

2016 – 18 SEFSC COOPERATIVE INVASIVE PLANT REMOVAL PROJECT

Australian pine
(*Casuarina
equisetifolia*)



Brazilian pepper
(*Schinus
terebinthifolia*)

- = Brazilian pepper
- ✕ = Australian pine

Tom Jackson NOAA FISHERIES (062018)



BACKGROUND:

In 2013 while I was working with MUVE (Frost Museum) on a Virginia Key planting project, I heard a number of Virginia Key Active groups / parties voicing interest in *“tackling the VA key invasives”*

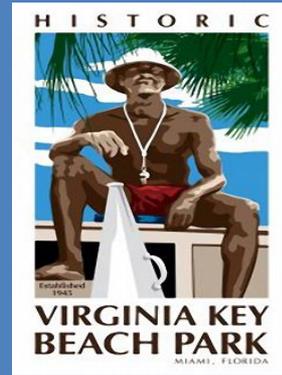
There have been actions over the years, but nothing holistic or cooperatively- often meaning invasives are aggressively removed on one neighbor’s property, which is quickly recolonized from uncontrolled other neighbors’ properties.



ORGANIZATIONS / THOSE CONTACTED

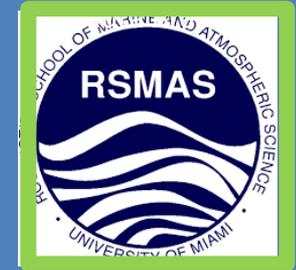
I took time and spoke to all parties gauging interest and asking advice.

Virginia Key Beach park
Guy Forchion Executive Director



Dennis Giradina
FWC Everglades Region Biologist

"GREEN COMMITTEE"



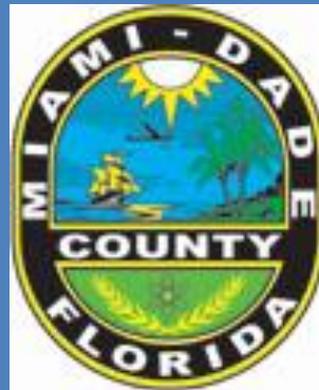
The John C. Gifford Arboretum
University of Miami



Steve Pearson
Director of the John C. Gifford Arboretum



Gary Hunt
tree removal specialist



In the fall of 2016 the **Biscayne Bay Habitat Focus Area** was formed, and the implementation team & plan were being compiled.

For one of the activities I **suggested that we make the cooperative removal of Brazilian pepper and Australian pine on SEFSC PROPERTY an HFA project** since :

- >it was aligned with NOAA invasive species policy mandates
- >it benefitted our neighbors (park) on-going efforts,
- >BP/AP were impacting our Office perimeter structure, and security (pre Irma).

Dr Browder, Tom jamir and I petitioned SEFSSC management and in late 2016, **we were given the go ahead for the COOPERATIVE VIRGINIA KEY INVASIVE REMOVAL HFA PROJECT!**



THE PROBLEMS:

Brazilian pepper (*Schinus terebinthifolia*) and Australian pine (*Casuarina equisetifolia*) two invasive plants essentially overpopulating the island. They both have bad aspects of their biology affecting native habitat. They are both prodigious seed makers; Australian pine 300,000 / year. The Brazilian pepper outside of being a prodigious seed producer has the added issue of being a “leggy aggressive” expanding colonizer often overgrowing adjacent species and smothering them. The Australian pine’s needles, and Brazilian pepper contain “allelopathic” toxins meaning even if light gets through the canopy to the floor, there are no juvenile plants below since the toxins limit the germination of seeds, and or reduces the growth of other species plants essentially limiting any neighboring competition. The Virginia Key Beach Park has actively tried to remove these two species.



Brazilian pepper
(Schinus terebinthifolia)



Australian pine
(Casuarina equisetifolia)

THE PROBLEM: Brazilian Pepper

Environmental damage caused by Brazilian pepper forests

>Brazilian pepper produces dense closed canopy forests that shade out almost all other plant life.

>Brazilian pepper forests alter natural fire regimes.

>Brazilian pepper forests are considered to be poor habitat for native wildlife species.

>Because of its relationship to poison ivy, many who come in contact with its sap develop allergic skin reactions



Although I have no reaction to poison ivy, sumack, or oak, I did have a reasonably bad reaction to Brazilian pepper on (unprotected) hands arms and legs

GOAL:

Cooperatively target 2 invasives on SEFSC ;

Brazilian Pepper, *Schinus terebinthifolia*

&

Australian pine, *Casuarina equisetifolia*

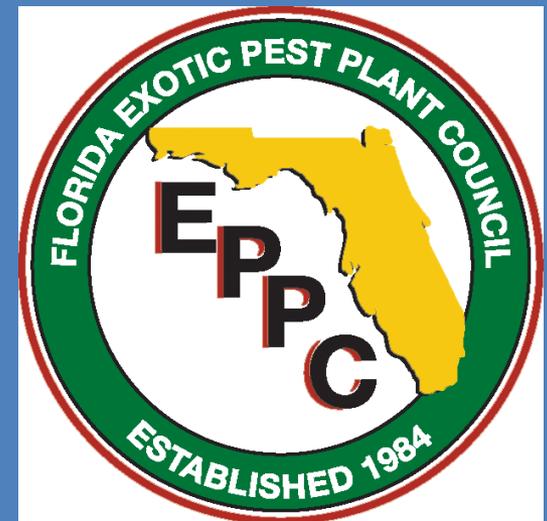
**BOTH ARE LISTED ON FLORIDA'S EXOTIC PEST
PLANT COUNCIL'S CATEGORY 1 LIST OF INVASIVE PANTS**

<http://www.fleppc.org/list/2015fleppclist-largeformat-final.pdf>

HOW:

ACTIONS will be requested and or grants applied for to allow assistance by those already having permit for removal as well as if needed concurrent application of herbicide (Garlon) to limit their regrowth

ISSUE: Clearance for on Federal property activities (here at SEFSC) will need some outlining investment of time for acceptable agreement / access to fed property, requires a workplan and maintenance plan.



TARGET SP PLANTS WERE GPS MAPPED WITH HELP OF CAT KULPA (summer or 2017)

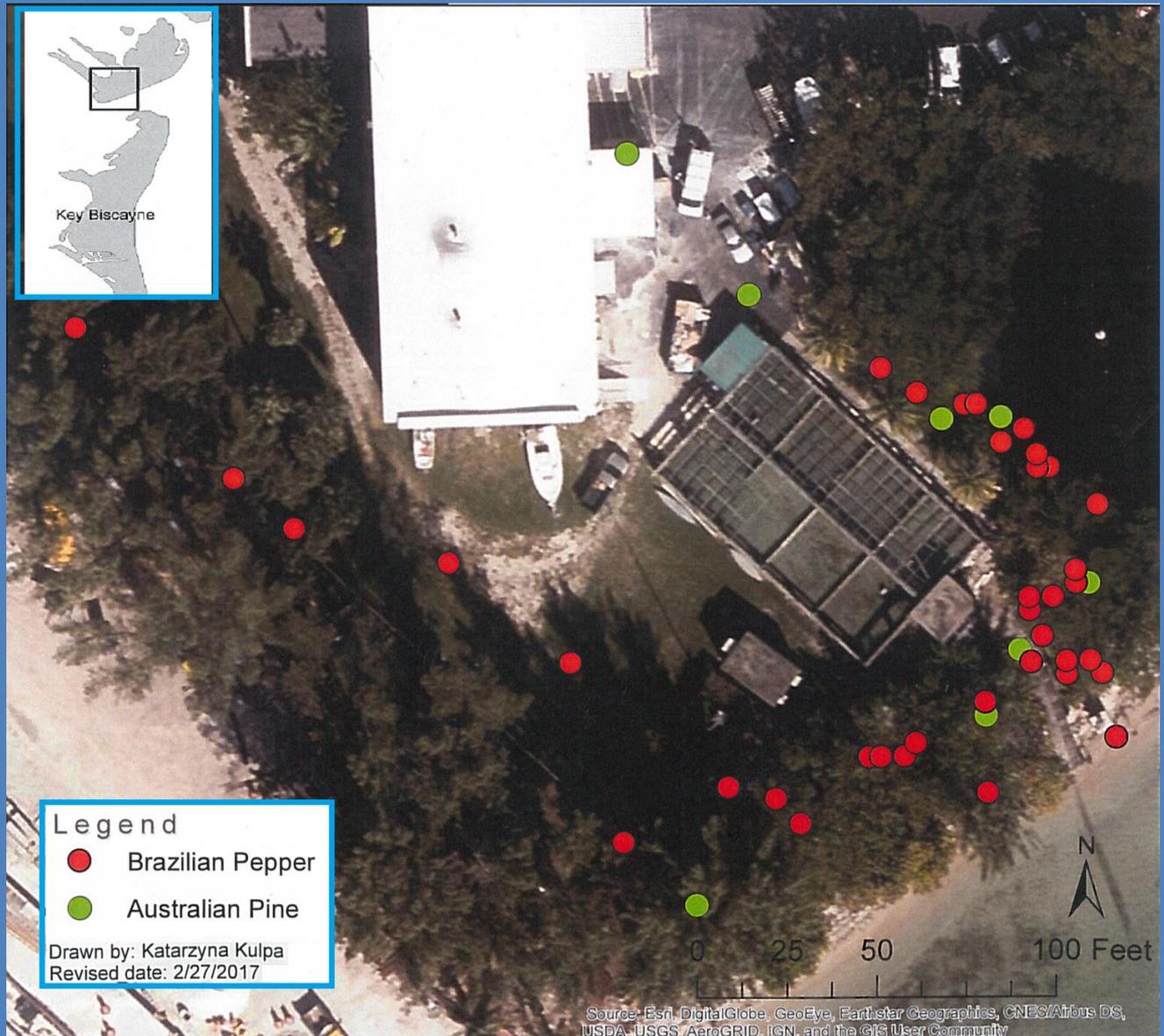


On the overhead SEFSC image you can see the number of areas compromised. Such have increased in number and density with the limitation of volunteer staff removals (as of 2007).

TARGET PLANTS WERE GPS MAPPED WITH HELP OF CAT KULPA (07/2017)

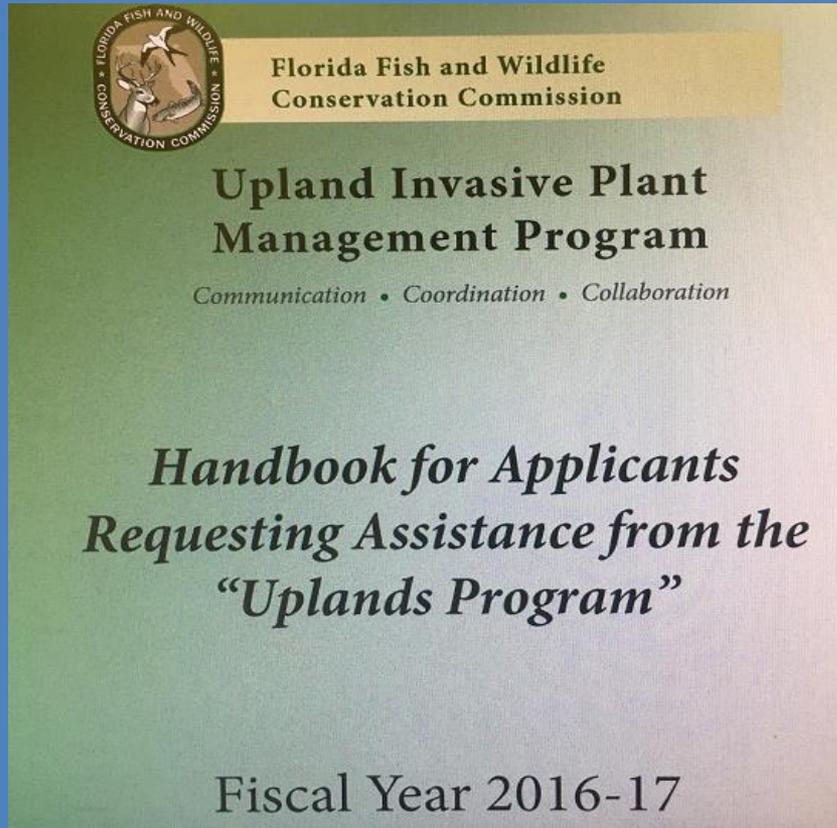
EXAMPLE This is a
GPS subsample of
ONLY the NE
corner of the
property having;
35 =BP identified
8 = AP identified

The property
total count;
225 BP
58 AP



FFWCC HAS A PROGRAM IN PLACE WHERE YOU CAN APPLY FOR REMOVAL OF BOTH BRAZILIAN PEPPER AND AUSTRALIAN PINE

“TIERS” GRANT



UPLAND INVASIVE PLANT MANGEMENT WORKING GROUP SOUTHEAST LIAISONS

Joe Maguire: 305.257.0933 x244

J57@co.miamidade.fl.us

Janet Gil: 305.372.6471

gilj@miamidade.gov

ECISMA CONTACT:

Dennis Giardina

Dennis.Giardina@MyFWC.com

Everglades Region Biologist

Florida Fish and Wildlife Conservation
Commission

Division of Habitat and Species
Conservaton

Invasive Plant Management Section
298 Sabal Palm Road

Naples, FL 34114

239-229-5403

SOURCE: Florida Fish and Wildlife Conservation Commission Upland Invasive
Plant Management Program Handbook for Applicants
Requesting Assistance from the “Uplands Program” Fiscal Year 2016-17
<http://myfwc.com/media/3006665/uplands-program-proposals-handbook.pdf>

TO GET THE TIERS GRANT THERE ARE STEPS PRIOR TO APPLICATION

There has to be some site management prior including but not limited to;

- 1) Removal and deposition of most of above ground material
- 1) and marking any to be treated stumps left in place

TO START (1) ABOVE I WALKED THE PROPERTY AND **HAND REMOVED**;

> 137 Brazilian pepper plants of various sizes, and

> 44 Australian pine juveniles removing all complete with root



WE HAD TO HAVE A PLACE TO DEPOSIT FOR REMOVAL,
GUY FORCHION STEPPED UP AND SUPPLIED JUST THAT!



Trust Office

Plant
Material
Dumping
Area



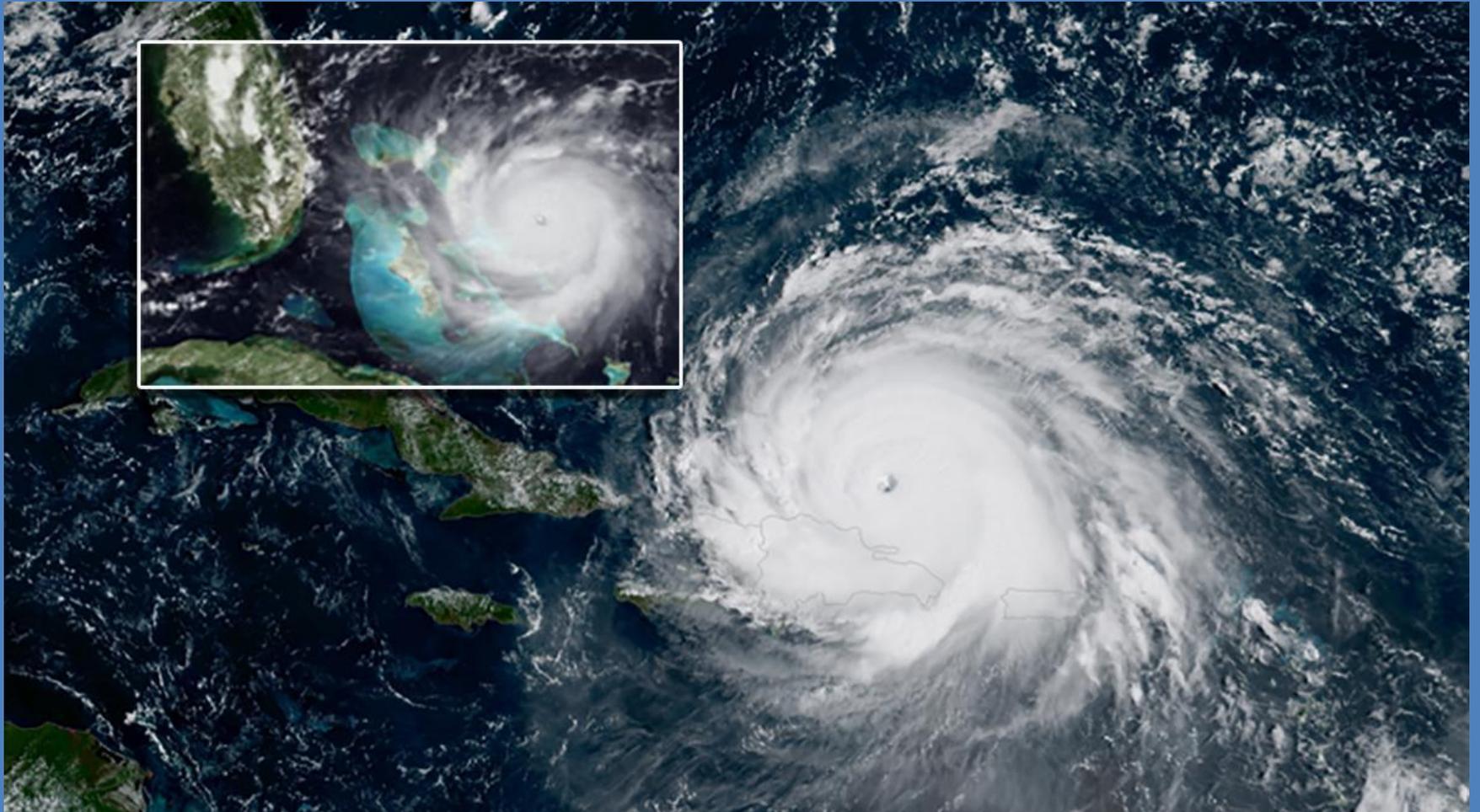
Virginia Key Beach Park Trust

Historic Virginia Key Beach Park

Print #171218487
Date: 12/18/17
Lat/Lon: 25.736455 -80.157200
Order No. 52076
Aerial Photography, Inc. 954-568-0484

THEN IRMA DELAYS THINGS!

Aug 30 to Sep 11 2017



IRMA GONE , OUT OF HURRICANE SEASON, BUT BEFORE THE SEEDING SEASON, MARCH 2018 I STARTED TACKLING THE REMOVAL OF THE BP/AP SO I COULD APPLY TO “TIERS”



Some of the BP were 30 feet tall and had runners that far away from main stumps

By May 12018 , I managed to remove **these area** approx. ½ acre up to 30 foot high , using only a machete , loppers and a small hand saw I only had the yellow portions to complete before applying for **TIERS** assistance funding



JUST HAVING TAKEN THE FIRST OF ½ ACRE LOAD
TO VA KEY BEACH PARK DUMP SITE, WITH
REMAINING LARGE PILES, AND STILL SOME OF
THE LAST BITS LEFT TO CUT..... **GOOD NEWS!**



Image: mother nature network

NMFS management completes plans and gets the OK for a contract for the replacement fence including removal of remaining exotics

Construction in addition will include;

- 1) The removal of the remaining cut BP / AP
- 2) Removal of any leftover cut BP / AP
- 3) AND...



3) Treatment with garlon of remaining BP/ AP stumps by fence contracting company



The fence construction included complete remediation of these two exotics, as well as treatment of their remaining stumps to limit regrowth, this step we were planning this fall on applying to TIERS funding for.

This is being done in cooperation with RSMAS given the hatchery is our neighbor and all wanted to avoid any contamination issues

SO IN THE END HOW MANY WERE REMOVED?



REMOVAL SUCCESS!!

BRAZILIAN PEPPER

225 Brazilian peppers (TOTAL)

AUSTRALIAN PINE

58 Australian pines (TOTAL)

OF THESE REMOVED BY TOM BY HAND:

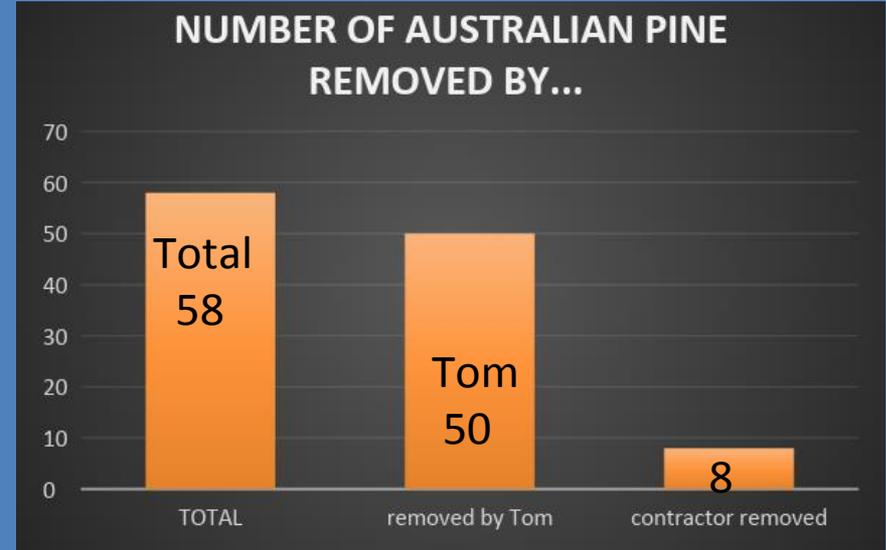
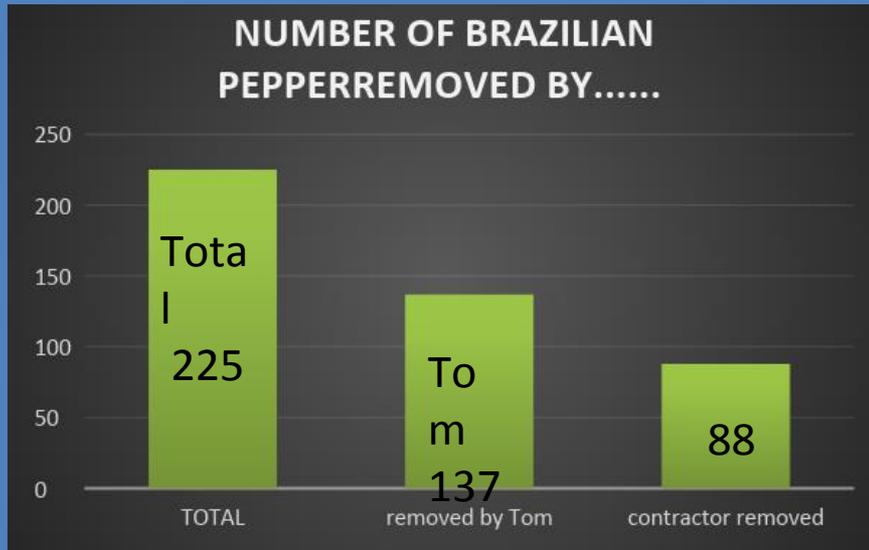
182 Brazilian pepper

50 Australian pine

REMOVED BY CENTER CONSTRUCTION CONTRACT:

43 Brazilian pepper

8 Australian pine



END

A scenic sunset over a body of water. The sky is filled with vibrant orange, yellow, and pink clouds, transitioning to a deep blue at the top. In the foreground, several palm trees are silhouetted against the bright sunset. To the right, a long bridge with a railing extends into the water. The water reflects the colors of the sunset. In the distance, a city skyline is visible on the horizon.

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