Strategic Plan Performance Review Measures FY 24/25

1.1.1 number of new breeding locations, total number of breeding sites

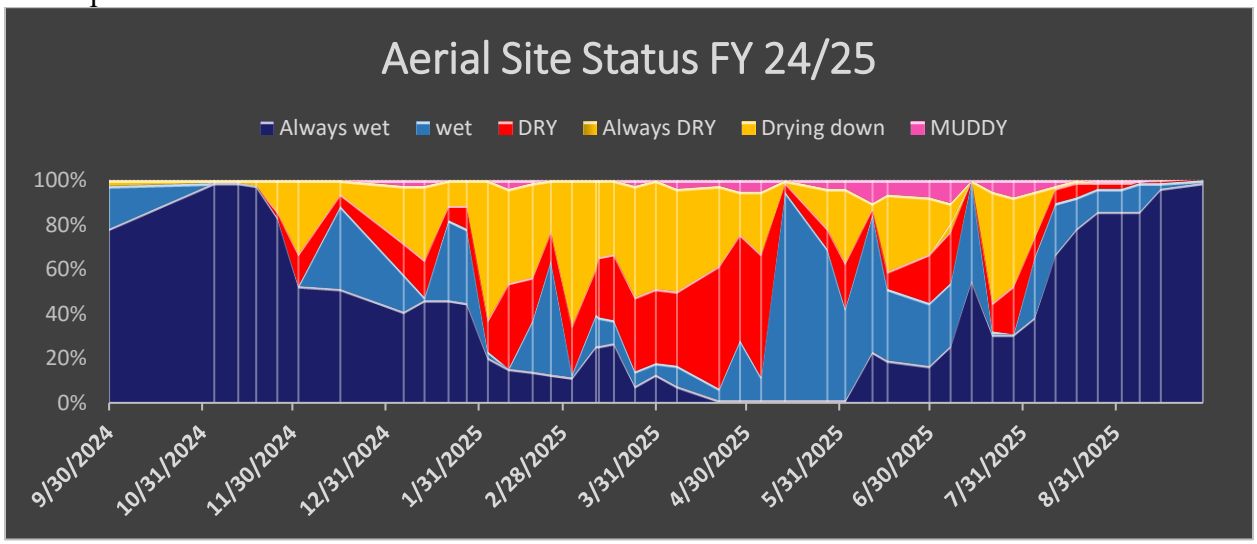
Year	Aerial	Boat	Drone	Evaluate	Ground	No Interest	Total
<7/7/2015	6	1		19	125	3	154
2015	3			1	5		9
2016	44	4		12	371	2	433
2017	7			6	84	11	108
2018	14		3	10	222	8	257
2019	10	4	2	9	174	12	211
2020	5		10	9	150	2	176
2021	1		2	22	136	8	169
2022			1	26	41	7	75
2023	25		1	156	77	6	265
2024	1		3	44	26	3	77
2025		1	1	25	33	2	62
Total	116	10	23	339	1444	64	1996

1.1.2 total sites checked each week, wet, dry

- INSPECTION VOLUME:
  - Total Sites Inspected Across All Weeks: 58,338
  - Average Sites Inspected Per Week: 686.3
  - Maximum Sites in One Week: 1799 (Week of 2025-04-28)
- STATUS CHANGES - WENT WET:
  - Total "Went Wet" Events: 3001
  - Average Per Week: 35.3
  - Maximum in One Week: 263 (Week of 2025-08-25)
  - Weeks with Zero "Went Wet": 20
- STATUS CHANGES - WENT DRY:
  - Total "Went Dry" Events: 3247
  - Average Per Week: 38.2
  - Maximum in One Week: 193 (Week of 2025-07-28)
  - Weeks with Zero "Went Dry": 22
- ACTIVITY PATTERNS:
  - Weeks with High Inspection Volume (>1500 sites): 5
  - Weeks with High "Went Wet" Activity (>100 events): 10
  - Weeks with High "Went Dry" Activity (>100 events): 9
- TOP 5 WEEKS BY INSPECTION VOLUME:
  - 2025-04-28: 1799 sites (25 wet, 98 dry)
  - 2025-02-24: 1761 sites (20 wet, 119 dry)
  - 2025-04-21: 1665 sites (4 wet, 164 dry)
  - 2025-05-19: 1545 sites (45 wet, 135 dry)
  - 2025-03-03: 1519 sites (5 wet, 150 dry)

- TOP 5 WEEKS BY 'WENT WET' EVENTS:
    - 2025-08-25: 263 sites went wet (out of 1422 inspected)
    - 2025-08-04: 194 sites went wet (out of 1114 inspected)
    - 2025-05-12: 168 sites went wet (out of 619 inspected)
    - 2025-01-20: 159 sites went wet (out of 947 inspected)
    - 2025-05-05: 148 sites went wet (out of 1223 inspected)
- TOP 5 WEEKS BY 'WENT DRY' EVENTS:
- 2025-07-28: 193 sites went dry (out of 1431 inspected)
- 2025-04-21: 164 sites went dry (out of 1665 inspected)
- 2025-04-14: 162 sites went dry (out of 1130 inspected)
- 2025-03-24: 159 sites went dry (out of 1335 inspected)
- 2025-03-03: 150 sites went dry (out of 1519 inspected)

1.1.3 Helicopter surveillance- Annual saltmarsh chart



1.1.4 Remote monitoring Analysis for key sites

Remote Tracking Log Comprehensive Analysis via Claude AI

October 1, 2024 - September 30, 2025

EXECUTIVE SUMMARY

This analysis examines water status conditions across 14 monitoring sites over a full year. The data reveals significant seasonal variations, with critical spring drought conditions and notable site-specific vulnerabilities.

Key Findings:

- **34.3%** of data is missing (125 days per site), (note: these are new sites that came online this year)
- **Spring 2025** experienced severe drought (68.7% DRY conditions)
- **4 sites** maintain good water levels; **7 sites** show chronic dryness
- **Site 44** shows extreme instability with 99 DD days

📊 OVERALL STATISTICS

Aggregate Distribution Across All Sites

Status	Total Days	Percentage
WET	1,352	26.5%
DRYING DOWN (DD)	562	11.0%
DRY	1,382	27.0%
MUDDY	0	0.0%
MISSING DATA	1,755	34.3%

Total observations: 5,110 (365 days × 14 sites)

🏆 SITE CLASSIFICATIONS

🟢 WET-DOMINANT SITES (4 sites) - Excellent Water Availability

Site	WET	DD	DRY	Health Score	Assessment
Site 3	198 days (54.2%)	35 days (9.6%)	7 days (1.9%)	+156 👍	Best performer - rare drought
Site 12	191 days (52.3%)	32 days (8.8%)	7 days (1.9%)	+152 👍	Excellent stability
Site 44	139 days (38.1%)	99 days (27.1%)	2 days (0.5%)	+38 ⚠️	WET but highly unstable
Site 92	126 days (34.5%)	36 days (9.9%)	78 days (21.4%)	+12 ⚠️	Moderate volatility

🟡 TRANSITIONAL/UNSTABLE SITES (3 sites) - Variable Conditions

🔴 DRY-DOMINANT SITES (7 sites) - Poor Water Availability

Site	WET	DD	DRY	Health Score	Assessment
Site 76	35 days (9.6%)	24 days (6.6%)	181 days (49.6%)	-170 🚨	Critically dry
Site 81	33 days (9.0%)	20 days (5.5%)	177 days (48.5%)	-164 🚨	Critically dry
Site 87	33 days (9.0%)	26 days (7.1%)	171 days (46.8%)	-164 🚨	Critically dry
Site 18S	71 days (19.5%)	26 days (7.1%)	138 days (37.8%)	-93 🚨	Chronically dry
Site 83	64 days (17.5%)	44 days (12.1%)	130 days (35.6%)	-110 🚨	Dry with instability
Site 7	75 days (20.5%)	28 days (7.7%)	128 days (35.1%)	-81 🚨	Poor conditions
Site 8	94 days (25.8%)	22 days (6.0%)	115 days (31.5%)	-43 ⚠️	Marginal

Health Score = WET days - (DD + DRY days)

📅 SEASONAL PATTERNS

Monthly Status Distribution

Month	WET Days	DD Days	DRY Days	Predominant Condition
October 2024	198 (94.7%)	9 (4.3%)	2 (1.0%)	🟢 Excellent
November 2024	187 (74.8%)	18 (7.2%)	45 (18.0%)	🟢 Good
December 2024	73 (34.8%)	40 (19.0%)	97 (46.2%)	🔴 Declining
January 2025	109 (37.1%)	103 (35.0%)	82 (27.9%)	🟡 Peak DD Activity
February 2025	59 (22.6%)	75 (28.7%)	127 (48.7%)	🔴 Poor
March 2025	39 (13.3%)	59 (20.1%)	196 (66.7%)	🔴 Critical
April 2025	8 (2.7%)	51 (17.3%)	235 (79.9%)	🔴 Severe Drought
May 2025	76 (25.9%)	43 (14.6%)	175 (59.5%)	🔴 Drought Continues
June 2025	70 (23.8%)	55 (18.7%)	169 (57.5%)	🔴 Still Dry
July 2025	105 (34.1%)	45 (14.6%)	158 (51.3%)	🟡 Improving
August 2025	180 (61.2%)	47 (16.0%)	67 (22.8%)	🟢 Recovery
September 2025	248 (84.4%)	17 (5.8%)	29 (9.9%)	🟢 Excellent Recovery

Seasonal Summary

Season	WET	DD	DRY	Key Observations
Fall 2024	385 (83.9%)	27 (5.9%)	47 (10.2%)	Optimal conditions

Season	WET	DD	DRY	Key Observations
Winter 2024-25	241 (31.5%)	218 (28.5%)	306 (40.0%)	High instability, onset of decline
Spring 2025	123 (13.9%)	153 (17.3%)	606 (68.7%)	**CRITICAL DROUGHT PERIOD**
Summer 2025	355 (39.6%)	147 (16.4%)	394 (44.0%)	Gradual recovery
Early Fall 2025	248 (84.4%)	17 (5.8%)	29 (9.9%)	Full recovery

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🔗 CONCURRENT EVENTS & SITE CORRELATIONS

Most Severe Concurrent DD Event

January 31, 2025: 9 sites simultaneously experiencing Drying Down

- Sites affected: 8, 42, 92, 18N, 76, 7, 87, 44, 9
- Indicates systemic water shortage event

Late January 2025 Crisis (Jan 27-31)

- 8-9 sites affected each day
- Suggests regional water supply failure
- Requires root cause investigation

Frequently Co-Occurring Site Pairs

Sites that experience DD together - likely share watershed or water sources

Site Pair	Days Together	Relationship Strength
Sites 18N & 44	41 days	Very Strong
Sites 18N & 9	39 days	Very Strong
Sites 44 & 9	38 days	Very Strong
Sites 18N & 42	33 days	Strong
Sites 3 & 44	31 days	Strong
Sites 12 & 44	28 days	Strong
Sites 12 & 3	27 days	Strong

Recommended Site Groups for Management:

- **Group A:** Sites 18N, 44, 9 (highly correlated)
- **Group B:** Sites 3, 12 (wet-dominant pair)
- **Group C:** Sites 76, 81, 87 (dry-dominant cluster)

📊 SITE VOLATILITY ANALYSIS

Status Change Frequency (Number of Transitions)

Higher numbers indicate more unstable/fluctuating conditions

Rank	Site	Transitions	Assessment
1	Site 42	45	Extremely volatile
2	Site 92	39	Highly volatile
3	Site 18S	37	Highly volatile
4	Site 83	36	Highly volatile
5	Site 18N	36	Highly volatile
6	Site 44	34	Very volatile
7	Site 8	33	Very volatile

Site 42 shows the highest instability with 27 separate DD periods and 45 status changes across the year, suggesting either equipment issues or unique hydrological conditions.

🚨 CRITICAL FINDINGS

1. SPRING DROUGHT CRISIS (March-May 2025)

- **April 2025:** Worst month on record
  - 79.9% DRY conditions
  - Only 2.7% WET conditions
  - Affected nearly all sites
- Total spring DRY days: 606 (68.7% of observations)
- **Recommendation:** Implement water conservation measures before March

2. WINTER TRANSITION PERIOD (Dec-Feb)

- January 2025: Peak DD activity (103 days across sites)
- 28.5% of winter observations show DD status
- Critical monitoring period as sites transition from wet to dry

3. SITE-SPECIFIC CONCERNS

Immediate Intervention Required:

- **Sites 76, 81, 87:** Dry >46% of time, need water management

- **Site 44:** Despite 38% WET, shows extreme instability (99 DD days, 27% of year)

Enhanced Monitoring:

- **Sites 18N, 42, 9:** High DD frequency indicates vulnerability
- **Site 42:** 45 status changes suggest systemic issues

Maintain Current Practices:

- **Sites 3, 12:** Performing excellently, serve as benchmarks

📈 PERFORMANCE METRICS

Most Stable

- Site 3: Only 10 DD periods, 2.9% DRY time
- Site 12: Only 11 DD periods, 3.0% DRY time

Least Stable

- Site 42: 27 DD periods, 45 status changes
- Site 44: 32 DD periods, despite 38% WET
- Site 18N: 23 DD periods, high correlation with other unstable sites

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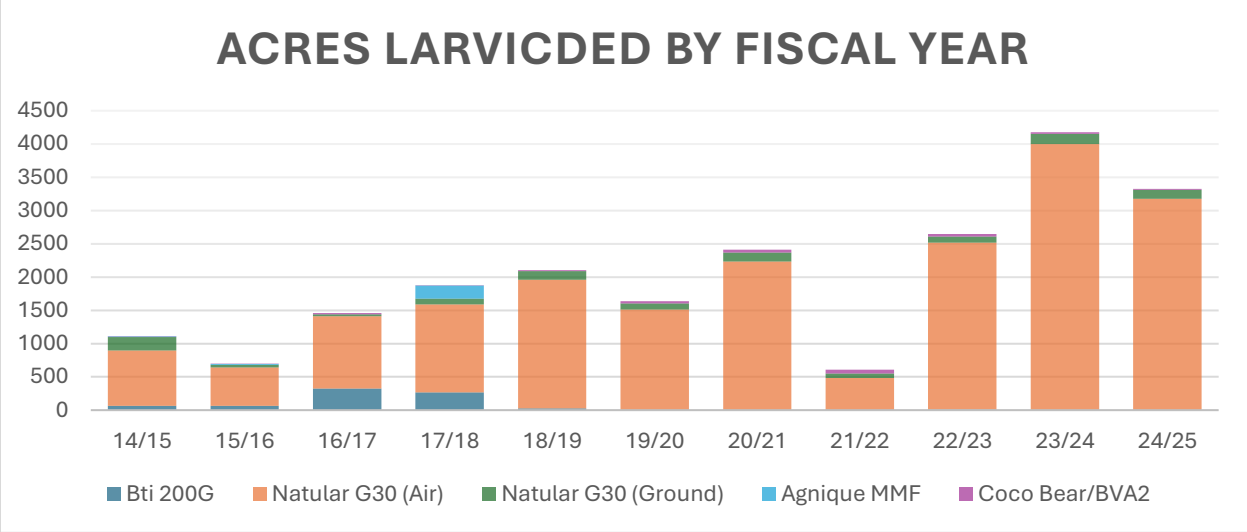
APPENDIX: STATUS DEFINITIONS

- **WET:** Site has adequate water availability
- **DRYING DOWN (DD):** Site is transitioning from wet to dry; water level decreasing
- **MUDDY:** Site has minimal water with muddy conditions (not observed in dataset)
- **DRY:** Site has inadequate or no water availability
- **MISSING:** No data recorded for that date

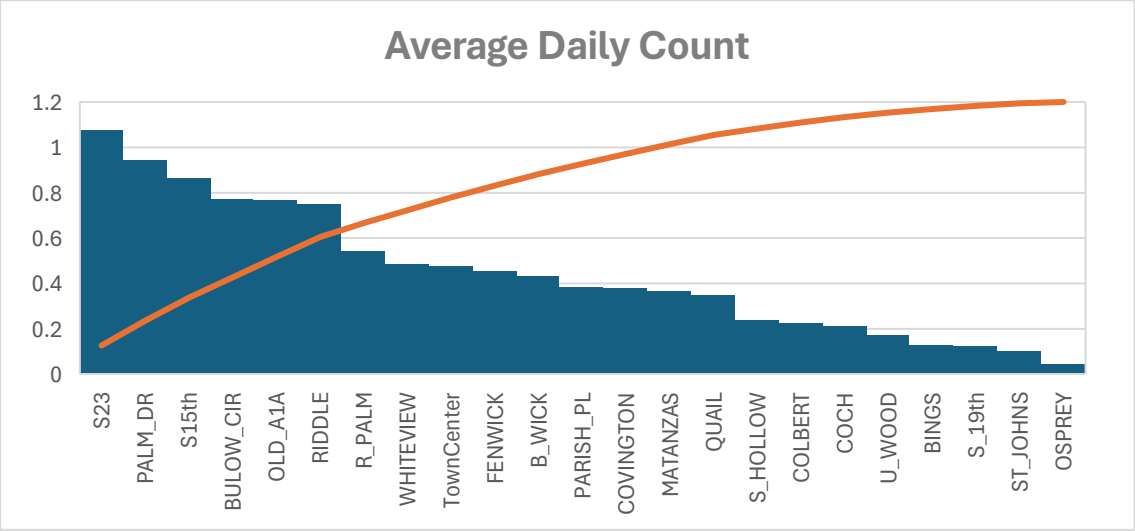
Analysis Date: November 20, 2024
Data Period: October 1, 2024 - September 30, 2025
Total Sites: 14
Total Days Analyzed: 365

1.2.1 Area Pretreated with larvicide

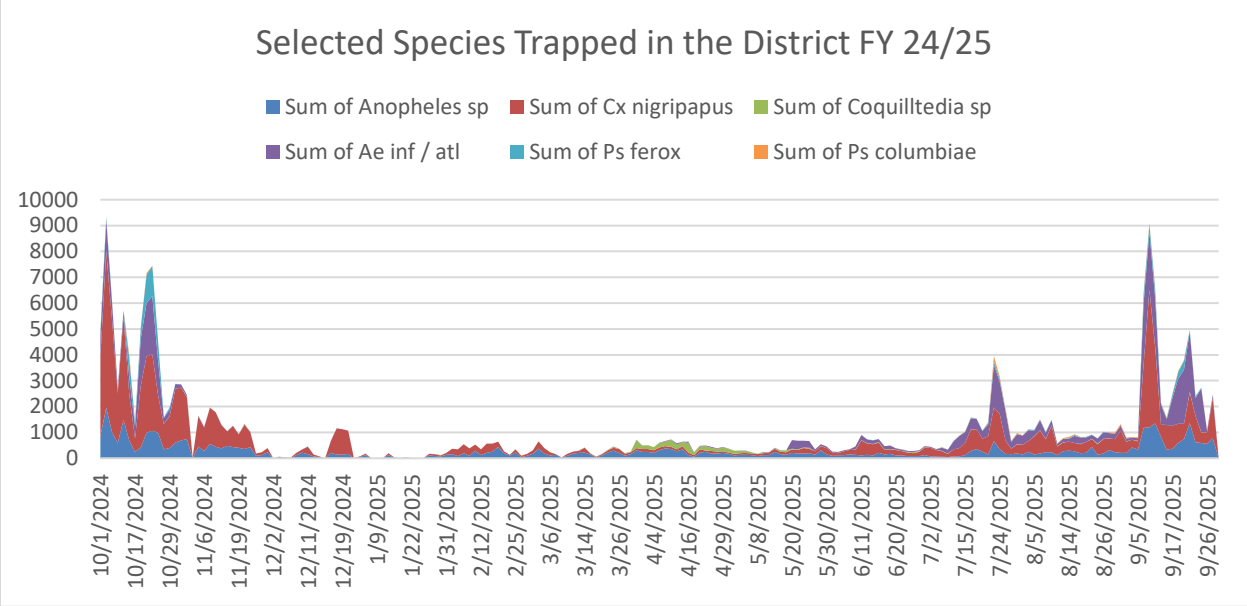


1.3.1 Daily landing rate counts – map with highest counts listed or box chart of sites

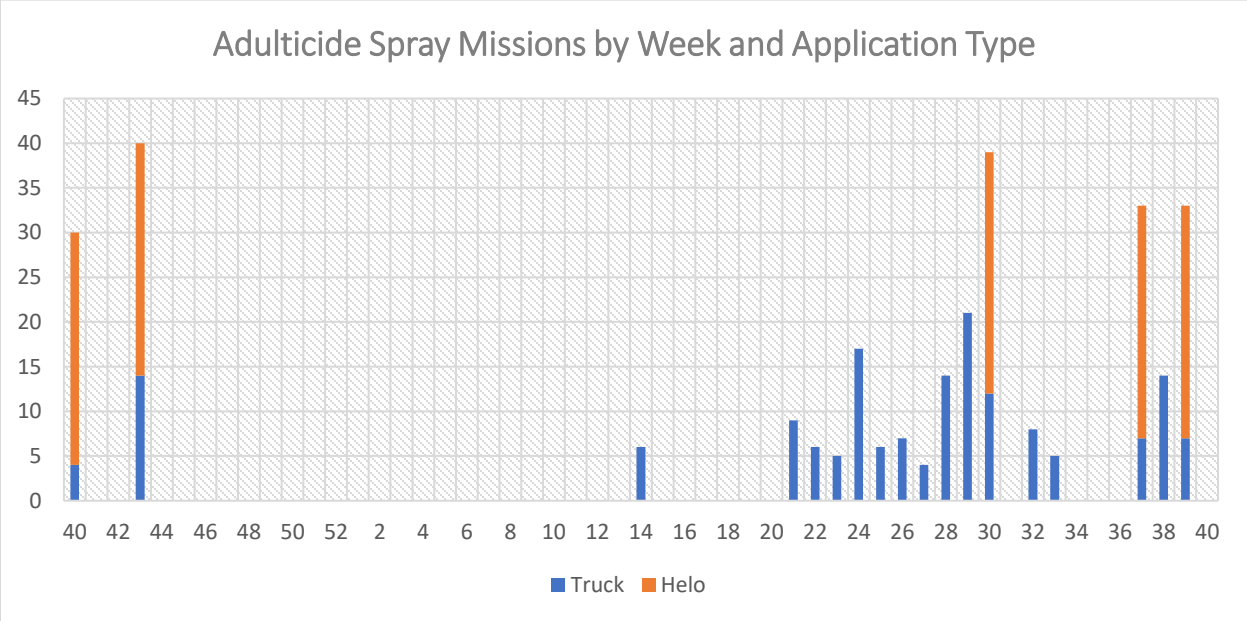
The average daily landing rate counts at all but one site is below one.



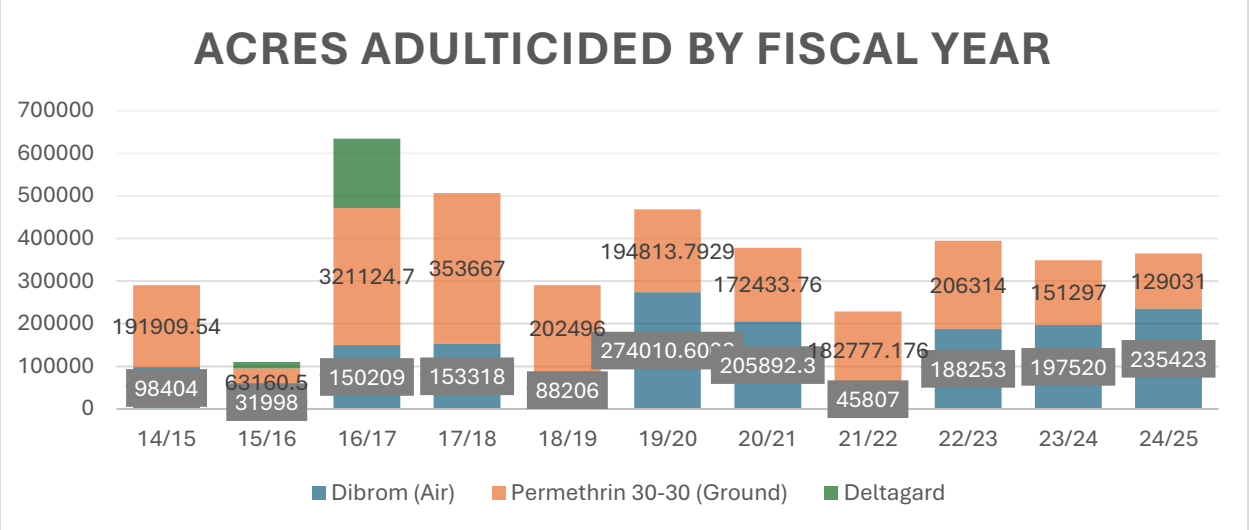
1.3.2 Daily trap data – annual chart



1.3.3 Zones treated graph



1.3.4 Adulticide Acreage treated graph



For outreach measures see the 2025 Outreach Report
2.1.1 list of events attended for public outreach
2.2.1 school events
2.3.1 local groups hosted, including elected and appointed officials, open house
2.4.1 Measure?
2.5.1 Waste tire pounds removed
2.5.2 Sites fond with bromeliads

3.1.1 number of human cases imported Statewide

There were no travel related cases of any mosquito-borne disease in Flagler County. Statewide data below.

Florida Arbovirus Surveillance https://www.floridahealth.gov/diseases-and-conditions/mosquito-borne-diseases/surveillance.html	Travel Associated Dengue	Chikungunya	Oropouche
2024 Weeks 1 - 39	548	9	86
2024 Weeks 40 - 52	363	2	17
2025 Weeks 1 -39	239	15	0
Total for Fiscal Year 24/25	**602**	**17**	**17**

3.1.2 number of locally acquired human cases Statewide

There were no locally acquired cases of any mosquito-borne disease in Flagler County. Statewide data below.

Florida Arbovirus Surveillance https://www.floridahealth.gov/diseases-and-conditions/mosquito-borne-diseases/surveillance.html	Human		Horse	
	Dengue	West Nile	EEE	West Nile
2024 Weeks 1 - 39	45	8	9	1
2024 Weeks 40 - 52	40	19	13	10
2025 Weeks 1 -39	40	8	33	13
Total for Fiscal Year 24/25	**80**	**27**	**46**	**23**

4.1.1 MOU completed on date contract number

The District signed a memorandum of understanding FDACS#31642 with the Florida Department of Agriculture and Consumer Services on 10/7/2024. This agreement details reporting requirements for State funds and pesticide activity. This was made mandatory by F.S. 189.0694 enacted in the 2023 Legislative session. The District is not eligible for State funds, as the grant is intended for small programs. The pesticide activity reporting is in addition to the inspection process in measure 5.2.1 and is essentially a duplication of effort of the site inspection.

5.1.1 Total staff CEU's for Public Health Pest Control

District staff earned 63.5 CEU's total in the fiscal year. Having a small staff that is highly trained creates the most efficient and effective workforce.

5.1.2

Staff training for pesticides date, Haz mat tabletop

All staff that handle pesticides are licensed by the State. Staff receive professional continuing education units and formal training as mentioned above to maintain their licenses. The District also works to enhance safety in general and specifically for use of pesticides, reviewing labels and procedures annually in the Spring. Additionally, last December we hosted an EOC tabletop exercise focusing on a downed aircraft carrying pesticides. Many local and State agencies participated and we appreciate their effort to keep everyone safe should an accident occur.

5.2.1 recent inspection

The District was inspected by the Florida Department of Agriculture and Consumer Service on February 2, 2024 with no violations being found.

6.1.1 number of tips, maybe by date and or zone

255 TIPS in the District

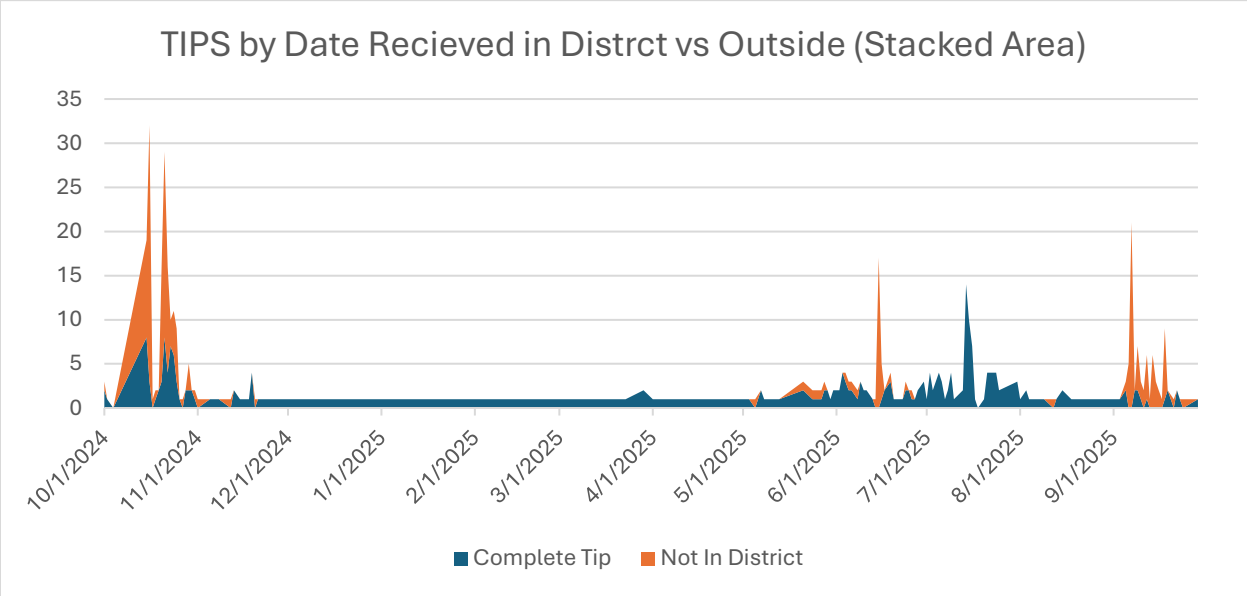
6.1.2 container related TIPS

39 TIPS were found to have containers, about 15% of TIPS

6.1.3 TIPS not related to mosquitoes

68 TIPS were found to have no mosquitoes present, better than 25%

A low number of TIPS were received this year due to an extended drought and no hurricanes. Additionally, we received 210 TIPS from outside the District. An agreement with Flagler County Government reimburses the District for truck spraying missions by request from the County EOC. To facilitate this request-based system, we receive all calls for mosquito service in the County and relay the TIPS outside the District. TIPS outside the District are received in a condensed fashion, likely from postings on social media encouraging neighbors to submit TIPS.



7.1.1-5 weekly analysis link to operations update

Weekly Operations Updates can be found here 136 pages