

AERIAL INVESTIGATION RESEARCH (AIR) PILOT PROGRAM MID TERM REPORT

Baltimore Police Department

SEPTEMBER 2020



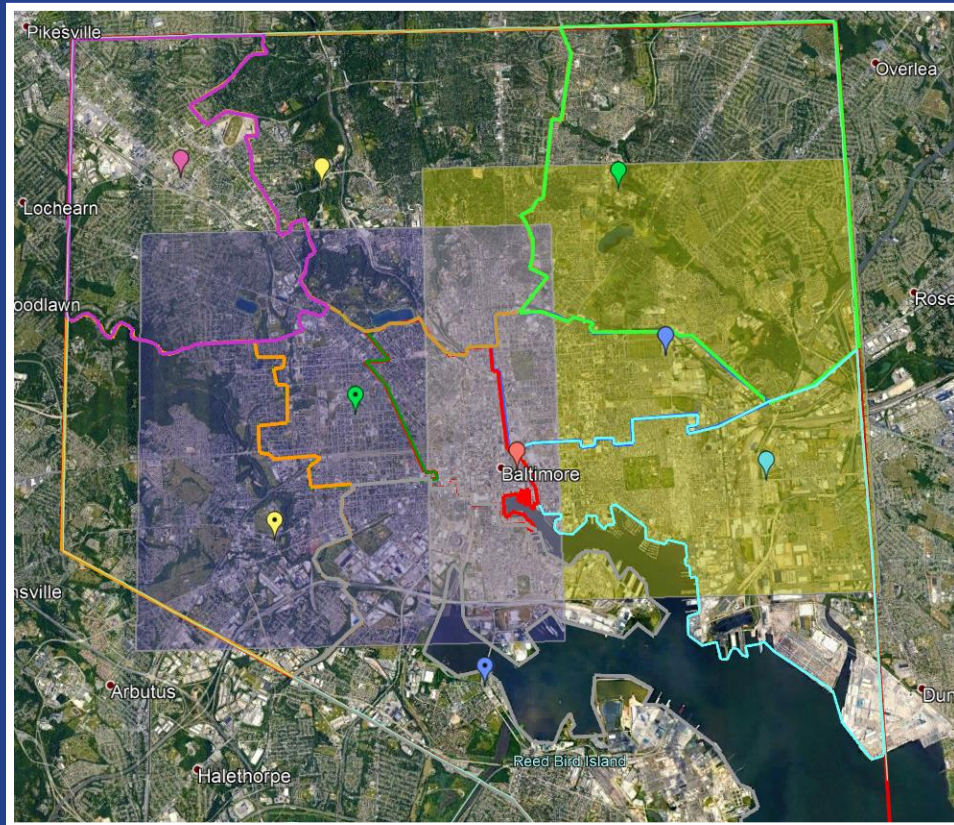


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REVIEW OF FLIGHT HOURS & COVERAGE



MAY – JUNE:

- **1 PLANE = 30% COVERAGE**

JULY – AUGUST:

- **2 PLANES = 60 % COVERAGE**

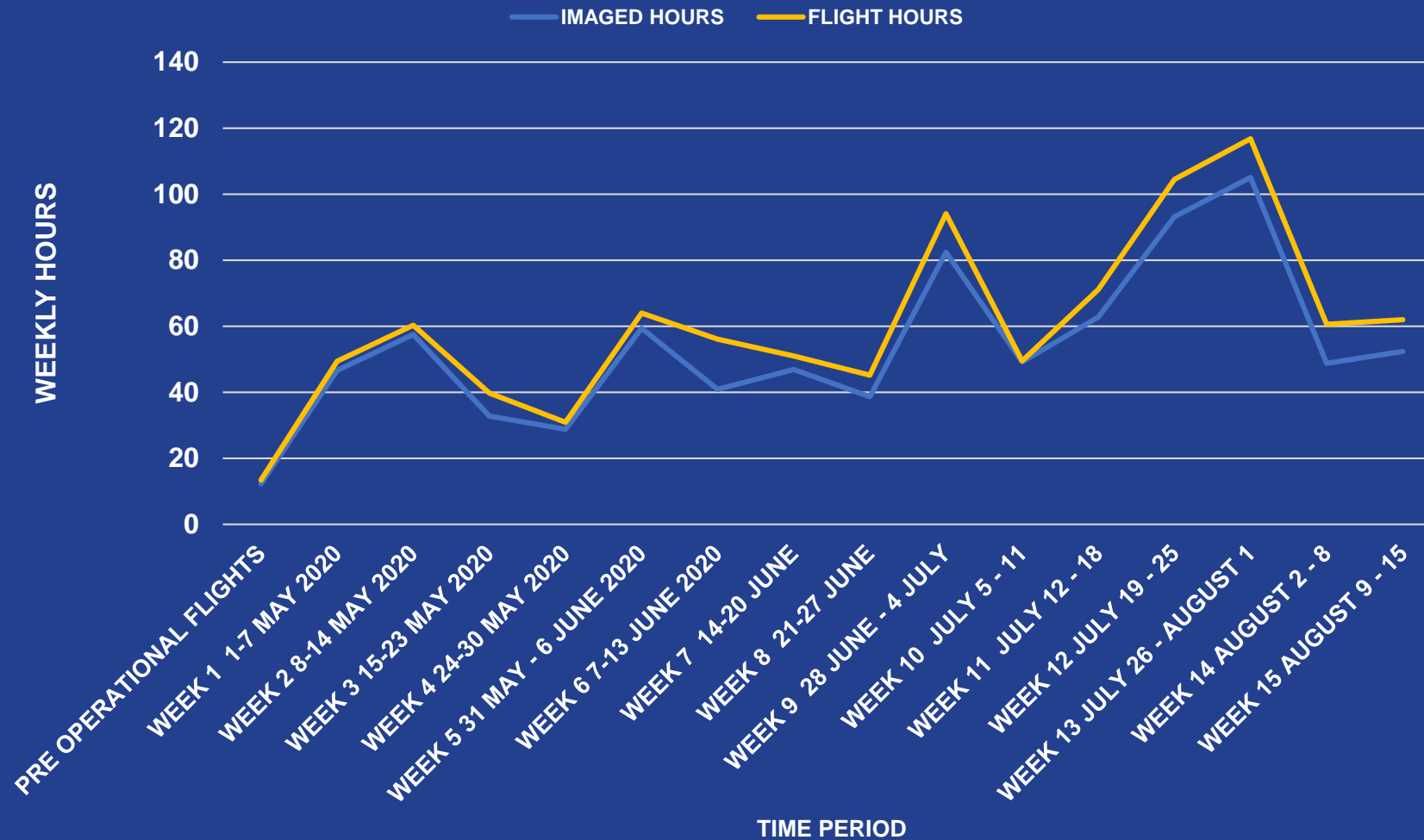
SEPTEMBER – OCTOBER:

- **3 PLANES = 90 % COVERAGE**

**ONLY DAYTIME COVERAGE DURING
PILOT PROGRAM**



REVIEW OF FLIGHT HOURS & COVERAGE



**WEATHER AND MECHANICAL ISSUES
LOWERED FLIGHT HOURS
IN WEEKS
10, 11, 14, AND 15**



DATA DISCLAIMER

ALL DATA PRESENTED IN THIS MID TERM REVIEW ARE PROVISIONAL IN NATURE AND STILL REQUIRE FULL VALIDATION UNDER THE UNIFORM CRIME REPORTING (UCR) STANDARDS.

BPD ASSERTS NO CONCLUSIONS OR ASSUMPTIONS ABOUT EFFECTIVENESS OF THE AIR PROGRAM AT THIS TIME.

ALL DATA ARE UNDER REVIEW BY RESEARCH PARTNERS TO DETERMINE CORRELATION, CAUSALITY, AND EFFECTIVENESS OF AIR PROGRAM'S INVOLVEMENT IN CASE CLOSURE DATA



DATA FROM THE FIRST THREE MONTHS OF OPERATION (HALFWAY MARK) (MAY 1ST – JULY 31ST)



AIR PROGRAM PROGRESS TO DATE: DATA PROVIDED BY RESEARCH PARTNER RAND CORPORATION:

| TARGET CRIMES MAY 1 – JULY 31, 2020 | HOMICIDE | SHOOTING | ARMED ROBBERIES | CAR- JACKING | TOTAL |
|--|----------|----------|--------------------|-----------------|-------|
| TOTAL INCIDENTS BY TYPE DURING TIME PERIOD | 103 | 167 | 390 | 118 | 778 |
| INCIDENTS THAT OCCURRED DURING FLIGHT HOURS | 29 | 30 | 95 | 27 | 181 |
| INCIDENTS THAT OCCURRED DURING FLIGHT HOURS & IN FLIGHT COVERAGE | 16 | 19 | 49 | 12 | 96 |
| CASES WORKED BY AIR PROGRAM (INCLUDES SUPPLEMENTAL REQUESTS) | 19 | 21 | 34 | 7 | 81 |



AIR PROGRAM PROGRESS TO DATE: DATA PROVIDED BY RESEARCH PARTNER RAND CORPORATION:

| TARGET CRIMES MAY 1 – JULY 31, 2020 | HOMICIDE | SHOOTING | ARMED ROBBERIES | CAR- JACKING | TOTAL |
|--|--------------|--------------|--------------------|-----------------|---------------|
| CASES WORKED BY AIR PROGRAM (INCLUDES SUPPLEMENTAL REQUESTS) | 19 | 21 | 34 | 7 | 81 |
| CASES WITH AIR EVIDENCE PROVISIONALLY CLOSED | 7 (36.8%) | 6 (28.6%) | 5 (14.7%) | 1 (14.3%) | 19 (23.5%) |
| CASES WITH AIR EVIDENCE PROVISIONALLY CLOSED W/ARREST | 6 (31.6%) | 6 (28.6%) | 4 (11.8%) | 1 (14.3%) | 17 (21.0%) |
| CASES WITH AIR EVIDENCE PROVISIONALLY CLOSED AS UNFOUNDED | 0 (0.0%) | 0 (0.0%) | 3 (8.8%) | 2 (28.6%) | 5 (6.2%) |



AIR PROGRAM PROGRESS TO DATE: DATA PROVIDED BY RESEARCH PARTNER RAND CORPORATION:

| TARGET CRIMES MAY 1 – JULY 31, 2020 | HOMICIDE | SHOOTING | ARMED ROBBERIES | CAR- JACKING | TOTAL |
|--|---------------|---------------|--------------------|-----------------|----------------|
| CASES NOT WORKED BY AIR PROGRAM | 84 | 146 | 356 | 111 | 697 |
| CASES WITHOUT AIR EVIDENCE PROVISIONALLY CLOSED | 16 (19.0%) | 20 (13.7%) | 71 (19.9%) | 20 (18.0%) | 127 (18.2%) |
| CASES WITHOUT AIR EVIDENCE PROVISIONALLY CLOSED W/ARREST | 14 (16.7%) | 19 (13.0%) | 61 (17.1%) | 19 (17.1%) | 113 (16.2%) |
| CASES WITHOUT AIR EVIDENCE PROVISIONALLY CLOSED AS UNFOUNDED | 0 (0.0%) | 0 (0.0%) | 11 (3.1%) | 5 (4.5%) | 16 (2.3%) |



COMPARISON OF SOLVE RATES FOR CASES WITH OR WITHOUT AIR PROGRAM EVIDENCE:

| | |
|--|---------------------|
| CASES FROM MAY 1 – JULY 31 WITH AIR EVIDENCE PROVISIONALLY CLOSED (OR DETERMINED UNFOUNDED) | 24 OF 81 (29.6%) |
| CASES FROM MAY 1 – JULY 31 WITH AIR EVIDENCE PROVISIONALLY CLOSED W/ ARREST | 17 OF 81 (21.0%) |

| | |
|---|-----------------------|
| CASES FROM MAY 1 – JULY 31 WITHOUT AIR EVIDENCE PROVISIONALLY CLOSED (OR DETERMINED UNFOUNDED) | 143 OF 697 (20.5%) |
| CASES FROM MAY 1 – JULY 31 WITHOUT AIR EVIDENCE PROVISIONALLY CLOSED W/ARREST | 113 OF 697 (16.2%) |

CLOSURE RATES FOR CASES WITH AIR ARE HIGHER, HOWEVER THE PROGRAM HAS NOT COLLECTED SUFFICIENT DATA FOR RESEARCH PARTNERS TO MAKE A DEFINITIVE CONCLUSION ON IMPACT OF AIR PROGRAM ON SOLVE/CLEARANCE RATES



TOTAL DATA SET FOR ALL DAYS OF OPERATION ANALYZED (MAY 1ST – AUGUST 20TH)



AIR PROGRAM PROGRESS TO DATE: DATA PROVIDED BY RESEARCH PARTNER RAND CORPORATION:

| TARGET CRIMES MAY 1 – AUGUST 20, 2020 | HOMICIDE | SHOOTING | ARMED ROBBERIES | CAR- JACKING | TOTAL |
|--|----------|----------|--------------------|-----------------|-------|
| TOTAL INCIDENTS BY TYPE DURING TIME PERIOD | 121 | 224 | 494 | 142 | 981 |
| INCIDENTS THAT OCCURRED DURING FLIGHT HOURS | 30 | 37 | 115 | 33 | 215 |
| INCIDENTS THAT OCCURRED DURING FLIGHT HOURS & IN FLIGHT COVERAGE | 17 | 23 | 61 | 16 | 117 |
| CASES WORKED BY AIR PROGRAM (INCLUDES SUPPLEMENTAL REQUESTS) | 22 | 27 | 46 | 12 | 107 |



AIR PROGRAM PROGRESS TO DATE: DATA PROVIDED BY RESEARCH PARTNER RAND CORPORATION:

| TARGET CRIMES MAY 1 – AUGUST 20, 2020 | HOMICIDE | SHOOTING | ARMED ROBBERIES | CAR- JACKING | TOTAL |
|--|----------|----------|--------------------|-----------------|-------|
| TOTAL INCIDENTS BY TYPE DURING TIME PERIOD | 121 | 224 | 494 | 142 | 981 |
| INCIDENTS THAT OCCURRED DURING FLIGHT HOURS | 30 | 37 | 115 | 33 | 215 |
| INCIDENTS THAT OCCURRED DURING FLIGHT HOURS & IN FLIGHT COVERAGE | 17 | 23 | 61 | 16 | 117 |
| CASES WORKED BY AIR PROGRAM (INCLUDES SUPPLEMENTAL REQUESTS) | 22 | 27 | 46 | 12 | 107 |



AIR PROGRAM PROGRESS TO DATE: DATA PROVIDED BY RESEARCH PARTNER RAND CORPORATION:

| TARGET CRIMES MAY 1 – AUGUST 20, 2020 | HOMICIDE | SHOOTING | ARMED ROBBERIES | CAR- JACKING | TOTAL |
|---|--------------|--------------|--------------------|-----------------|---------------|
| CASES WORKED BY AIR PROGRAM | 22 | 27 | 46 | 12 | 107 |
| CASES WITH AIR EVIDENCE PROVISIONALLY CLOSED | 7 (31.8%) | 6 (22.2%) | 5 (10.9%) | 3 (25.0%) | 21 (19.6%) |
| CASES WITH AIR EVIDENCE PROVISIONALLY CLOSED W/ARREST | 6 (27.3%) | 6 (22.2%) | 4 (8.7%) | 3 (25.0%) | 19 (17.8%) |
| CASES WITH AIR EVIDENCE PROVISIONALLY CLOSED AS UNFOUNDED | 0 (0.0%) | 0 (0.0%) | 3 (6.5%) | 2 (16.7%) | 5 (4.7%) |



AIR PROGRAM PROGRESS TO DATE: DATA PROVIDED BY RESEARCH PARTNER RAND CORPORATION:

| TARGET CRIMES MAY 1 – AUGUST 20, 2020 | HOMICIDE | SHOOTING | ARMED ROBBERIES | CAR- JACKING | TOTAL |
|--|---------------|---------------|--------------------|-----------------|----------------|
| CASES NOT WORKED BY AIR PROGRAM | 99 | 197 | 448 | 130 | 874 |
| CASES WITHOUT AIR EVIDENCE PROVISIONALLY CLOSED | 18 (18.2%) | 21 (10.7%) | 76 (17.0%) | 23 (17.7%) | 138 (15.8%) |
| CASES WITHOUT AIR EVIDENCE PROVISIONALLY CLOSED W/ARREST | 16 (16.2%) | 20 (10.2%) | 66 (14.7%) | 22 (16.9%) | 124 (14.2%) |
| CASES WITHOUT AIR EVIDENCE PROVISIONALLY CLOSED AS UNFOUNDED | 0 (0%) | 0 (0%) | 13 (2.9%) | 5 (3.8%) | 18 (2.1%) |



COMPARISON OF SOLVE RATES FOR CASES WITH OR WITHOUT AIR PROGRAM EVIDENCE: (WITH AUGUST)

| | |
|---|----------------------|
| CASES FROM MAY 1 – AUG 20 WITH AIR EVIDENCE PROVISIONALLY CLOSED (OR DETERMINED UNFOUNDED) | 26 OF 107 (24.3%) |
| CASES FROM MAY 1 – AUG 20 WITH AIR EVIDENCE PROVISIONALLY CLOSED W/ ARREST | 19 OF 107 (17.8%) |

| | |
|--|-----------------------|
| CASES FROM MAY 1 – AUG 20 WITHOUT AIR EVIDENCE PROVISIONALLY CLOSED (OR DETERMINED UNFOUNDED) | 156 OF 874 (17.9%) |
| CASES FROM MAY 1 – AUG 20 WITHOUT AIR EVIDENCE PROVISIONALLY CLOSED W/ARREST | 124 OF 874 (14.2%) |

ADDING AVAILABLE AUGUST DATA REDUCES CLOSURE RATES FOR BOTH CATEGORIES SLIGHTLY – STILL NOT ENOUGH DATA FOR RESEARCH PARTNERS TO MAKE A DEFINITIVE CONCLUSION ON EFFECTIVENESS



ADDITIONAL AIR PROGRAM INFORMATION

QUESTIONS THAT REMAIN TO BE ANSWERED

- Review of Closed Cases with AIR Evidence to Determine:
 - Differences in Solvability of Day Crime vs. Night Crime
 - Differences in Solvability of Crimes in Zones Monitored by AIR vs. Outside of Coverage Area
 - Would the cases worked by AIR have been solved without AIR?
 - Did AIR Program reduce labor hours to close a case?
 - Does providing additional planes to increase coverage increase effectiveness?
- Research Partners will assist BPD in answering these questions once enough data is collected



ADDITIONAL AIR PROGRAM INFORMATION

PUBLIC SUPPORT / OPPOSITION BEING MONITORED

- Morgan State University and University of Baltimore are in the process of collecting survey data
- BPD has received a total 63 complaints/concerns about AIR since it began
 - 43 noise complaints
 - 3 pollution concerns
 - 17 programmatic concerns
- For each individual complainant BPD provided a written response
- 3rd plane being deployed is quieter than first two to address noise



RESEARCH PARTNERS AND INDEPENDENT TECHNOLOGY AUDITOR REVIEWING PROGRAM COMPLIANCE

- **NYU School of Law Policing Project will provide recommendations concerning appropriate use of technology by law enforcement**
- **Independent Verification and Validation (IV&V) technology firm has begun extensive review of AIR Program usage and data storage to ensure full compliance with Memorandum of Understanding with BPD and program restrictions**