AGREEMENT BETWEEN

THE UNIVERSITY OF GEORGIA RESEARCH FOUNDATION, INC.

SAVANNAH RIVER ECOLOGY LABORATORY

AND

AUGUSTA - RICHMOND COUNTY, GEORGIA

Effective, October 1, 2025, the University of Georgia Research Foundation, Inc., Savannah River Ecology Laboratory, hereinafter called the "University", accepts from Augusta - Richmond County, a political subdivision of the state of Georgia through its Board of Commissioners, hereinafter called the "Sponsor", a research grant, the conditions of which are as follows:

I. Objectives: There are six objectives of this research grant. **First**, the University will conduct ground-based surveys (via UGA vehicle) describing the abundance and distribution patterns of waterfowl (ducks, geese, and swans), wading birds (herons, egrets, ibises, wood storks), other waterbirds (American coots, grebes, gallinules, cormorants, anhingas, gull species), raptors, and avian species of special interest (bald eagles, ospreys) using man-made wetlands in the vicinity of Augusta Regional Airport at Bush Field, hereinafter called the "Airport". Specifically, this includes only the nearby Messerly Wastewater Treatment Plant's artificial wetlands comprised of twelve individual wetland cells. Surveys of the Merry Land and Investment Company's Brickyard Ponds have been discontinued as of the 2017–2018 contract period. **Second**, the University will continue to conduct ground-based bird movement surveys at both the Airport and the adjacent artificial wetlands. These ground-based surveys are designed to provide time-and location-specific information regarding the daily patterns of movement, altitude, and behavior of flocking bird species such as blackbirds and larger-bodied bird species including waterfowl, wading birds, and birds of prey. **Third**, the University will continue to serve as a resource to Airport personnel by providing assistance for the purpose of identifying birds involved in collisions with aircraft at the Airport and otherwise consulting with Airport personnel on bird issues. **Fourth**, the University will continue to examine historical and updated bird strike data from the Airport to identify patterns that may be associated with the construction and operation of the artificial wetlands. **Fifth**, the University will conduct a once-per-week evening qualitative assessment of blackbird use of the wetlands during October – March to guide bird harassment efforts conducted by the Sponsor's bird-harassment team. At the time of these assessments, University personnel will also provide assistance to the bird-harassment team members to refine their use of bird-harassment tools. **Sixth** and finally, the University will summarize the above data in a manner so as to provide Airport and Augusta Utilities Department officials useful information for identifying potential bird hazards in the vicinity of the Airport, guiding bird control efforts, and gauging the effectiveness of bird control measures over time.

II. Programs: The principal contractor/investigator, Travis L. DeVault, Savannah River Ecology Laboratory, will direct the programs. The contractor/investigator will be assisted by certain technical consultants. Commitments as to the extent of the obligations of this investigator

will be the responsibility of the investigator, within the scope of the work plans approved by the Sponsor. Work plans for accomplishing each of the objectives listed above are attached.

III. Funds: (a). For the work accomplished by the University during the grant period from October 1, 2025 – September 30, 2026 (12 months; total cost - $108,353), the Sponsor will pay the University $108,353 upon submission of periodic invoices and upon receipt of evidence approved by the Sponsor that the work programs are progressing. Budgets for the research programs are attached.

(b). If this research grant is terminated prior to the end of the grant period, payments by the Sponsor shall be provided based on the actual incurred and/or obligated expenditures as of the date of termination.

(c). Expenditures shall be made at the discretion of the principal investigator in conformity with the approved budgets and work plans and in relation to the fiscal policies of the University.

IV. Liability: To the extent provided by Georgia law, each party agrees to be responsible for any and all liability including claims, demands, losses, costs, damages, and expenses of every kind and description, or damages to persons or property, arising out of or in connection with, or occurring during the course of this contract, where such liability is founded upon or grows out of the acts or omissions of any of the officers, employees, or agents of the party. The University assumes no responsibility for its interpretation of the data collected under these studies, with regard to aircraft accidents occurring as the result of bird strikes at the Airport.

V. Reports: The principal investigator will submit eight (8) copies of a final report to the Sponsor on November 1, in the year of the investigation's completion, covering all aspects of these investigations, in accordance with the conditions defined in the work plan agreed to by the University and the Sponsor. Interim presentations summarizing the results to date of the study, as described above, may be provided to the Sponsor if requested.

VI. Records: The University agrees to abide by the Office of Management and Budget 2 CFR 200 in regard to accounting for staff workloads.

VII. Publications: (a). The University shall have freedom of publication of the research conducted under this contract.

(b). All manuscripts written for publication will be a collaborative effort between the principal investigator and a designee of the Sponsor. In the event that no Sponsor collaborator is designated, the Sponsor will be provided two (2) courtesy copies of any manuscripts written by the principal investigator prior to publication.

(c). In the event that the Sponsor elects to provide data collected by the University under this research program to a third party for publication purposes, the principal investigator shall have the following options in regard to such publications: (1) The principal investigator and/or other University staff involved in the work may choose to be co-author(s) of the publication, with editorial privileges and/or (2) The principal investigator shall be allowed the option of having a disclaimer appear in the publication claiming no responsibility for the use and interpretation of data collected by the University.

VIII. Duration: (a). The period of performance shall be from October 1, 2025 – September 30, 2026.

(b). This research grant may be terminated at any time upon 30 days written notice by either party.

(c). The contract covering these research programs shall be renewable on an annual basis upon agreement of both the Sponsor and the University.

IX. Equal Opportunity Employment: During the performance of this contract, the University/Contractor agrees not to discriminate in its employment practices or subcontracts with regard to race, color, sex, age, religion, national origin or disability.

X. Inventions: Investigators/Contractors shall comply with the stipulations of P.L.96-517.

PRINCIPAL CONTRACTOR/INVESTIGATOR

BY: _____ DATE: 8-29-25

Travis L. DeVault,
Associate Director for Research (UGA, Savannah River Ecology Laboratory)

UNIVERSITY OF GEORGIA RESEARCH FOUNDATION, INC.

BY: _____ DATE: August 29, 2025

James L Garrett - Senior Grants Specialist
for Dr. Christopher King,
UGA Interim Vice President for Research

AUGUSTA - RICHMOND COUNTY

BY: _____ DATE: 9/30/2025

Garnett L. Johnson
Mayor

GLJ

AUGUSTA-RICHMOND COUNTY 1736 GEORGIA

Attest: Lena J. Bonner
Clerk of Commission

General Scope of Work
for a Bird Study at Augusta Regional Airport at Bush Field and Messerly Wastewater Treatment Plant Constructed Wetlands Project

While always endeavoring to effectively monitor bird populations that may or may not pose a hazard to air traffic operations, Savannah River Ecology Laboratory (SREL) will carry on with the decision to discontinue aerial bird surveys as of 2017–2018. This decision was based upon results from more than 600 previous aerial surveys (1998–2017) of these areas and other programmatic ground-based surveys, together indicating that distributions and movements of heavily-bodied birds such as geese, other waterfowl, and wading birds using these wetlands in the vicinity of Bush Field Airport have not posed a particular concern from the perspective of a potential aircraft-bird strike hazard. In the place of these aerial surveys, SREL will continue to broaden the program of ground-based counts (described below) at the Constructed Wetlands Project by counting these heavy-bodies bird species from a vehicle visiting each of the twelve Constructed Wetlands Project cells on a twice-monthly basis. If warranted, due to a perceived increase in the threat of aircraft strikes with such large-bodied birds, SREL may consider resuming a program of aerial surveys to include the Constructed Wetlands Project and Merry Land Brickyard Ponds in future contracts.

While replacing aerial surveys as described above, SREL also will continue ground-based bird movement surveys at both the airfield and the adjacent constructed wetlands. These ground-based surveys are designed to provide time- and location-specific information regarding the daily patterns of movement, altitude, and behavior of the larger-bodied bird species including waterfowl, wading birds, and birds of prey, as well as flocking blackbirds. This specific information will provide the type of detail that will allow airport management and flight controllers to continue to predict times, locations, and conditions of increased bird-strike hazard potential that would be of particular consequence to aircraft in the area. Furthermore, with the habitat alterations now being implemented at the artificial wetlands during fall/winter (i.e., airboat crushing of vegetation) and with active bird dispersal activities (e.g., pyrotechnics, or acoustics) now being used at the airfield and the artificial wetlands, these ground-based bird movement surveys have the further importance of helping to evaluate the effectiveness of these techniques and identifying any new problematic bird movement patterns that might be created by such bird disturbances.

This contract period will also include a series of qualitative assessments of blackbird use of the entire artificial wetlands and surrounding tree-line that will be used to guide the bird harassment activities conducted there. Particular areas within the wetlands harboring relatively large numbers of roosting blackbirds will be identified before, during, and after Augusta Utilities Department vegetation crushing by airboats. The results from these once-per-week assessments (conducted from October through March) will be communicated to the bird-harassment team so that optimizing adjustments can be made quickly to the bird harassment activities. These same evening visits to the wetlands will also be used as needed to meet with the Sponsor's bird-harassment team members to train and refine their use of all the tools they have to work with, including the Avian Dissuader laser and various pyrotechnic/launcher devices. These qualitative assessments will further be used in the decision-making process to determine if and when vegetation crushing by airboats will need to be carried out.

In addition to bird surveys described above, the SREL principal investigator and/or technical consultants supported under this contract will act as an avian information resource by providing professional consultation to the Sponsor's bird-harassment team and Bush Field Airport personnel with regard to bird issues, including help in identifying the remains and/or photographs of any birds involved in aircraft strikes in the vicinity of Bush Field or in the effective use/deployment of bird-harassment techniques (e.g., sound, lasers, pyrotechnics, etc.) that may be used.

In order to keep the cost of this work as low as possible, SREL will continue to provide an annual report to Augusta that include a comprehensive, yet simplified approach of summarizing the results primarily in tabular and graphical form (excluding detailed statistical analyses), with an accompanying Executive Summary explaining the meaning and importance of the data that have been collected. The SREL principal investigator and/or technical consultants will be available however to verbally discuss the findings with Augusta Utilities Department and Bush Field officials, including the Wildlife Control Specialist, as necessary. This approach will continue to be the most cost-effective in terms of directing a greater proportion of the overall budget to personnel who are involved directly with the collection and reporting of critical data.

Specific details for carrying-out the research programs of this study ([I] conducting ground-based bird-movement surveys, [II] conducting qualitative assessments of roosting blackbirds in the Constructed Wetlands Project with bird-harassment techniques refinement) are provided in the two individual scope of work plans that follow. Separate budgets for each of the two major study components are also provided.

RESEARCH PROGRAM I:

Scope of Work for Ground-Based Bird-Movement Surveys at the Augusta Regional Airport at Bush Field and the Constructed Wetlands Project

(12 months, beginning October 1, 2025)

Based on previous aerial surveys of bird abundance and distribution in wetlands near the Augusta Regional Airport at Bush Field, relatively large numbers of large-bodied aquatic birds are found in the area, particularly during the winter period when migratory waterfowl are most abundant. In addition to the many waterfowl found in the area, numerous wading birds, divers including cormorants and anhingas, blackbirds, gulls, and raptors including vultures are known to frequent the area as well. Wetlands near Bush Field harboring the majority of these birds include the Merry Land and Investment Company Brickyard Ponds and the Constructed Wetlands Project of the Messerly Wastewater Treatment Plant. Based on previous ground-based bird-movement surveys, extremely large numbers (in the millions) of migrant blackbirds may move through airspace in the vicinity of Bush Field and the Constructed Wetlands Project in the fall/winter period on a twice-daily basis. These blackbirds, in particular, have created an annual period of increased hazardous conditions to aircraft operating in the area.

SREL personnel will continue to collect ground-based bird data to determine daily behavior and movement patterns (i.e., timing, directions, altitudes) of birds moving through the airspaces of Bush Field and the Constructed Wetlands Project. Emphasis will be placed on documentation of movements of flocking bird species such as blackbirds and large-bodied bird species such as waterfowl that are most likely to produce serious consequences when involved in collisions with aircraft. In the absence of aerial surveys conducted in years prior to 2017–2018, SREL intends to continue to broaden the program of ground-based counts at the Constructed Wetlands Project by counting these heavy-bodies bird species from a vehicle by visiting each of the twelve Constructed Wetlands Project cells on a twice-monthly basis.

Bird movements will be documented from routinely-monitored ground stations at Bush Field and the Constructed Wetlands Project. Stations selected at Bush Field (3) and at the Constructed Wetlands Project (1) in December 2001 will continue to be used to ensure adequate coverage of the areas of interest. The daylight hours will be divided into four approximately equal time blocks: (1) 15 minutes before sunrise until 9:00AM, (2) 9:01AM until 12:00PM, (3) 12:01PM until 3:00PM, and (4) 3:01PM until 15 minutes after sunset (Eastern Standard Times; one hour added when Eastern Daylight Saving Time is in use). Emphasis will be placed on the time blocks coinciding with sunrise and sunset, because most bird movements occur during these times of the day. Observations will be made at two different stations within two different time blocks daily, for two days each week, for four weeks each month of the study. This methodology allows for all possible combinations of the four locations and the four time blocks to be chosen monthly in a randomized design. Observations will be made over a 2.5 hr period and will consist of four 30-minute observation bouts with a 10-minute lapse between each observation period. Observations will be initiated at the beginning of a time block with the exception of the last time block, which will be timed so that the final 30-minute observation bout ends approximately 15

minutes after sunset. During the observation bouts, observers will scan the 360° horizon with binoculars, attempting to collect data on as many flying birds as possible with no upper limit on distance from the observer. Short movements by birds (<100m) or movements by small passerine birds in flocks of less than 20 birds will not be recorded. Emphasis will be placed on movements of waterfowl (ducks and geese), wading birds (herons, egrets, ibises, wood storks), other large and/or flocking waterbirds (coots, cormorants, anhingas, gull spp., blackbird spp.), and raptors (hawks, kites, vultures, bald eagles, ospreys). During times of intense movements, observers will give priority to larger birds and larger flocks. Observations will be conducted regardless of weather conditions. In addition to meteorological data, the following data will also be recorded for each observation: time, species, actual or estimated number of individuals, approximate distance from the observer, approximate direction from observer, estimated altitude above land or water, approximate direction of bird movement, and flight behavior (e.g., level flight, soaring, landing, taking-off).

Data will be stored on a networked PC-workstation operating in a Microsoft-Windows environment. Upon project completion, all data will be provided to the Sponsor in a mutually agreeable database format (e.g., Microsoft Excel). For the purposes of electronic data storage and summarization, bird movement data from Bush Field and the Constructed Wetlands Project will be retained according to each of four observational stations. Data summaries will be performed using standard statistical software. Summaries will be made for each observation station and will be comprised of avian species movement patterns including timing and direction of flight, flight altitudes, and temporal (annual and seasonal) changes in bird movement patterns.

As a part of this Research Program, the SREL principal investigator and/or technical consultants will act as an avian information resource by providing professional consultation to Bush Field Airport personnel with regard to birdstrike issues, including help in identifying the remains and/or photographs of any birds involved in aircraft strikes in the vicinity of Bush Field or in the effective use/deployment of bird-harassment techniques (e.g., sound, lasers, pyrotechnics, etc.) that may be used.

RESEARCH PROGRAM II:

Scope of Work for Conducting Qualitative Assessments of Roosting Blackbirds in the Constructed Wetlands Project with Bird-Harassment Techniques Refinement

(6 months, beginning October 1, 2025)

Based on previous ground-based surveys of bird abundance and movements in and around the Constructed Wetlands Project of the Messerly Wastewater Treatment Plant (WTP) near the Augusta Regional Airport at Bush Field, blackbirds numbering into the millions have been shown to roost at night within and adjacent to the Constructed Wetlands where they use the standing vegetation of the wetland cells as a roosting substrate. This behavior is particularly notable in the fall/winter months (November–February) when migratory blackbirds frequent the area. Fall crushing of standing vegetation in the entire Constructed Wetlands was first used as a successful habitat alteration for dissuading use of the wetlands by roosting blackbirds in November and December 2008, and the process was continued again in 2009 through 2024, each time successfully removing the blackbird roost. This vegetation crushing will be carried out once again as early as mid-October in 2025 by contractors working for the Augusta Utilities Department. Although not necessary in past years, multiple airboat crushing events in the same fall/winter may be required to maintain the desired vegetation alteration and thus keep roosting blackbird numbers in check as the season progresses, so insight as to whether/when vegetation re-crushing is needed will be valuable. In addition to altering habitat as a bird deterrent, the WTP operator prior to December 31, 2009, Operations Management International (OMI), Inc., first assembled a bird-harassment team in late 2008 to begin actively engaging the roosting blackbirds with the aid of propane cannons and other pyrotechnic/acoustic devices. Since January 1, 2010, operations of the WTP have been assumed by Environmental Services Group (ESG), Inc. and they have provided a bird-harassment team to continue the bird abatement program. As in 2009 through 2024, and with a continued desire to develop the activities of the bird-harassment team, SREL personnel will again make qualitative assessments of numbers of roosting blackbirds in the fall/winter of 2025–26 at all wetland cells and the surrounding tree-line that will be used to guide and coordinate the activities of the bird-harassment team. These same qualitative assessments will further be used in the decision-making process to determine whether/when vegetation re-crushing by airboats will need to be carried out. Additionally, SREL personnel will work with the bird-harassment team as needed to increase basic bird knowledge and provide further training and refinement in their use of bird-harassment tools.

During this contract period, once-per-week visits to the Constructed Wetlands will be made from October through March. Since blackbirds roosting in the wetland cells arrive in the evening and depart at dawn, the assessments will concentrate on the evening arrival period. Observations will be conducted from 30 minutes before sunset until 30 minutes after sunset (Eastern Standard Times). Each evening while at the Constructed Wetlands, SREL personnel will qualitatively examine blackbird use of all wetland cells and the surrounding tree-line while traversing the site in a vehicle, noting areas of high-density bird-use and prioritizing areas for the concentration of bird harassment activities. SREL personnel will communicate the findings of these assessments within 24-hours to designated ESG and/or Augusta Utilities Department

personnel via e-mail (primary) or voice communication (secondary). SREL personnel will also assemble the communications/assessments made over the course of a 6-month period (October 2025-March 2026) into a text record (pdf file) for inclusion with annual final report documents. SREL personnel will also coordinate to meet with bird-harassment team members while at the Constructed Wetlands as needed for the purpose of general consultation on matters related to wetlands and birds, improving basic knowledge of bird identification/behavior, and providing training/refinement in the use of such devices as the Avian Dissuader laser, propane cannons, and various pyrotechnic/launcher devices.

Under this agreement, SREL personnel will only be responsible for conducting the assessments of bird use of the artificial wetlands and offering refinement of bird-harassment techniques associated with this scope of work. SREL will not assume responsibility for conducting the vegetation crushing or any other type of vegetation alteration. Costs and logistics for conducting the vegetation alteration and costs associated with bird-scaring devices and the actual bird harassment will be the responsibility of the Sponsor.

RESEARCH PROGRAM I:

Budget for Ground-Based Bird-Movement Surveys at the Augusta Regional Airport at Bush Field and the Constructed Wetlands Project

(12 months, beginning October 1, 2025)

Personnel costs, including benefits	
T. L. DeVault (PI; Assoc. Dir. Research, 10% FTE)	
Salary: $12,075 Benefits @ 23%: $2,777	$14,852
M. Strassburg (Research Technician, 70% FTE)	
Salary: $28,865 Benefits @ 51%: $14,721	$43,586
UGA Vehicle expenses (NOT TRAVEL)	$ 3,500
RESEARCH PROGRAM I DIRECT COSTS	**$61,938**
UGA/SREL INDIRECT COSTS (@ 35%)	**$21,678**
RESEARCH PROGRAM I: TOTAL	**$83,616**

RESEARCH PROGRAM II:

Budget for Conducting Qualitative Assessments of Roosting Blackbirds in the Constructed Wetlands Project with Bird-Harassment Techniques Refinement

(6 months, beginning October 1, 2025)

Personnel costs, including benefits	
T. L. DeVault (PI; Assoc. Dir. Research, 7% FTE)	
Salary: $8,453 Benefits @ 23%: $1,944	$ 10,397
M. Strassburg (Research Technician, 10% FTE)	
Salary: $4,124 Benefits @ 51%: $2,103	$ 6,227
UGA Vehicle expenses (NOT TRAVEL)	$ 1,500
Expendable supplies	$ 200
RESEARCH PROGRAM II DIRECT COSTS	**$ 18,324**
UGA/SREL INDIRECT COSTS (@ 35%)	**$ 6,413**
RESEARCH PROGRAM II: TOTAL	**$ 24,737**
RESEARCH PROGRAM I: TOTAL (from page 10)	**$ 83,616**
GRAND TOTAL:	**$ 108,353**

Prepared by: Travis L. DeVault
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