



Fire Restoration on Salt Cedar

Barry Wallace (UAP Distribution, Inc)

Cibola



NATIONAL WILDLIFE REFUGE



*U.S. Fish and Wildlife Service
Department of the Interior*

Cibola National Wildlife Refuge - Western AZ
Located Approximately 25 miles South of Blythe, CA & Ehrenberg, AZ along the Colorado River



Barry Wallace
UAP VM Rep

Dominic Barrett
Wildlife Biologist



Good quality water taken from cement irrigation ditch
100 gallons of water and spray mix used per load and applied at 15 GPA
Cibola National Wildlife Refuge – Western AZ



Cibola National Wildlife Refuge – Western AZ

GPS Guidance System

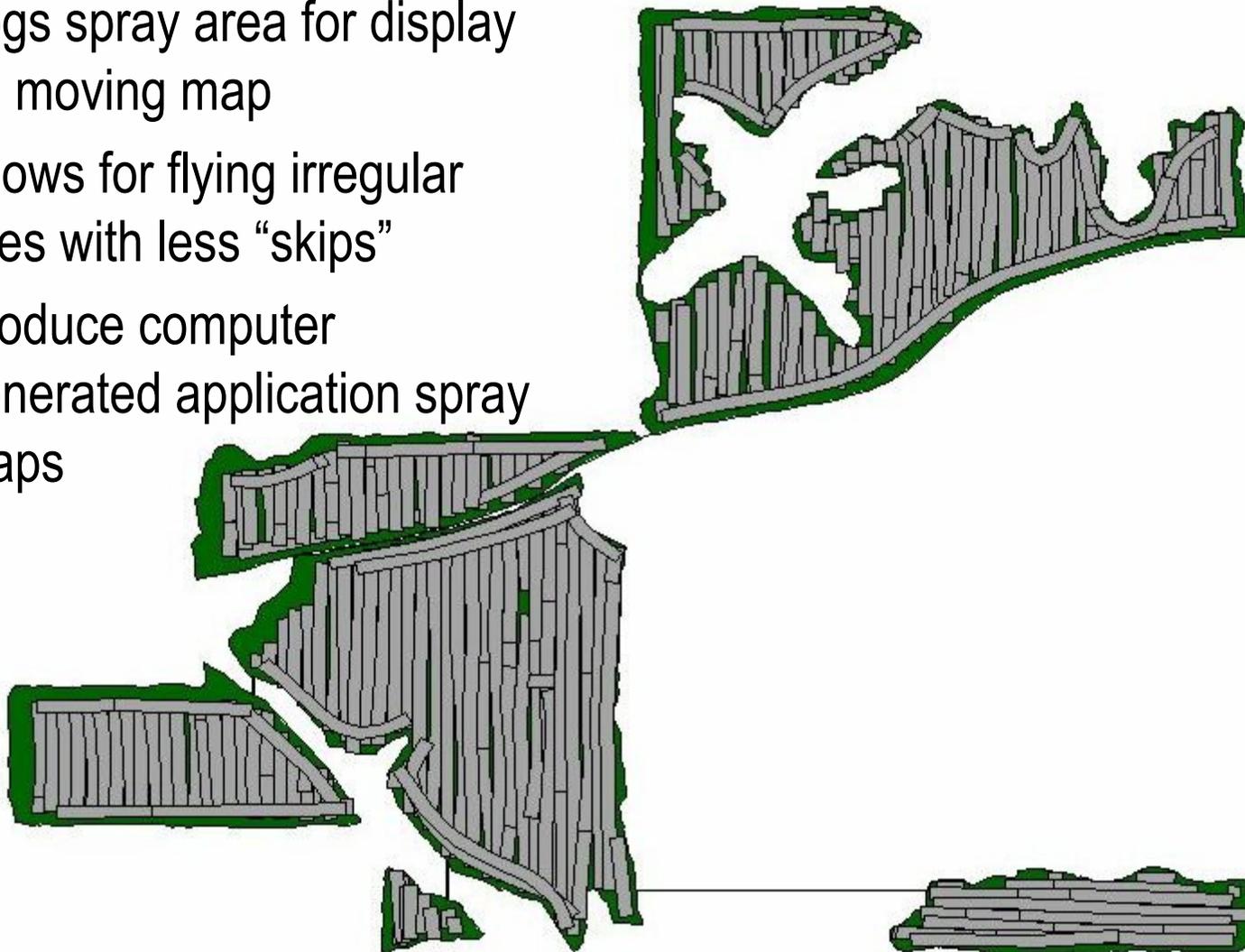


- Trimble Trimflight 3 GPS System.
- Auto-Cal Flow Control
- Crophawk Flow Monitor



Trimble GPS Guidance

- Logs spray area for display on moving map
- Allows for flying irregular lines with less “skips”
- Produce computer generated application spray maps





Three section spray boom

15 – 30 – 45 ft. swath width
controlled from cockpit

Aircraft comparison:

Helicopter

Spray at 30 mph

Flat turns

15 GPA

Varied spray width

1000 micron droplet

Less drift

Heliport near application site

\$1600-\$2500/Rotor Hour

\$50-\$120/Acre

Airplane

Spray at 110-140 mph

Banked turns

15 GPA

Fixed spray width

100-300 micron w/fines

More drift

Must ferry to air strip

\$800-\$1200/Tach Hour

\$15-\$40/Acre

8/27/1999

.028 Accuflo Nozzle
1000 Micron Droplet
15 g/acre TSV





← Swaths applied in E/W directions

→ 35-45 ft of Untreated Area Along Colorado River

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This area heavily infested
with arrowweed, salt cedar,
and mesquite trees

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Close-up of areas heavily infested
with arrowweed and salt cedar



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Swaths applied in E/W directions

35-45 ft of Untreated Area along Colorado River

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BASF Habitat® herbicide applied at 4.0 pt/ac (1.0 lbai/ac imazapyr) in Fall of 2007 – Photo 1 YAT
Helicopter applied at 15 GPA
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Untreated Area



Untreated Area across the road (south) from the BASF Habitat® treated area
Heavily infested with salt cedar
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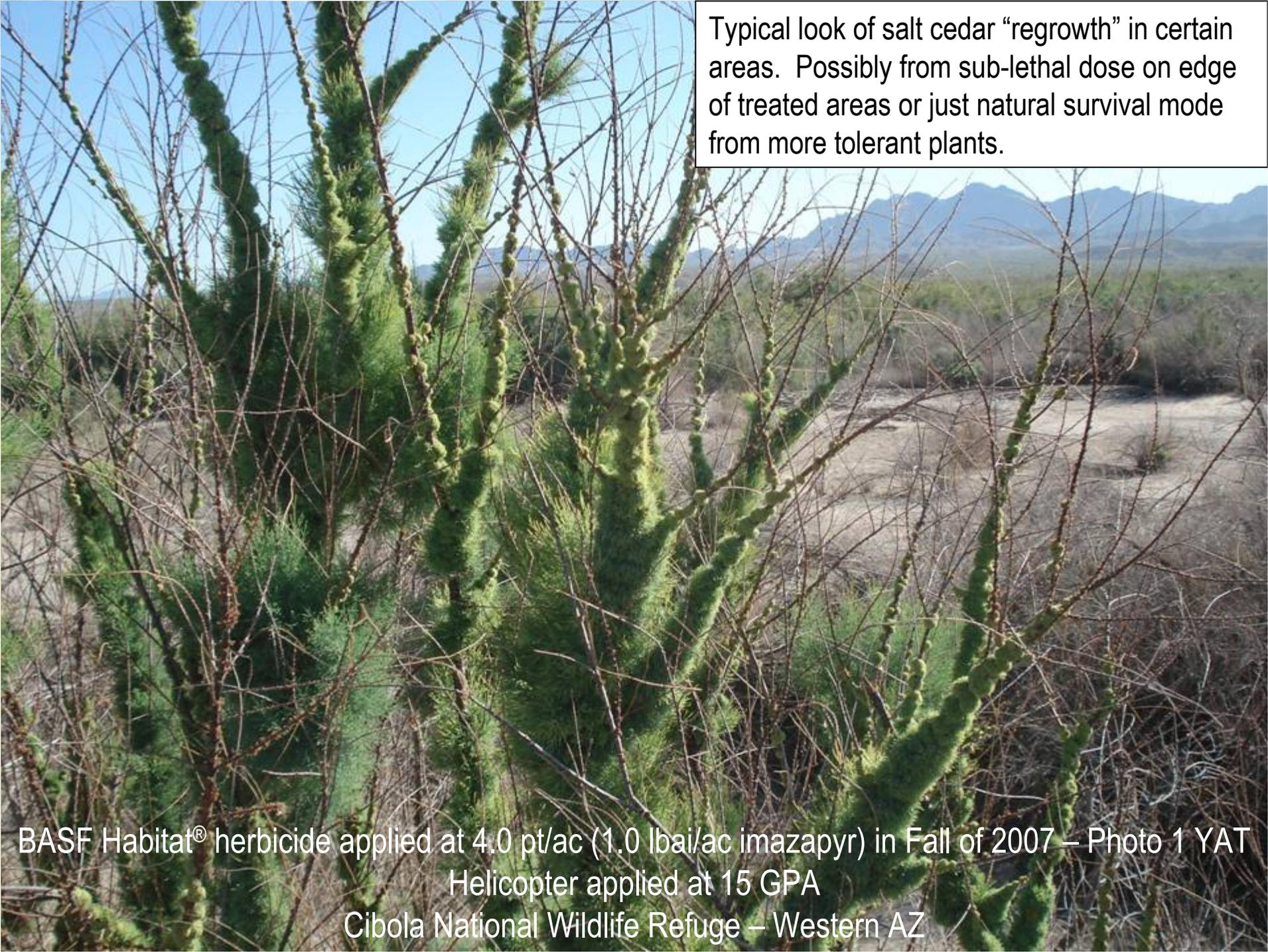


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Typical look of salt cedar “regrowth” in certain areas. Possibly from sub-lethal dose on edge of treated areas or just natural survival mode from more tolerant plants.

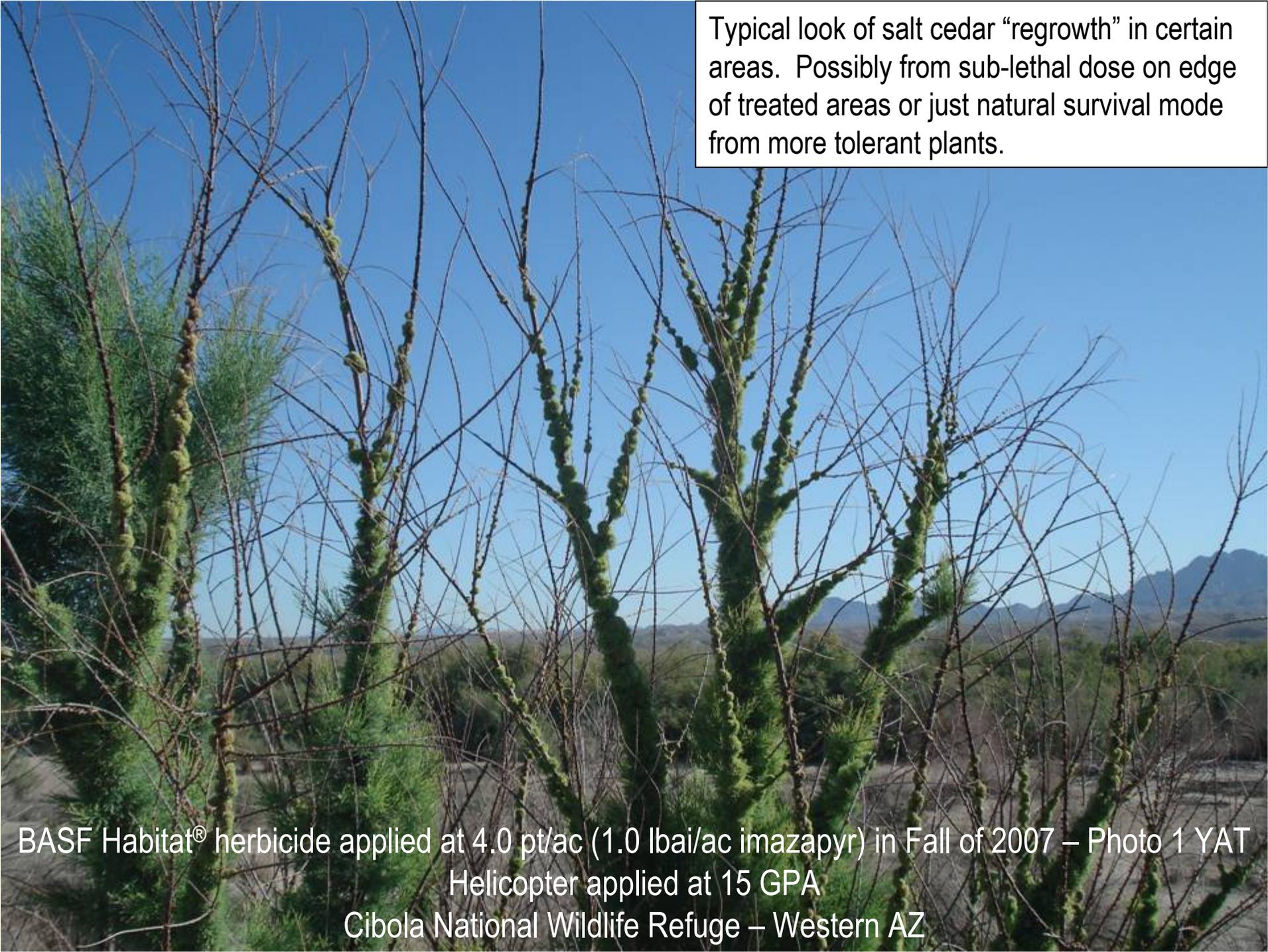


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A photograph showing several salt cedar stems lying on the ground. The stems are mostly brown and dry, but they have numerous small, green, fuzzy sprouts growing from them. The background is a mix of dry twigs and dark soil.

Salt cedar “regrowth” sometimes sprouts from stems, but may end-up dying from imazapyr residual in the soil or plant.

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9/26/2000

Mechanically removed salt cedar cost the refuge approximately \$4000 per acre
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Volunteer salt cedar in mechanically removed areas are treated by backpack spot spraying
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Barry Wallace

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