

Managing the Bird/Wildlife Strike Risk



with State Listed Threatened & Endangered Bird Species

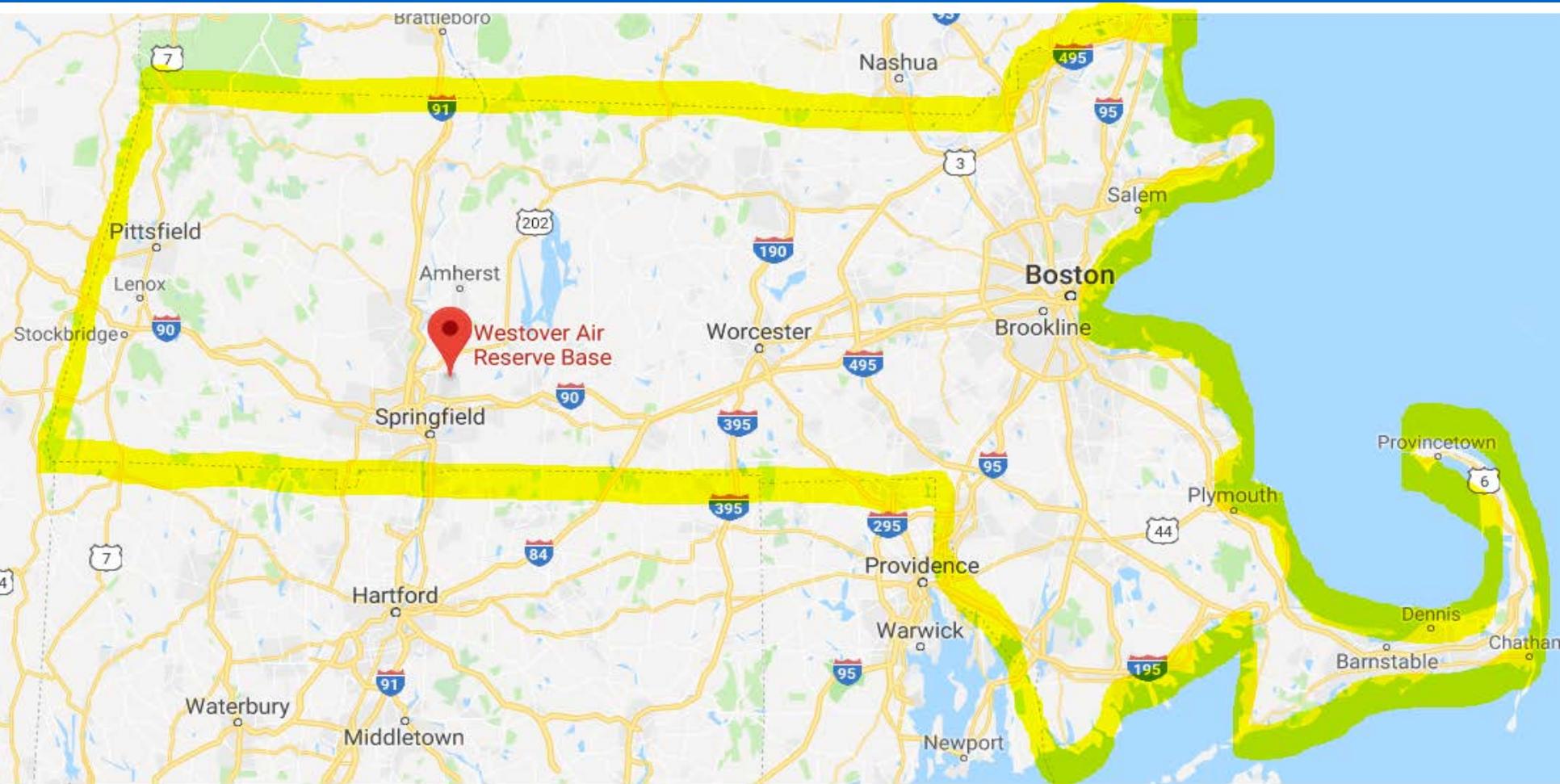


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BIRD/WILDLIFE AIRCRAFT STRIKE HAZARD (BASH) PLANS



Wing Vice Commander

Safety
Staff Judge Advocate
Public Affairs

Operations Group
Flyers
SOF/AOM/ATC

Maintenance Group
Maintainers (vital role
with strike remains)



Mission Support Group
Environmental
Engineering/Real Property
Managers

Other Stakeholders
USDA Biologists
Massachusetts
Endangered Species
Biologist
Land Fill Operators

A composite image showing a military jet flying over a wetland area with a forest in the background. The jet is in the upper middle section, flying towards the left. Below it is a wide, flat, green field. In the foreground, there is a body of water with tall green reeds. The background is a dense line of green trees under a light sky.

HABITAT MANAGEMENT

**CRUX OF ALL BASH
PROGRAMS**

TURF MANAGEMENT

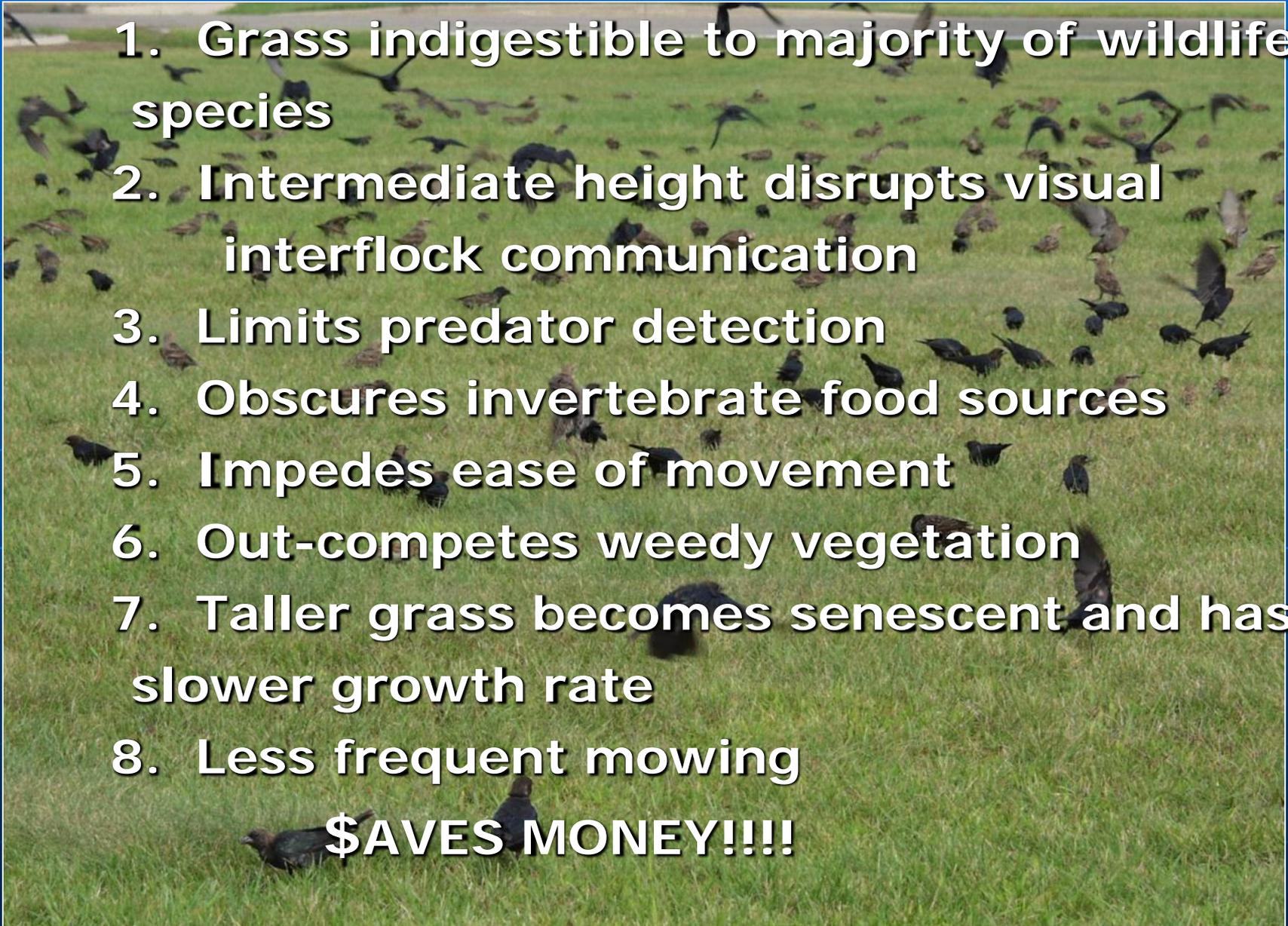
See AFI 91-212

7-14 Inches - AF Mandate
6-12 Inches - FAA Recommendation



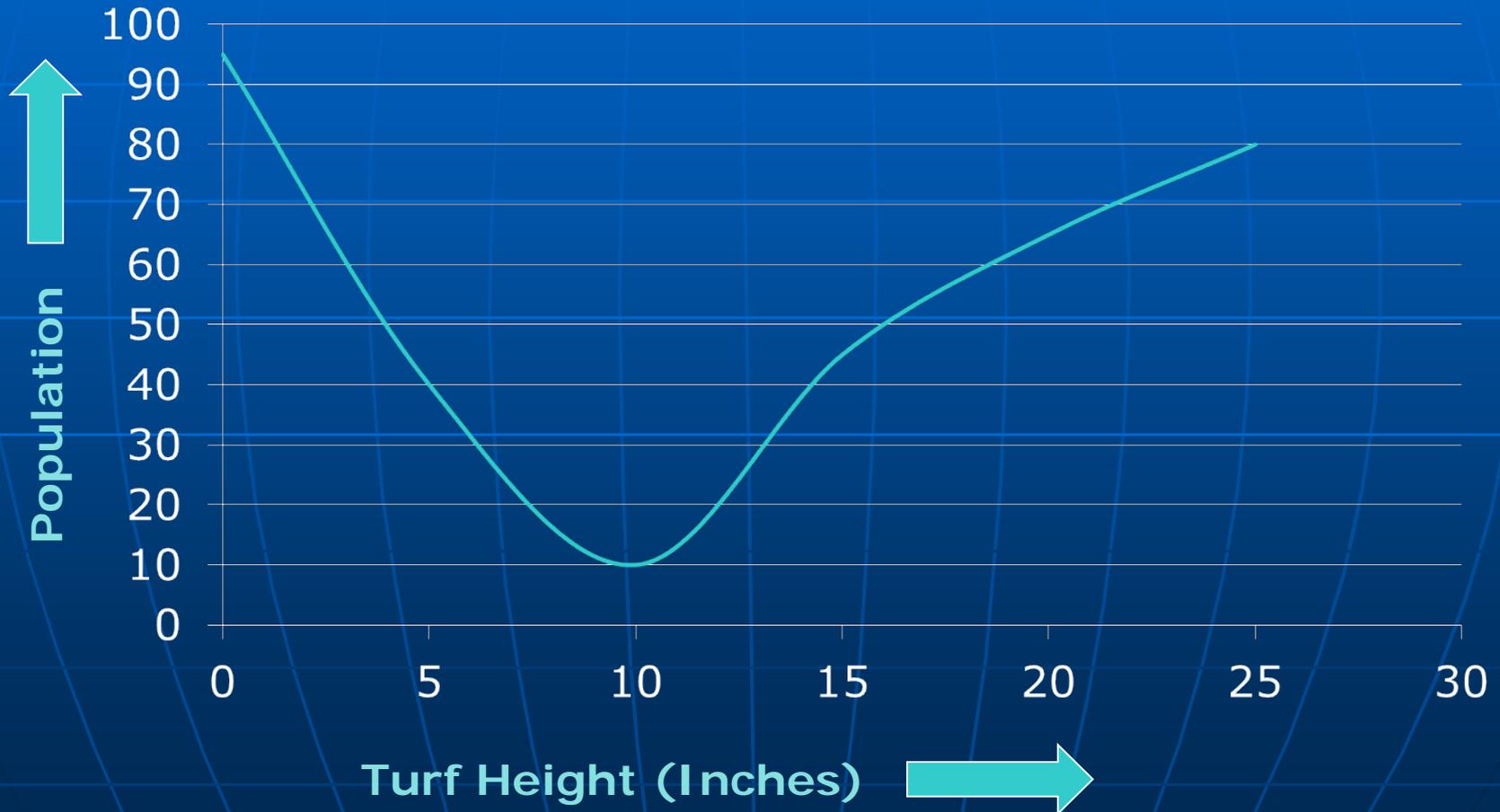
PROPER TURF MANAGEMENT:

1. Grass indigestible to majority of wildlife species
 2. Intermediate height disrupts visual interflock communication
 3. Limits predator detection
 4. Obscures invertebrate food sources
 5. Impedes ease of movement
 6. Out-competes weedy vegetation
 7. Taller grass becomes senescent and has slower growth rate
 8. Less frequent mowing
- \$AVES MONEY!!!!**



Wildlife and Turf Height

Hazardous Wildlife Population



Military Aviation

Primary Goal – Ensure mission readiness and combat capability while providing the safest flying environment possible.

Military Airfields

Artificially maintained environments designed specifically for the safe launch and recovery of aircraft.

Military Airfields

Attracting wildlife to an airfield is mutually detrimental to wildlife and mission capability.

Sikes Act

Integrated Natural Resources Management Plan (INRMP) that sustains the natural infrastructure while preserving the capability to support the military mission.

Minimize flight risks by making the airfield and AMA unattractive to hazardous wildlife.

INRMP

Commanders may choose to assist in conservation; however,

BASH personnel will ensure the aircraft movement areas are not utilized as wildlife conservation easements.

Federally-listed T&E Species



Whooping Crane
Grus americana





State Listed T & E species



INRMP

INRMPs provide for the protection and conservation of state listed protected species when practicable.

Provide conservation measures for species protected by state law when such protection is not in direct conflict with the military mission.

INRMP

When conflicts occur, consult with the appropriate state authority to determine if any conservation measures can be feasibly implemented to mitigate impacts

Mutual Agreement July 2001

- **BASH Team Chief**
- **USDA Scientist Project Leader
Sandusky Field Office**
- **USDA Wildlife Services Biologists**
- **Mass Division of Fisheries and
Wildlife Endangered Species
Division**

Mutual Agreement July 2001

- **Airfield Survey**
- **Chief of USAF BASH Team recommended approval of the May 2001 mowing plan**
- **Mowing boundaries that were agreeable to all parties**
- **Does not adversely affect flight safety**

Reevaluation in 2004

- BASH Team Subject Matter Experts
- Mass Division of Fisheries and Wildlife Endangered Species Division
- USDA Experts
- AF Reserve Flight Safety SMEs

Reevaluation in 2004

August 2004

Refined mowing plan

Increased grassland by removing
brush

Wildlife Workshop

31 Jul to 1 August 2012

AF BASH Team

AFSEC SJA

USDA Subject Matter Experts

Wildlife Workshop

USAF BASH Team Chief

Mow Aircraft Movement Areas
Plus 500 feet beyond

No basis for a waiver



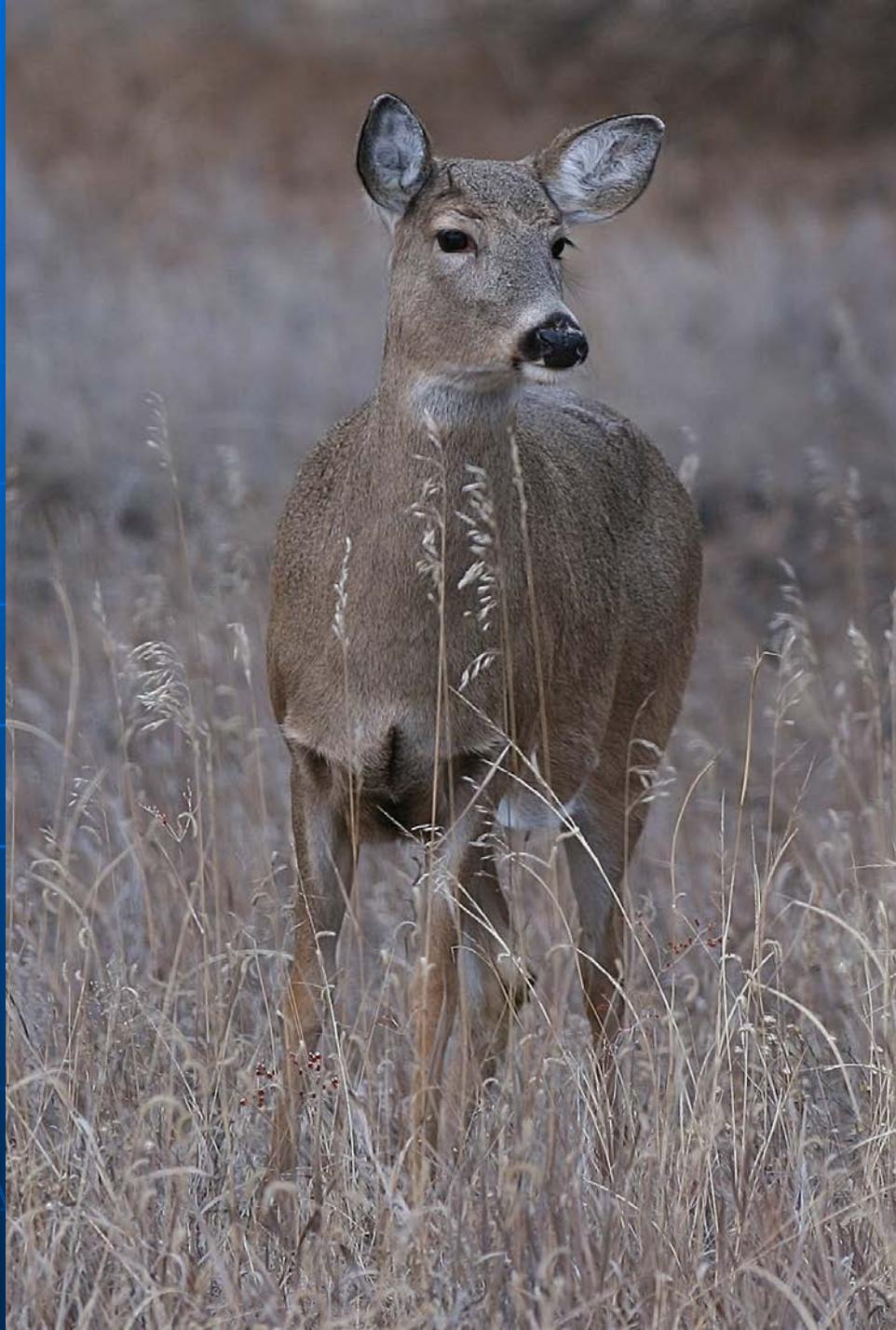




KC-135R







OTHER WILDLIFE



PREDATORS



TURF MANAGEMENT



Mowing Issue and CUI Write Up

Flight Safety

Excellent

Deficiencies:

F.8491.1281076: Significant

"UNIT IDENTIFIED DEFICIENCY" The current Westover ARB airfield mowing plan is not in compliance with Air Force Instruction 91-202. Specifically, the current mowing plan permits delaying mowing the grass on the airfield until after the local bird nesting season has passed. This results in enormous sections of the airfield (in close proximity to the Aircraft Movement Areas) becoming a wildlife attractant on the airfield. This results in decreasing the margin of safety for continuing safe aviation activity at Westover.

Reference: AFI 91-202, para 7.3.1.5.9

OPR: AFRC/A7

OCR: AFRC/JA/SE

MAJCOM FAM OPR: AFRC A7

Airfield Mowing

- **AFI 91-202 amended by Safety Center in 2011**
 - **Grass in AMA + 500ft mowed to height of 7-14”**
 - **Prior to amendment, installations had discretion**
- **Impact at Westover**
 - **Mow 733 acres more often**
 - **Start mowing earlier (in May or June) in order to meet 7-14” standard**
- **PROBLEM: NGO stakeholders & State of MA**
 - **Two state-listed species, Grasshopper Sparrow and Upland Sandpiper nest in May/June**
 - **Westover airfield best habitat in all New England**

Airfield Mowing

- **Waivers to mowing were allowed by AFSEC by request to augment mowing**
 - **Waivers denied by AFSEC**
- **Change in mowing practice triggered NEPA analysis**
- **Environmental Assessment (EA) drafted**
 - **Facilitated by AFCEC**
 - **Written by contractor**
- **Goal – Assess the outcome of mowing in accordance with regulation, and how it affects environmental and flight/airfield safety**

Mowing Timeline

- Oct 2012 - Waiver for mowing Requested
- Apr 2013 - Waiver Resubmitted to AFRC/SEC
 - Denied by AFRC/SEC and AFSE
- May 2013 EA Ordered
- Jun 2013 Draft EA came back with a FONSI
- Jul 2013 End of Comment Period for Draft EA/FONSI
- Aug 2013 Final EA/FONSI Distribution
 - With Delay for comment period; estimated 23 Aug 13

Comments Received

- Mass Fisheries and Wildlife
 - New Jersey Audubon
 - Mass Audubon
 - Mass Ornithologist
-
- General consensus is that they disagree with EA and want more studies completed before we mow

First Environmental Assessment

- **Finding of no Significant Impact**
- **State questioned the term Significant**
 - **Possible loss of 25% of population found not significant**
- **“Significant” had a different meaning with the Commonwealth of Massachusetts**

EA Finding of No Significant Impact

- Comments received from stakeholders and the threat of legal action from the state over FONSI
- Westover legal office deemed EA legally insufficient and vulnerable to litigation in Fall 2103 due to:
 - Inadequate discussion of scientific basis for mowing practice change
 - No empirical support (in the EA) for proposition that new standard would reduce BASH risk
 - No substance to proposed alternatives

Final Environmental Assessment

- The Way Forward...
- Another EA ordered
 - Completed in April 2015
- Finding of No Significant Impact (FONSI)
- Analyzed potential environmental consequences of three possible alternatives

Consultation with Stakeholders

- **The USAF conducted extensive consultation with all stake holders**
 - **Mass Division of Fisheries and Wildlife**
 - **Local and state government officials**
 - **Public and private regional agencies, etc.**

Proposed Action

- **Manage airfield vegetation to maximize flight safety and minimize the BASH risk.**
- **Vegetation cover (grass height) within 500 feet of the AMA between 7 and 14 inches.**
- **Conserve State-listed species to extent practicable**

No Action

- Continue the current mowing program
- Maintain 7 to 14 grass height in 499 acres of the AMA – mow 2-3 times per year
- Mow 832 acres once per year - Would jeopardize safety and not be compliant.
- Does not meet the project need.

Alternative One

- **Initiate mowing earlier and increase the mowing rate**
- **Basically, mow the whole airfield 2-3 times per year**
- **Maintain grass height of 7-14 inches on the AMA plus 500 feet**

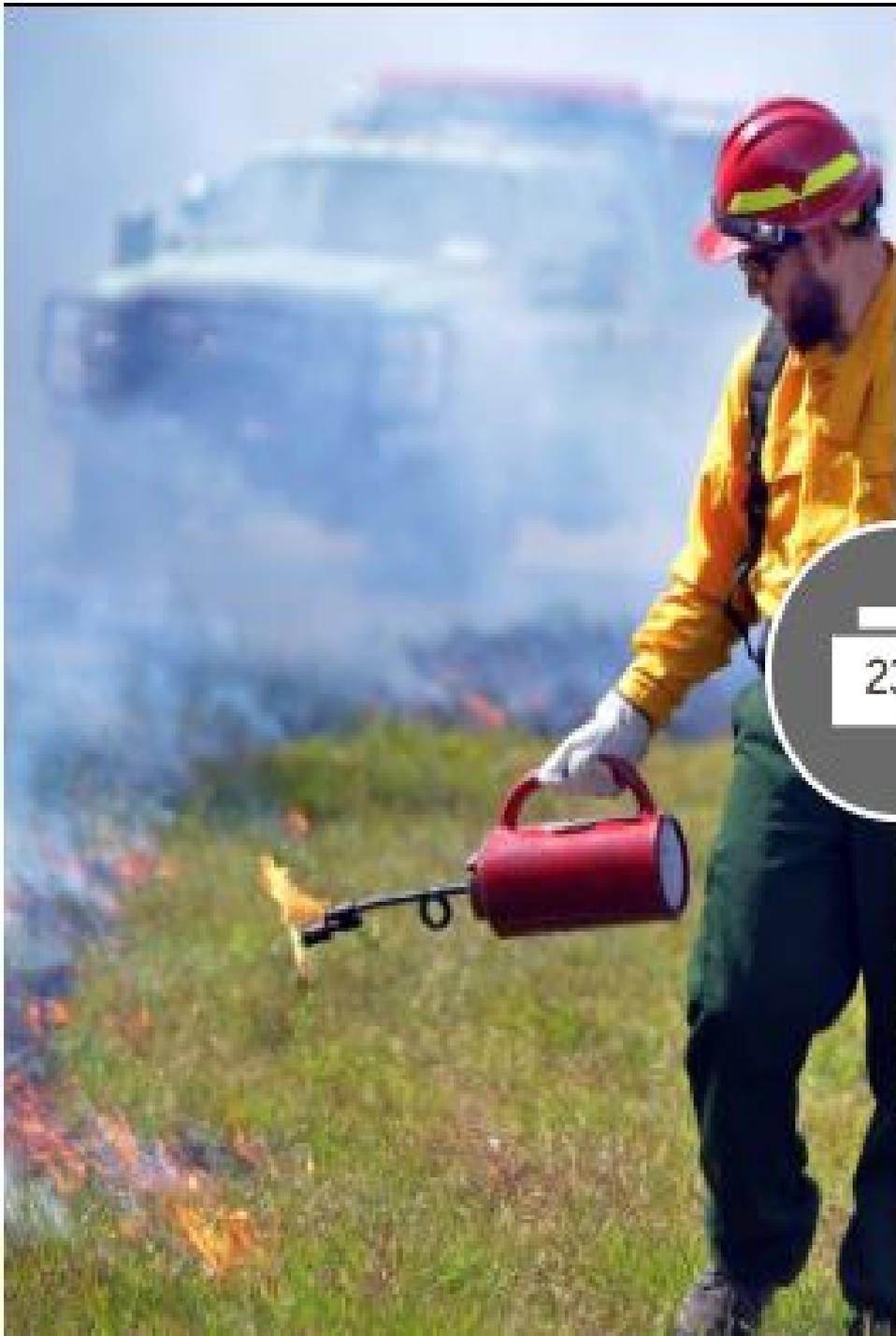
Alternative Two (Preferred)

- Application of plant growth regulators and mow as necessary with additional tools such as pre-emergent herbicides and controlled burns
- Multi-component management approach
- Delay the first mowing by 8-10 weeks

Controlled Burn

- A controlled burn of portions of the grassland occurs each year in the spring and fall.
- Slowly transitioning the ecosystem towards a greater dominance of warm season grasses over cool season grasses





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Final Decision

- **Multicomponent vegetation management approach (Alternative 2) would not result in or contribute to significant negative cumulative or indirect impacts to the resources of the region.**

Westover BASH Plan

- Aircraft movement area maintained to a grass height between 7 and 14 inches to 500 feet beyond the boundary.
- Weekly grass height observations
- Spot mow areas where grass height reaches 10 inches.
- Plant growth regulator applied by May 1st
- Circuit mowing as soon as all sectors have reached 10 inches or after birds have fledged

Airfield Mowing Plan

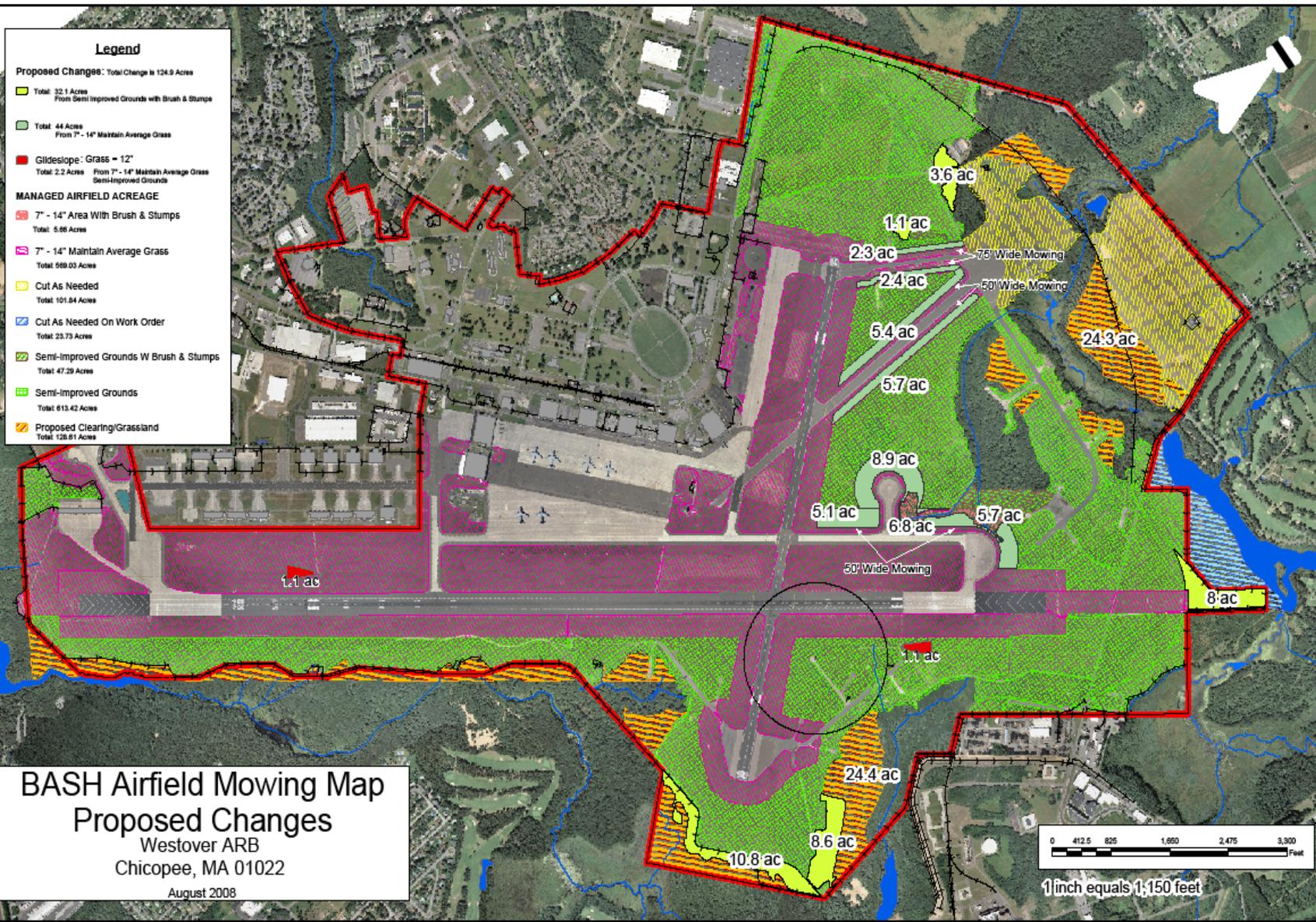
Legend

Proposed Changes: Total Change is 124.9 Acres

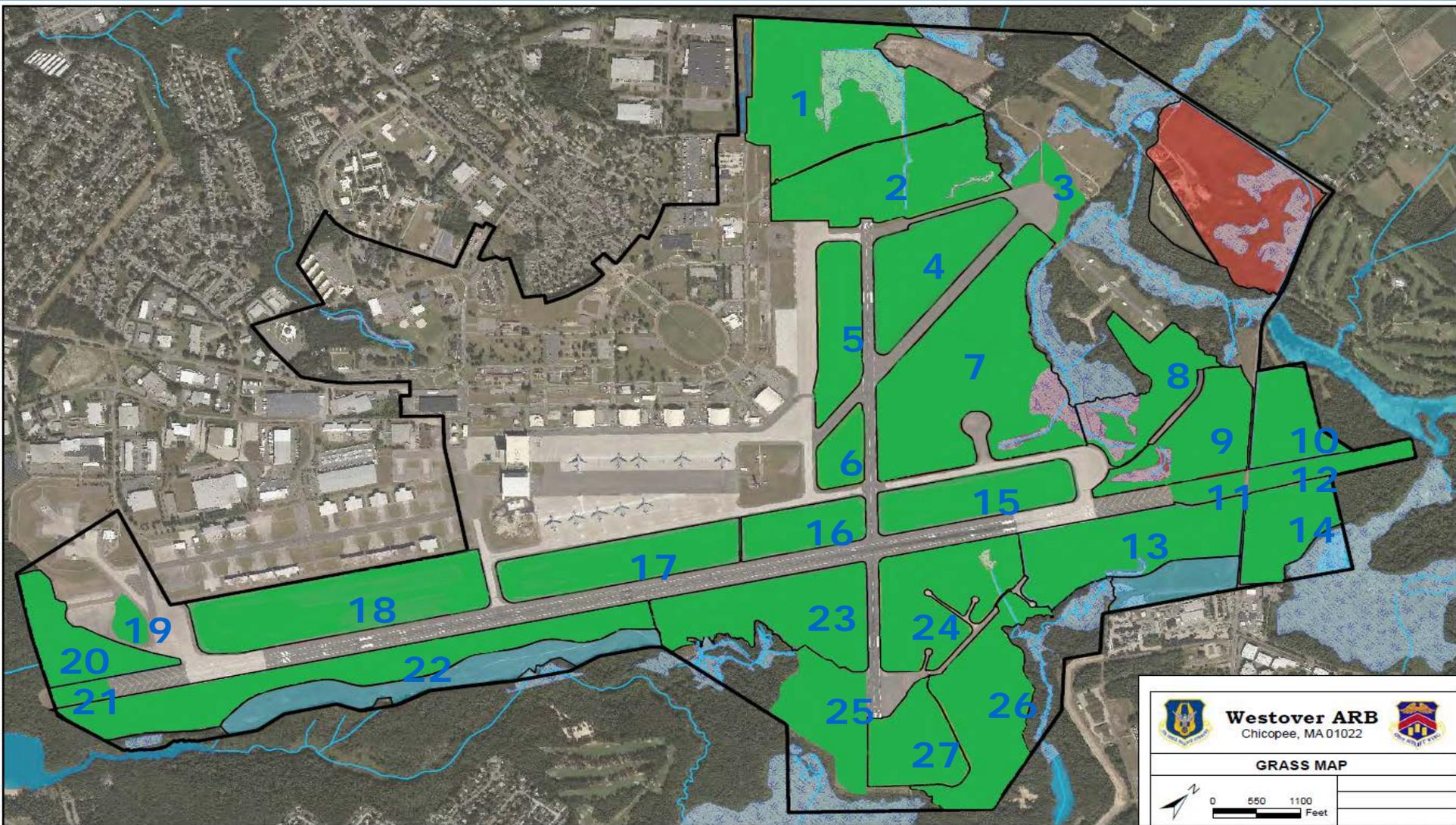
- Total: 32.1 Acres
From Semi-Improved Grounds with Brush & Stumps
- Total: 44 Acres
From 7" - 14" Maintain Average Grass
- Glideslope: Grass = 12"**
Total: 2.2 Acres From 7" - 14" Maintain Average Grass
Semi-Improved Grounds

MANAGED AIRFIELD ACREAGE

- 7" - 14" Area With Brush & Stumps
Total: 5.88 Acres
- 7" - 14" Maintain Average Grass
Total: 589.03 Acres
- Cut As Needed
Total: 101.84 Acres
- Cut As Needed On Work Order
Total: 23.73 Acres
- Semi-Improved Grounds W Brush & Stumps
Total: 47.29 Acres
- Semi-Improved Grounds
Total: 813.42 Acres
- Proposed Clearing/Grassland
Total: 128.61 Acres



BASH Airfield Mowing Map
Proposed Changes
 Westover ARB
 Chicopee, MA 01022
 August 2008



Westover ARB
Chicopee, MA 01022



GRASS MAP



0 550 1100
Feet

Access

- Westover continues to grant access to interested parties (bird groups) to conduct surveys and monitor the populations of various bird species present on the base, including those listed as Threatened, Endangered or of Special Concern.
- Requests routed through Safety, CE, and airfield management

Strike Record

- 502 strikes since 1998
- Five damaging strikes:
 - Killdeer (2016), Red Tail Hawk (2012)
American Robin (2008), Rock Dove
(2006), Mallard (2002)
- No damaging strikes with mammals

Current Regime

- **Controlled burns, herbicides much more effective in achieving compliance**
- **Vegetation height in compliance throughout the year**
- **State signed the INRMP in 2016**
- **Birds are OK**

QUESTIONS?



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