



Southeast Florida Utilities Council

Beyond Boundaries: How Regional Collaboration Enabled a Scalable Biosolids Solution

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Agenda

1. The Problem

Stringent Florida
biosolids regulations

2. Catalyst for Change

Broward County

3. Solution

Regional Biosolids
Solution Workgroup

4. Alternatives Evaluation

Technology and site evaluations

5. Initial Results

Regional thermal drying facility

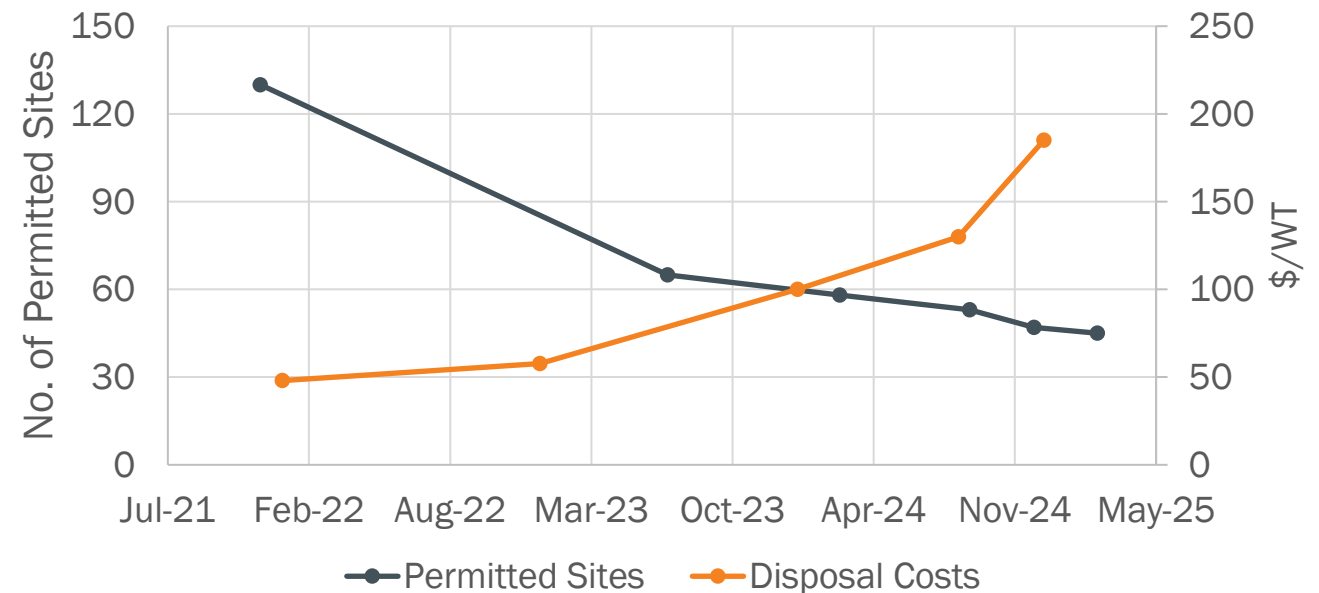
6. Lessons Learned

Tighter biosolids regulations

Chapter 62-640, F.A.C, 2021 revisions

- Class B biosolids require full site permitting, monitoring and setbacks
- Nutrient application limits
- Enhanced groundwater and surface water monitoring requirements
- Increased sampling, recordkeeping and permit renewals

South Florida Biosolids Disposal Rates vs Permitted Sites



Chapter 62-640 did not ban biosolids land application in Florida, but it transformed it into a tightly permitted, nutrient-limited, site-specific practice that significantly reduced available sites and pushed utilities toward higher-quality biosolids and alternative management pathways.

2026 Legislation



SB 1294/ HB 1245 Class AA Agronomic Limits

- Effective: 11/1/2026
- Agronomic rate limits for Class AA biosolids
- Maintain records for at least 5 years
- Without “bona fide sale”, Class AA biosolids must be land applied on permitted FDEP sites (Effective: 7/1/2028)
- Governor vetoed 6/30/2026

CLASS B

SB 290/ HB 433 2026 Florida Farm Bill

- Effective: 7/1/2026
- Phase-out of Class B biosolids land application sites
- Class AA biosolids land application (Effective 7/1/2028)
- FDEP has greater authority to update biosolids rules without legislative ratification



SB 1230/ HB 1019 PFAS Testing

- Effective: 7/1/2026
- Requires quarterly PFAS sampling for both biosolids and wastewater effluent
- Submit results to FDEP

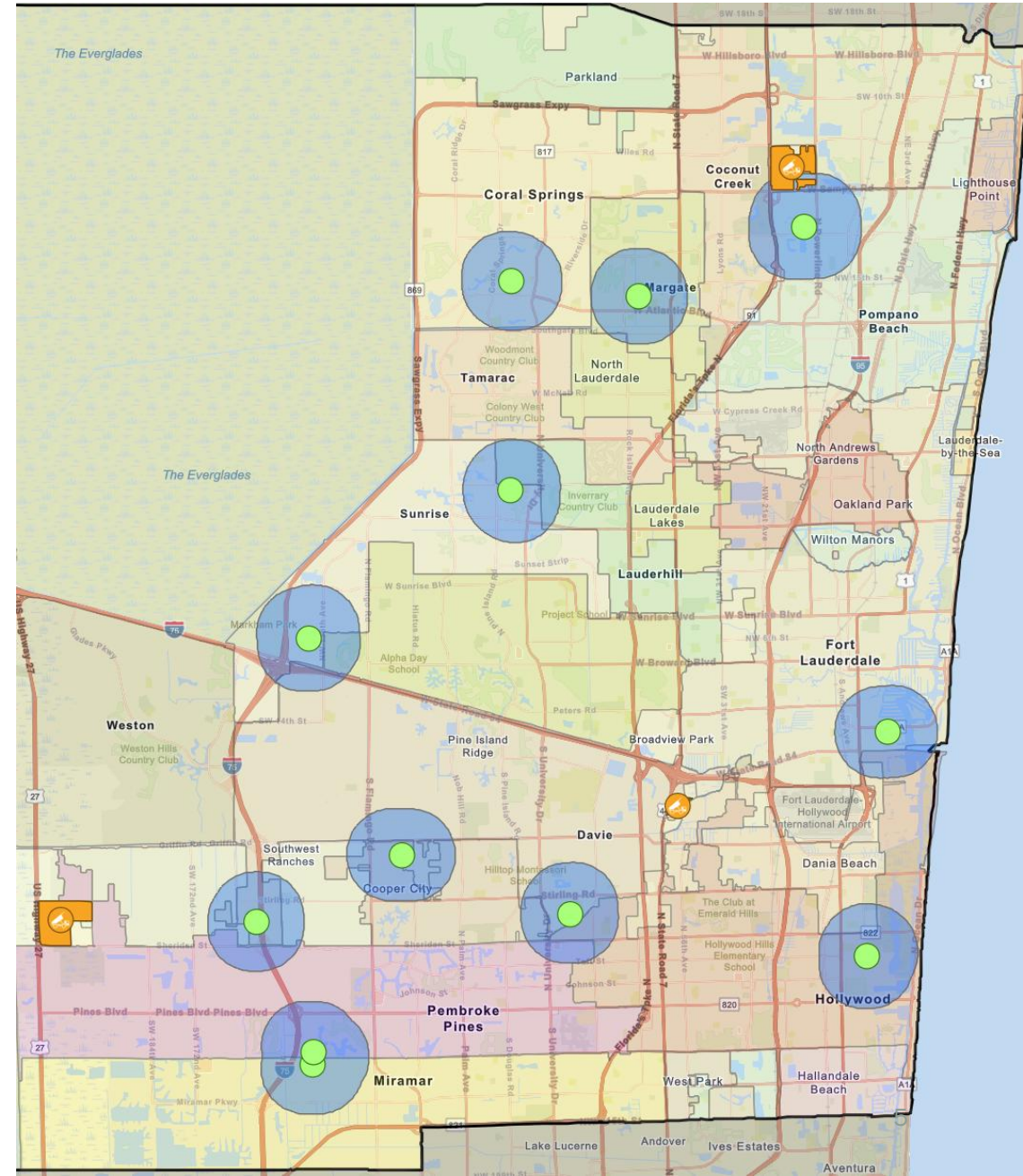
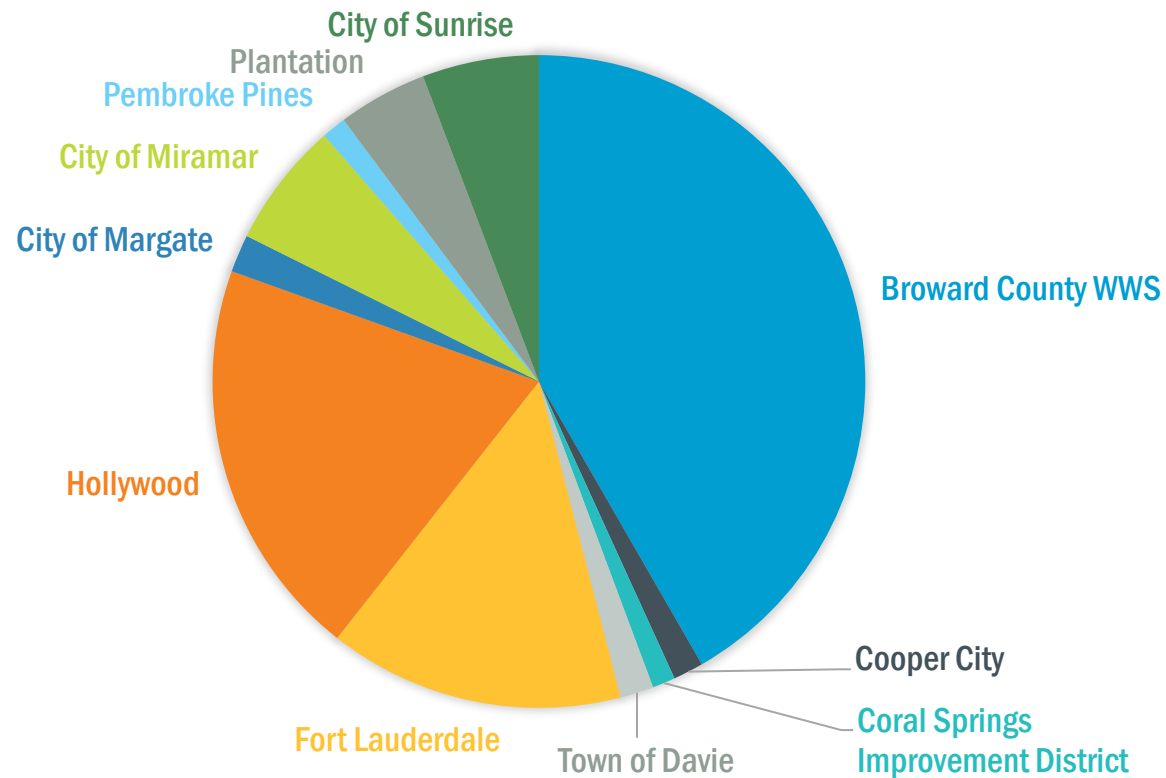


SB 1474/ HB 1285 Septage/ Class B Restrictions

- Effective: 7/1/2027
- Restricts land application of Septage as Class B biosolids
- 30 mile threshold

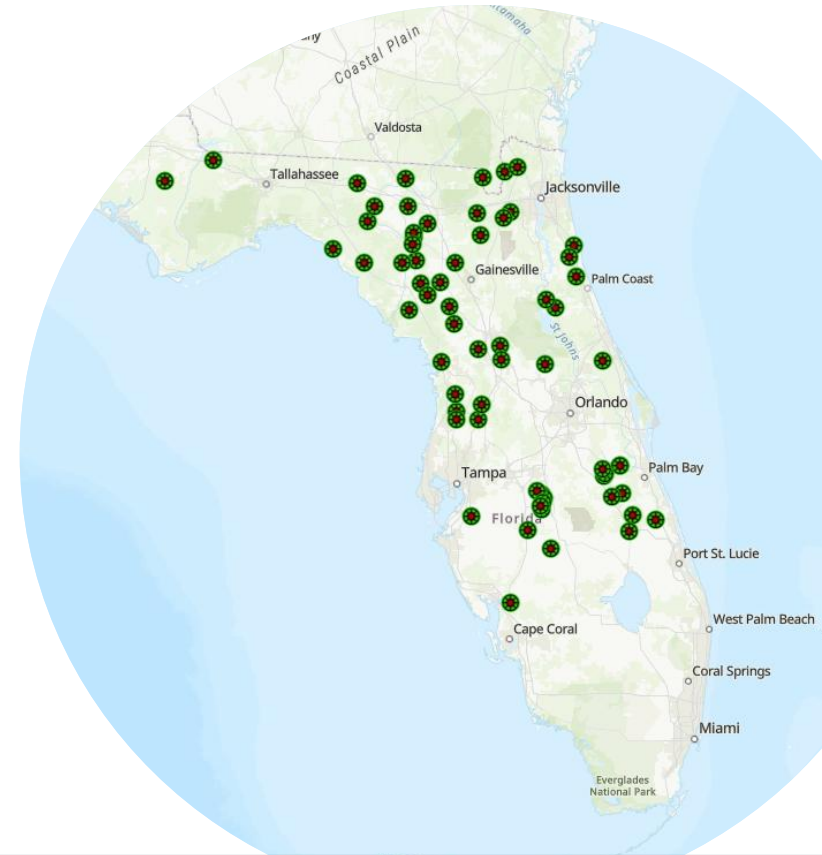
11 Utilities Produce Biosolids in Broward County

PERCENTAGE OF BIOSOLIDS IN BROWARD COUNTY



▶ New regulations impact all utilities within Broward County

- Shrinking land application sites
- Only 1 utility produces Class AA biosolids
- The need to act early
- Proactively engage neighboring utilities
- Positioned the effort as
 - Collaborative
 - Utility-driven
 - Transparent
 - Not profit-driven



30% of Florida population resides in South Florida
Nearest permitted site is **100 miles** from Broward County

► Broward County WWS's Goals and Drivers

- ✓ Volumetric reduction of biosolids
- ✓ Produce Class AA/useable biosolids product
- ✓ Develop a long-term, sustainable biosolids solution
- ✓ Reduce reliance on shrinking disposal options
- ✓ Maintain flexibility for future regulations
- ✓ Ensure cost transparency and defensibility
- ✓ Create a scalable, replicable framework

Broward County WWS is going to develop a project to achieve their goals.

Why not engage neighboring utilities to participate as well?

► Why a Regional Solution?

Similar challenges and goals across multiple utilities

Regional approach offered



Economies of scale



Shared resources. Allows for the inclusion of smaller utilities



Multi-jurisdictional public support



Diversify disposal options and decrease risk



Unified voice of likeminded utilities



► Establishing the Regional Biosolids Solution Workgroup

- Formation of the Regional Biosolids Solution (RBS) Workgroup using Interlocal Agreements (ILAs)
- Participation from 11 utilities across Broward County
- Prioritized equal voice and commitment and utility autonomy
- Allowed defined decision off-ramps



► Governance

- ✓ **Clear goals and expectations**
- ✓ **Broward County WWS as project champion**
- ✓ **Equal votes**
- ✓ **Transparent documentation and decisions at every step**

► Approach

Structured, cooperative framework that results in decisions that are **transparent and defensible with consensus**

PHASE 1

Conceptual Study

- Universe of technologies
- High-level siting analysis

PHASE 2

Refinement

- Final technology selection
- Site selection

PHASE 3

Deliver

- Design
- Construction

PHASE 4

Operation

► Continuous utility input throughout all phases

► Study Approach



Data Gathering and Analysis

- Establish goals
- Data Collection & Evaluation
- Projections of Future Conditions
- Regulations
- Market Analysis

Team provides data



Alternatives Evaluations

- Technology
- Site Assessment
- Delivery Model

Team provides input and participates in evaluation

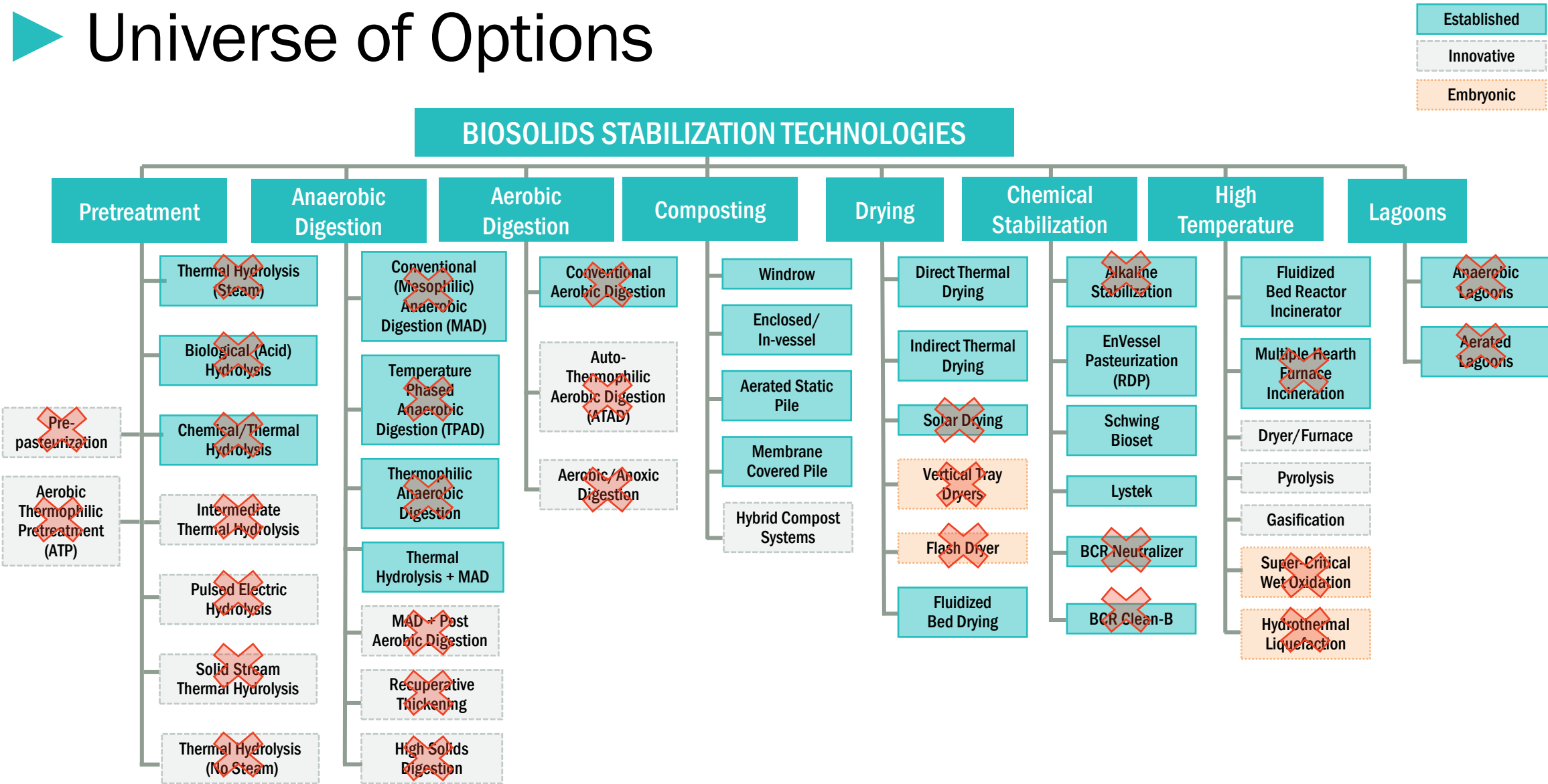


Regional Biosolids Plan

Report to convey key findings, promising alternatives, uncertainties & next steps

Planning document aligned with Team expectations and future vision

► Universe of Options



► In-Person Workshops – Building Consensus

- Regular in-person workshops with all utilities (10+)
- Open discussion of concerns and priorities
- Ability to make decisions in the room
 - Leadership trusted Partners to make decisions
- Maintained momentum and alignment
- Camaraderie, conversation, and brownies



► Transparent Decision-Making Tools

- Non-cost goals and objectives defined by utilities
- Weighted scoring for technologies and sites
- SWEET Model incorporated non-cost with cost criteria

Technologies' Scores For Achieving Each Goal (1-5):

The technical team scored each technology on a scale from 1 (unable to meet the goal) to 5 (very successful in meeting the goal)

Technology	Goals											
	Class AA Product	Reduce Mass	Resource Recovery & Reuse	Future Flexibility/ Scalability	O+M Simplicity	Improve Carbon Footprint	Proven Technology	Minimizes Footprint	Less Odors & Truck Traffic	Reduces Reg. Oversight	Redundancy	Permittability
Alternative A (THP)	4	3	4	3	3	5	5	3	3	4	4	5
Alternative B (Thermal Dryers)	5	4	4	3	3	2	5	3	4	4	2	4
Alternative C (Composting)	4	1	4	3	4	3	5	1	1	4	5	5
Alternative D (Fluid Bed Incineration)	3	5	2	4	3	2	5	3	5	4	2	1

► Drying Technologies

Drum

Paddle

Belt

Fluidized Bed

Disc

Thin Film

Solar/Bio

► What about PFAS?

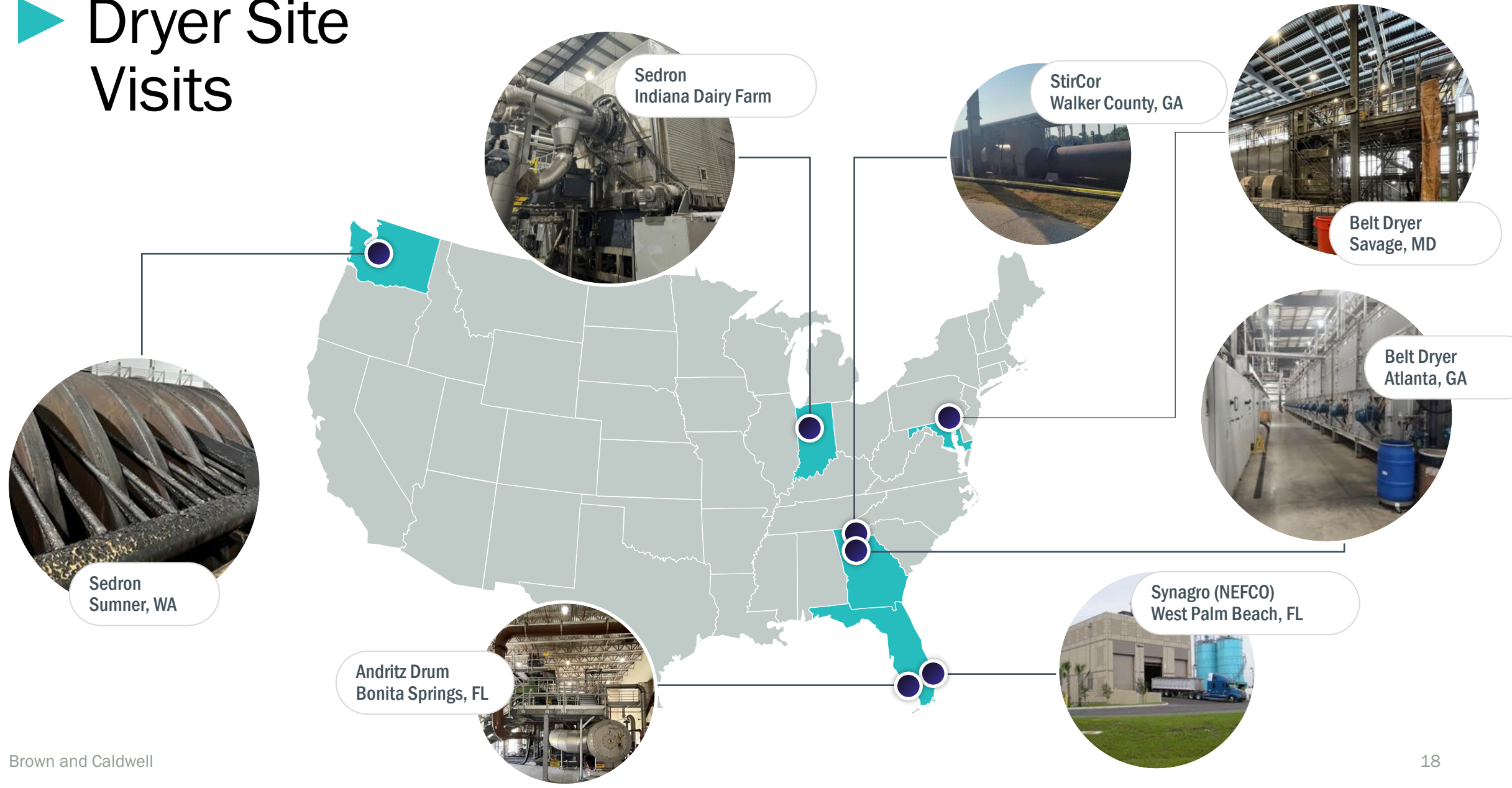
- Florida monitoring PFAS in biosolids now required per SB 1230/ HB 1019
- Thermal Dryers and PFAS
 - Currently no commercially available PFAS destruction/mitigation technologies on market with full-scale operation experience
 - Two most promising technologies: pyrolysis & gasification
 - Sludge drying (including thermal dryers) is the first step for both

Ongoing PFAS Research



Developing a PFAS Destruction Protocol Through Pyrolysis and Thermal Oxidation

Dryer Site Visits



► How Consensus Was Reached

Broward County's role

- Project champion
- Consistent advocate for fairness
- Keeper of momentum

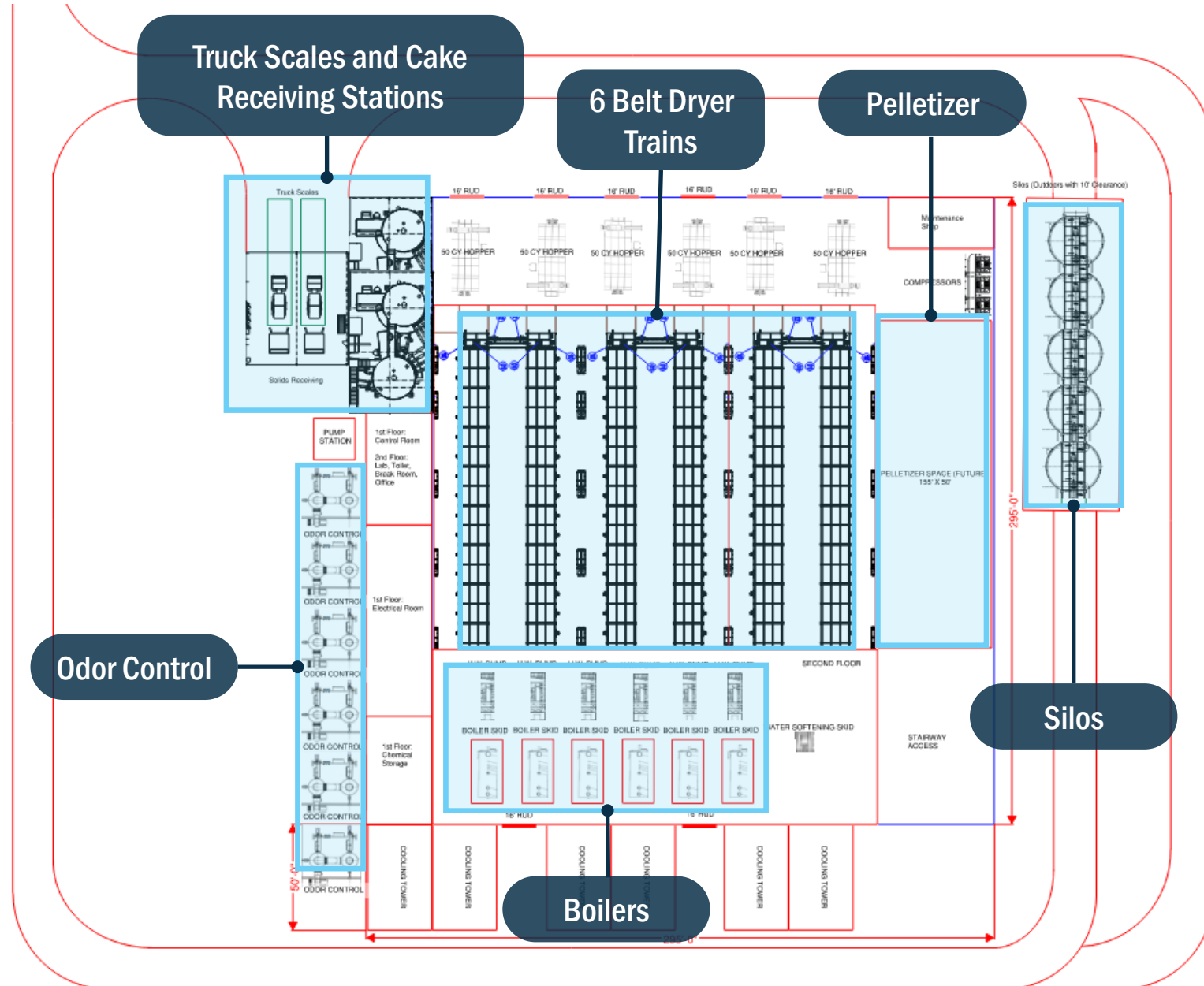
Brown and Caldwell's role

- Neutral facilitator
- Objective technical analysis
- Clear documentation

Criteria	Utility 1	Utility 2	Utility 3	Utility 4	Utility 5	Utility 6	Utility 7	Utility 8	Utility 9	Avg.
Create A Diversity In Biosolids/Residue End Use Markets (Class AA Product)	2	2	3	3	3	3	3	3	3	2.78
Reduce Biosolids Volume	2	1	2	2	2	2	3	3	3	2.22
Beneficially Reuse Biosolids And Allow For Resource Recovery	3	3	3	3	3	3	3	3	2	2.89
Provide Flexibility And Scalability To Meet Future Regulations	3	3	3	3	3	1	3	3	3	2.78
Ease Of Operation And Maintenance	3	2	3	3	2	2	3	2	2	2.44
Maintain Or Improve Current Carbon Footprint	2	3	3	3	3	1	3	2	2	2.44
Proven Technology	3	3	3	3	3	3	3	3	3	3.00
Minimizes Footprint Requirements To Achieve Objectives	1	1	2	2	2	2	3	2	2	1.89
Minimizes Neighborhood Impacts (Odors And Traffic)	3	3	2	3	3	2	1	2	2	2.33
Reduced Regulatory Oversight/Paperwork	2	3	1	1	2	1	3	3	3	2.11
Redundancy	3	3	3	3	3	3	3	3	3	3.00
Permittable (Including Length Of Permitting Time)	3	3	3	3	3	1	3	3	3	2.78

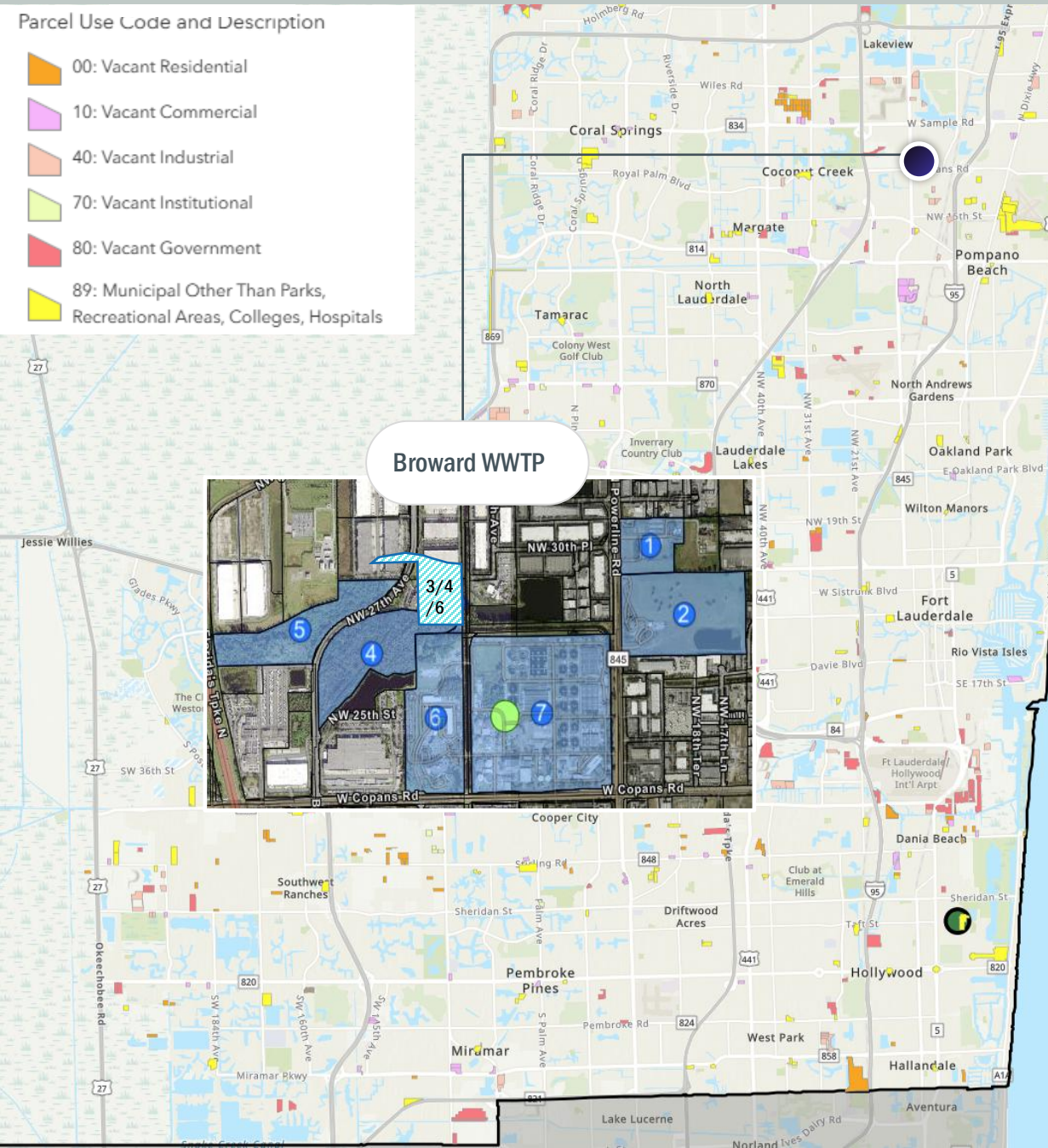
Technical Outcome

- Thermal drying identified as preferred technology
- Key reasons
 - Proven performance
 - Significant volume reduction
 - Class AA marketable end product
 - Future PFAS adaptability
- Belt dryer selected in Phase 2 refinement



Parcel Use Code and Description

-  00: Vacant Residential
-  10: Vacant Commercial
-  40: Vacant Industrial
-  70: Vacant Institutional
-  80: Vacant Government
-  89: Municipal Other Than Parks, Recreational Areas, Colleges, Hospitals



► Site Selection Outcome

- Structured site screening from hundreds of parcels
 - Assessment criteria narrowed down the number of available sites
794 → 61 → 16 → 7 → 1
- Focus on government-owned sites near WWTWs
- Final site selected based on
 - Constructability
 - Access and expandability
 - Permittability and public acceptance

▶ Stakeholder Engagement

- Prepare elevator speeches
- Simplified messaging developed for stakeholders
 - What problem we're solving
 - Why this solution is defensible
- Used to brief:
 - Utility leadership
 - Elected officials
 - Internal teams

**7 out of 11
utilities**
have signed the
next ILA. Expecting
a few more in the
next month

▶ Progress to date and next steps



▶ Lessons Learned for Regional Collaboration

- ✓ You must have a project champion
- ✓ Trust
- ✓ Establish governance early
 - ✓ Shared ownership of decisions
- ✓ Invest in in-person engagement
- ✓ Communicate simply and consistently
- ✓ Empower workgroup members to educate leadership and elected official
- ✓ Reduce individual utility risk and include off-ramps (multiple ILAs)

Questions?



City of Cooper City

Coral Springs Improvement District

Town of Davie

City of Fort Lauderdale

City of Hollywood

City of Margate

City of Miramar

City of Pembroke Pines

City of Plantation

City of Sunrise

Brown AND **Caldwell** :



