



(d) Patrick Bohlen



(c) FDACS

# Securing Water Related Environmental Services at a Landscape Scale from Working Cattle Ranches in the Northern Everglades Watershed

**Sarah Lynch and Patrick Bohlen  
July 31, 2008**



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# P sources in the Okeechobee Basin

| Land Use         | Acres   | % of Basin | P lbs/ac |
|------------------|---------|------------|----------|
| Row Crops        | 7,087   | 1%         | 170      |
| Dairy            | 21,063  | 2%         | 48       |
| Residential      | 24,068  | 2%         | 14       |
| Ornamentals      | 7,937   | 1%         | 8        |
| Citrus           | 62,744  | 5%         | 6        |
| Field Crops      | 5,624   | 0%         | 6        |
| Improved Pasture | 454,110 | 36%        | 3        |



# Florida Ranchlands Environmental Services Project (FRESP)

- Create a Pay for Environmental Services program that produces documented increases in:
  - Water retention,
  - P retention
- Make it:
  - Profitable to ranchers
  - Cost-effective for tax-payers
  - Feasible to administer
  - Compliments existing state and federal programs
  - Based on credible methods for documenting services



# *The FRESP Vision – To leverage and enhance traditional cost-share programs*

## Traditional cost share

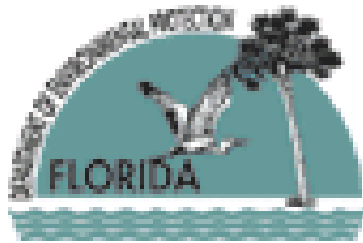
- Cost share for agency-approved BMPs
- Revenue neutral
- Limited verification / assumed effectiveness
- First come- first served

## FRESP

- **Payments for producing environmental services**
  - **Ranchers choose how and how much to produce**
- **Ranch profit center**
- **Payment depends on *documented* performance**
- **Payments target services**



# FRESP Collaboration Partners



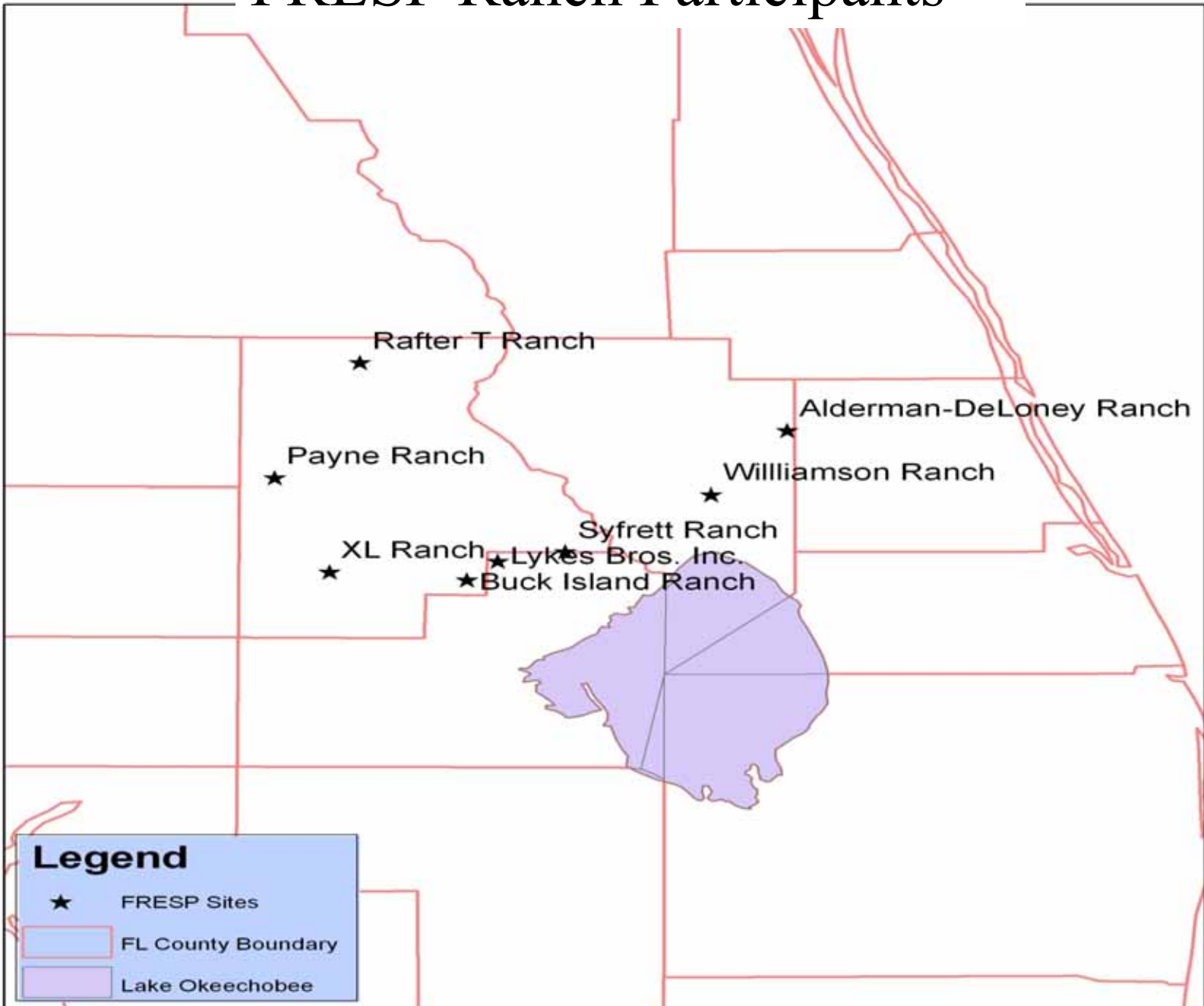
Participating Florida Ranchers



NRCS Natural Resources Conservation Service

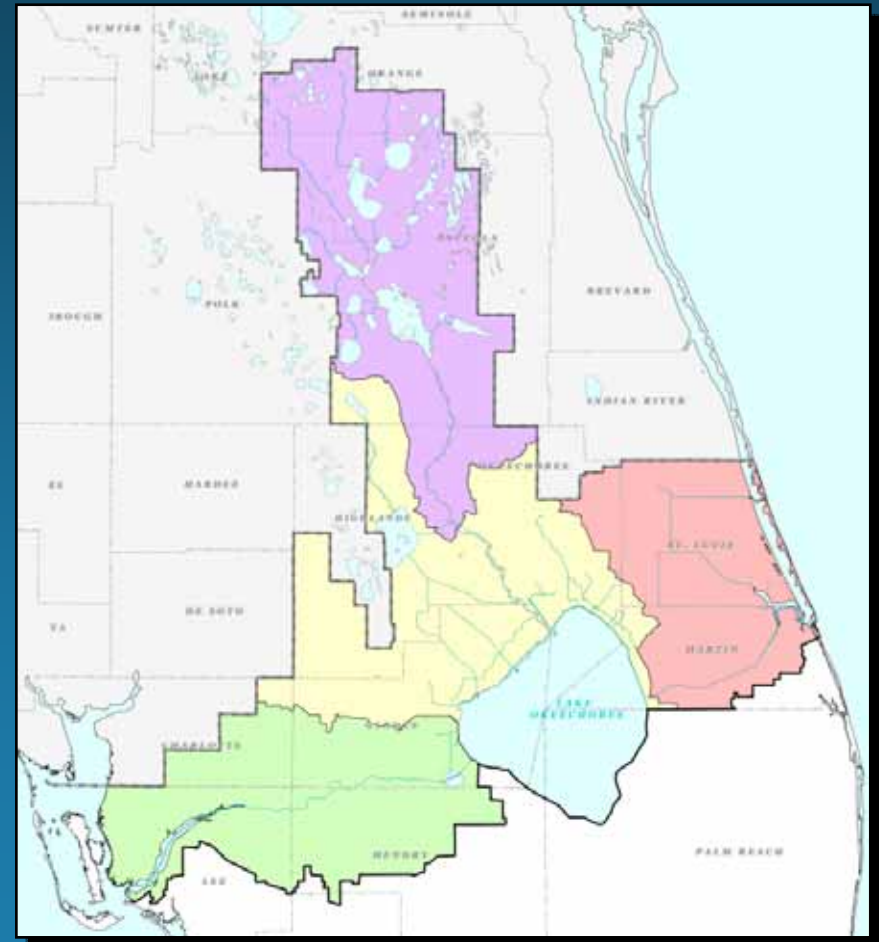


# FRESP Ranch Participants



# The FRESP Potential...

- A scaled up FRESP program in the Northern Everglades could:
  - Provide up to 1/3 to 1/2 the needed 900,000 to 1.3 mil acre-feet of water retention north of the lake
  - Contribute to meeting TMDL for the Lake and tributaries



# FRESP could help change quantity, phase and timing of water delivered to Lake O

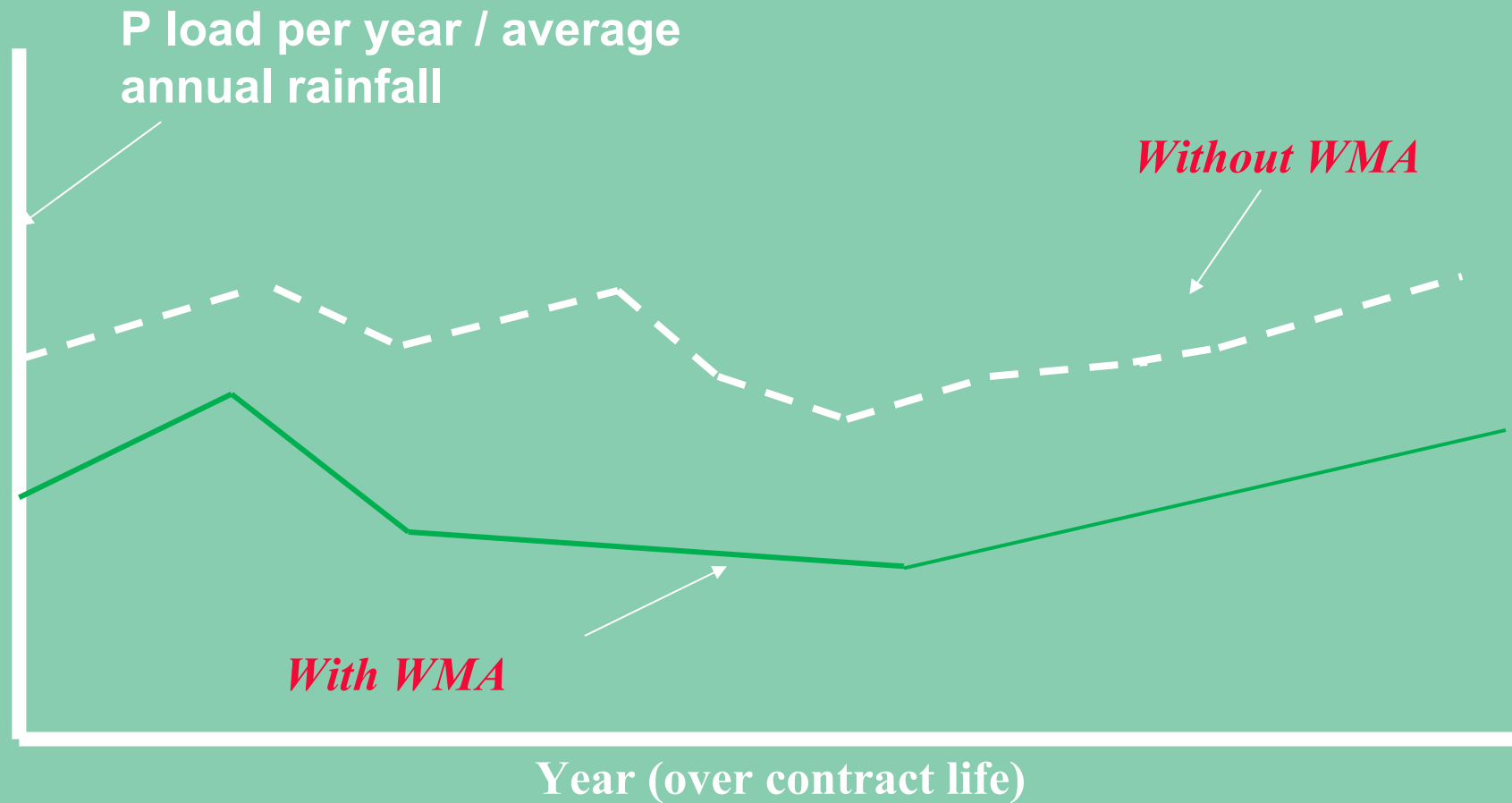




# Building a public-private partnership

- 2005: cost comparison of “on-ranch” water management alternatives with regional facilities
  - Conclusion: On-ranch water management could be cost competitive with regional facilities
- 2005: USDA Conservation Innovation Grant (CIG)
  - Launched FRESP, with funding for 4 Water Management Alternative (WMA) projects
- 2007: additional funding from FL legislature
  - Funding for 4 additional WMAs

# Reduce P load from FRESP WMA sites



# Market-like principles in FRESP design



- Fixed length contracts between agencies and ranchers
- Payments for water and P retention services
  - Ranchers (sellers) choose how to produce service
  - Buyers choose projects based on service potential
- Payments are made
  - Based on verified documentation of service
  - Ranchers meet a minimum set of participation requirements

# Pilot projects



- Proof of Concept for different WMA types
- Proof of Concept for documentation
  - Cost effective
  - Directionally precision
- Demonstration projects to build interest
- Collaboration and discussion on program design
  - Contract design
  - Price making
  - Regulatory Compliance
  - Identification and reduction in transaction costs

# Williamson Cattle Company: 250 Acre Rehydrated Wetland With A 900 Acre Drainage Area





# Buck Island Ranch: 2,800 Acre Cascading Pasture Water Retention System With 3,700-Acre Drainage



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# Lykes Bros. Inc: 2,500 Acre Treatment Marsh In Existing Reservoir To Treat Off-Site Water:







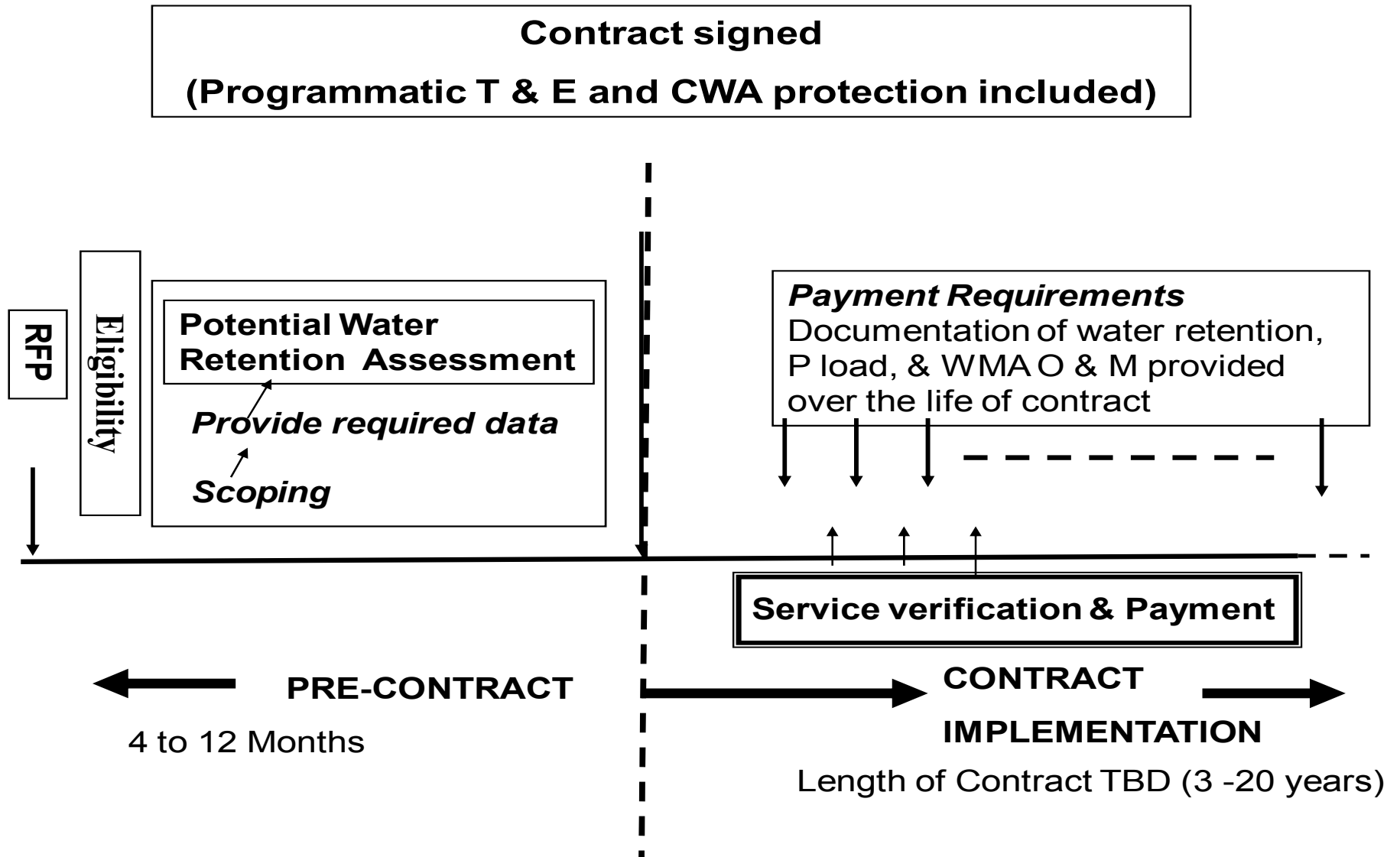
**Key Challenges:**  
**Documentation**  
**Contract Design**  
**Price Discovery**  
**Agency Functions**  
**Payment Certainty**

# Service Documentation

- Low-cost
- Reliable
- Replicable



# FRESP Contract Design





# Thank you!



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