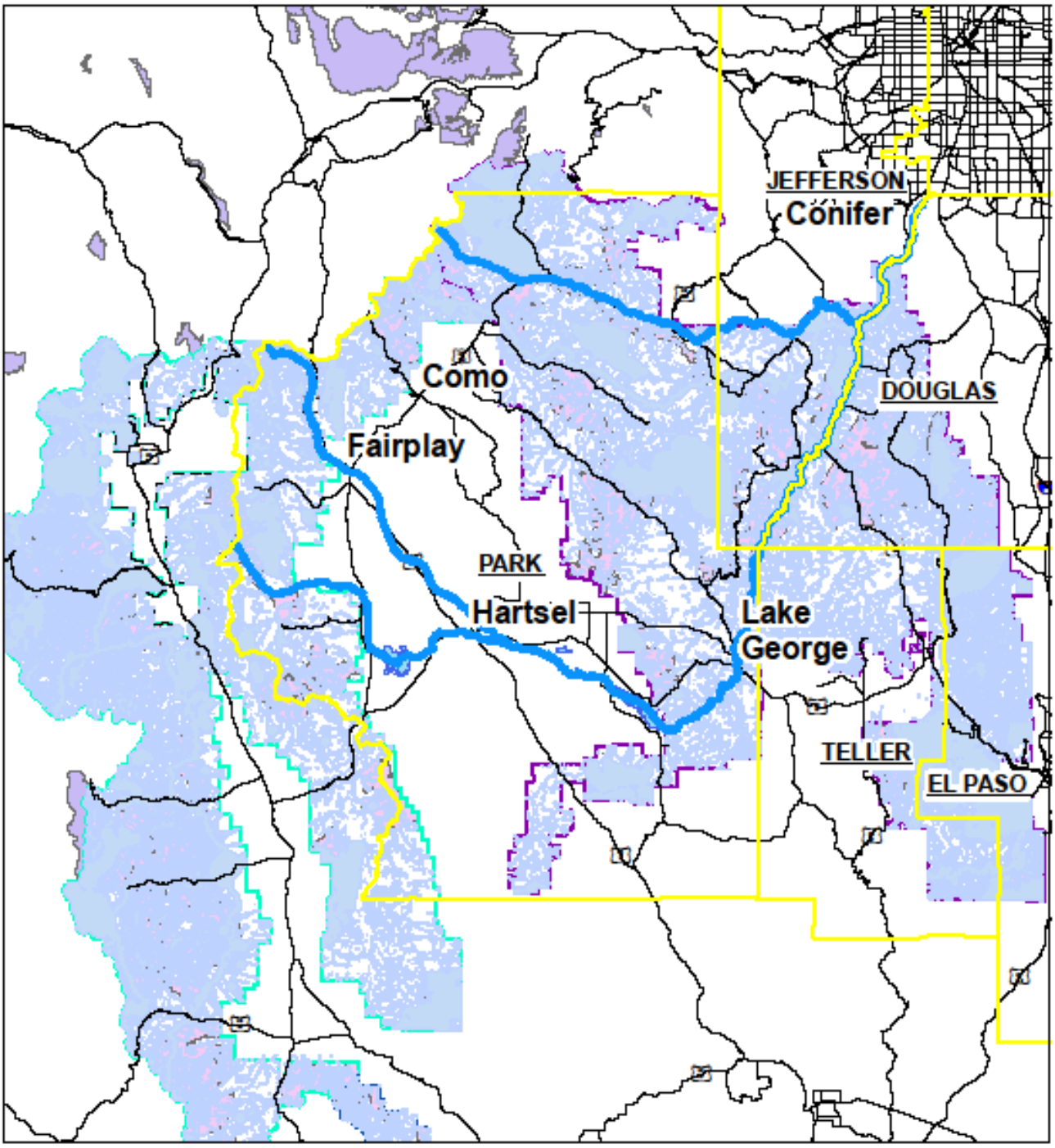
GeographicAreas

- Continental Divide
- Front Range
- Non Forest

Current Stipulations

- No Lease Formally Withdrawn From Leasing
- No Surface Occupancy (NSO)
- Timing Limitation (Seasonal)
- Controlled Surface Use (CSU)
- Standard Stipulations

Proposed PSICC Oil and Gas Stipulations in the Upper South Platte Watershed (NSO)



N

0 5 10 20 Miles

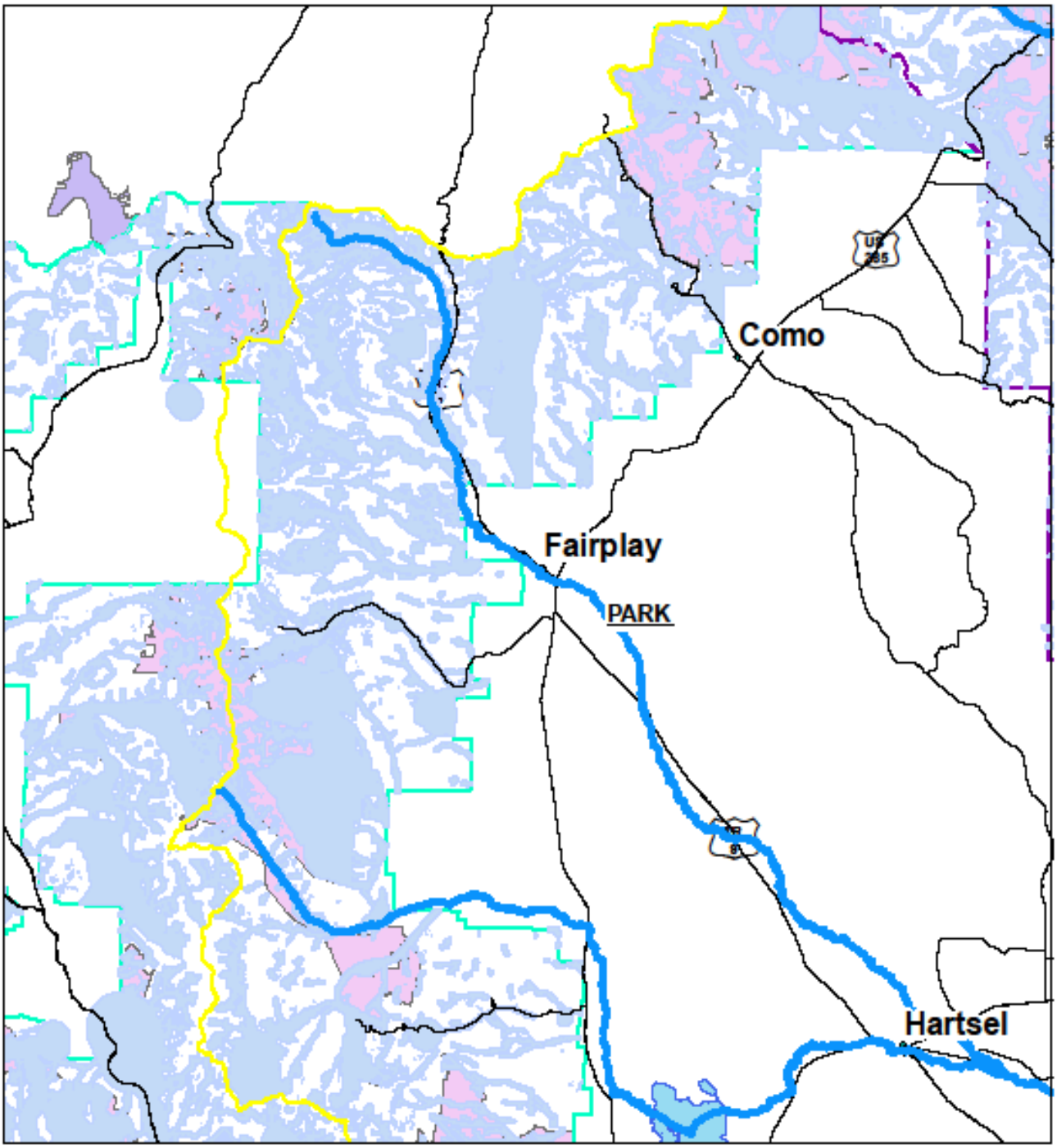
Legend

- No Surface Occupancy
- Colorado Roadless Areas Upper Tier
- Colorado Roadless Areas

GeographicAreas

- <all other values>
- Continental Divide
- Front Range
- Sangre de Cristo
- non-forest

Proposed PSICC Oil and Gas Stipulations in the Upper South Platte Watershed (NSO)



N

0 2.5 5 10 Miles

Legend

- No Surface Occupancy
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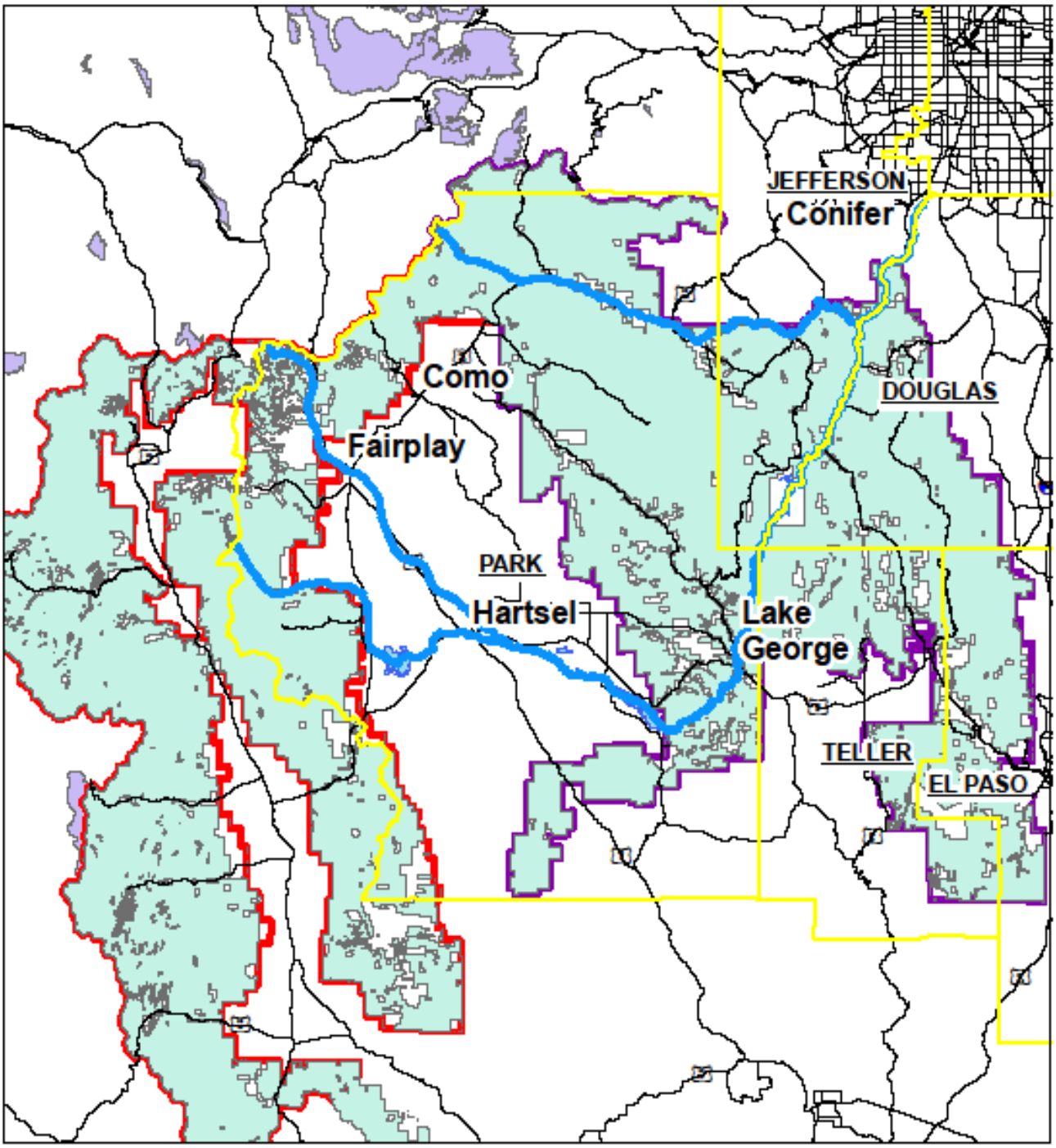
Proposed PSICC Oil and Gas Stipulations in the Upper South Platte Watershed (CSU)



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Legend

- Controlled Surface Use
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- Continental Divide
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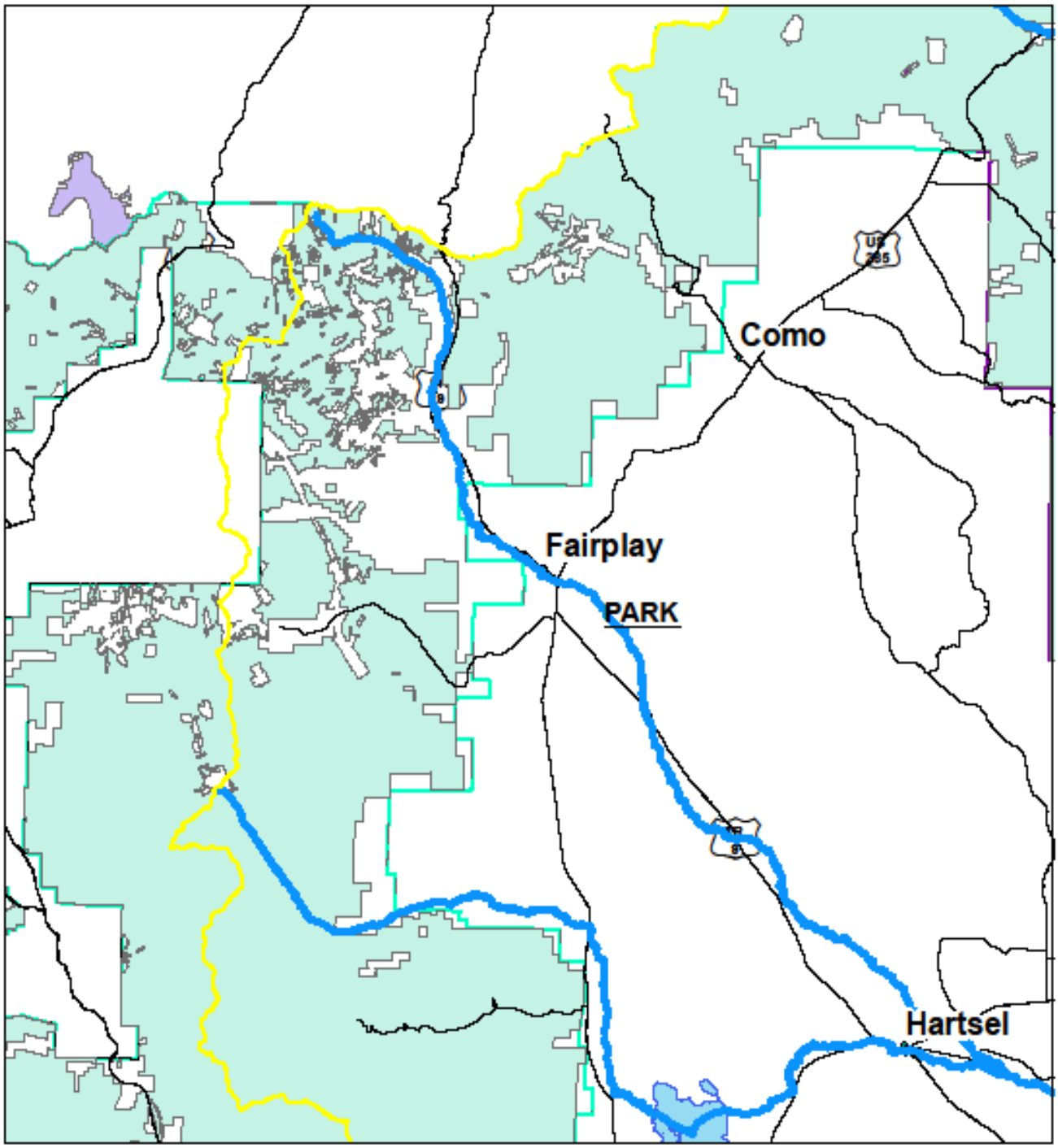
Proposed PSICC Oil and Gas Stipulations in the Upper South Platte Watershed (CSU)



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Oil and Gas Leasing Stipulations

- Layer Cake-they stack one on top of the other
- The USFS must balance the importance of resource protection with the equally important ability or inability to extract natural resources
- Are there areas that need additional protection?
- Where might those be?

Timeline

- Leadership transition
  - New Forest Supervisor expected in May
  - New Supervisor will determine the importance and set the timeline

Summation

- Analysis is started but not finished
- Opportunities exist for comments and suggestions
- Waiting on new leadership to determine future course of action
- Stipulations are required to be the least restrictive necessary to protect the targeted resource