

# Starting McIntosh from Scratch

CREATIVE FUNDING THROUGH MULTI-  
DEPARTMENT PROGRAM BUILDING



Bryan Boone

# McIntosh by the numbers

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	McIntosh	Glynn	Chatham	Liberty	Bryan	Camden
Land Area	424	419	426	489	435	613
Population	14,340	85,219	289,195	61,497	38,109	53,677
Pop. Under 18yr	16.2%	21.7%	21.2%	28.0%	29.3%	24.4%
Pop. Over 65yr	26.7%	20.2%	15.4%	9.3%	10.6%	13.6%
Payroll (\$1,000)	33,073	1,125,841	5,954,853	482,829	179,082	250,360
Poverty Rate	21.5%	16.6%	14.4%	16.1%	8.6%	15.8%
Building Permits	199	568	2,067	~	518	310



# Program Building

(So I heard you want a mosquito program...)

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- Buy-in is everything (Bosses, Politicians, Health Dept., Citizens)
  - Assess stakeholders tolerance for change
- Learn the law. (SDS, EPA, TLA, etc.)
- Get to know the area. (Helps to be a local)
  - Take mapping seriously (Visuals help)
- Find Money (Beg, Borrow and Steal)
  - It's a lot easier to ask for money when you've made some
  - Small grants still carry weight
  - Free stuff is just as good as money (used, donated, stolen, etc)

# Timeline and First Steps 2019

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- First look at the county's mosquito "procedures"
  - Zero surveillance
  - Adulticide only
  - Sublethal Dose (2oz/min+)
  - 3 hour spray sessions morning and night
  - Routes based on complaints only
  - Chemical Only budget controlled by Road Department

\*Initial meetings with Misty McKanna and Geoffrey Duesterbeck.



# Timeline 2020 – 2021

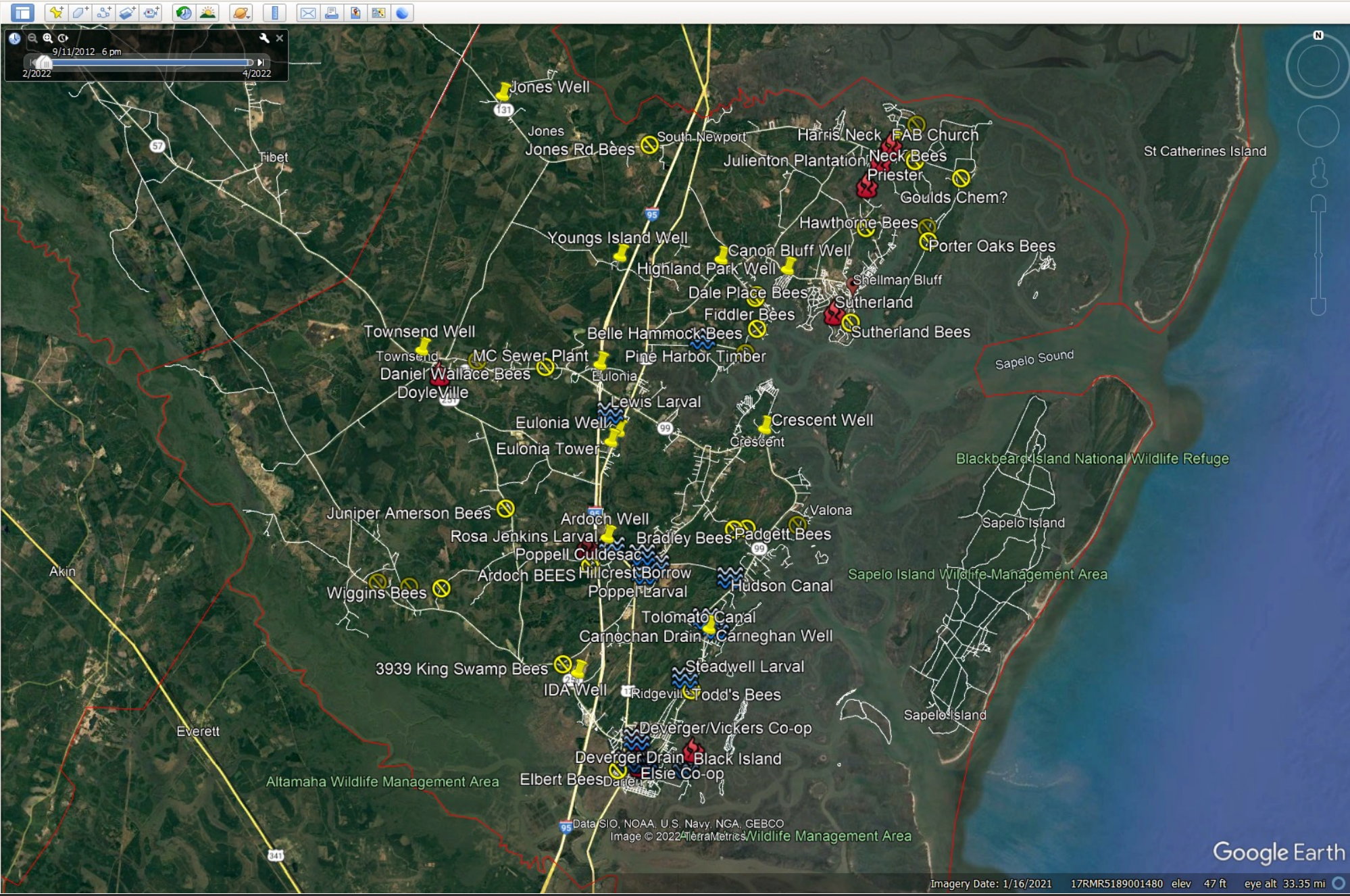
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- Implemented Complaint Database and started mapping hotspots
- Larval Surveillance and landing counts!
- Began Larviciding in city and larger neighborhoods
- Machines calibrated for dose and droplet size.
- Reduction in aduaticiding on complaint-only basis. Increase in surveillance-based
- 350 CFM machine added for larger rural neighborhoods
- Budget increased to around \$30,000 but still from Road Department
  - \*COVID stole Misty and Martin County stole Geoffrey so I was left on my own...

Search

Places

- My Places
  - Test Backup.kmz
    - My Places
      - Water Sites
      - Code Enforcement
      - Plugins
      - Missions
      - Larva Sites
      - Do NOT Spray
      - Hotspots
      - County Surveys
      - Misc
      - LH
      - MGRS GridLines by Nearby.org.uk
    - [Notes on these features](#)
  - GPS device
    - Created Thu Sep 22 14:39:51 2022
  - Mcl\_Roads.shp
  - Temporary Places



Layers



# Timeline 2021-2022

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- **First full-time Parks/Mosquito Director position created**
  - To staff department the Parks department was absorbed.
  - Mosquito Budget increased to \$60,000 and separated from Roads
  - Donation of portable building and lab/office construction budget
  - Construction of lab and office space (~\$6,500)
  - Applied and awarded 2023 SPLOST funding
  - Introduced to Ture
  - Five minutes later Ture told me to do the NACCHO grant





ROAD  
CLOSED

SPEED  
LIMIT  
15

STOP

NO  
THRU  
TRAFFIC























# Timeline 2022-2023

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- Awarded NACCHO Grant
- Asked to take over as Code Enforcement Director (+staff turnover)
- With Grant funds Purchased the following:
  - Gravid & CDC Light Traps
  - Lab Computer & Field Tablet
- Grant site visits to Chatham and reverse site visits
- Disease case triggered an emergency budget of sorts
  - Able to purchase additional 350cfm machine w/ Variable Spray & GPS Mapping









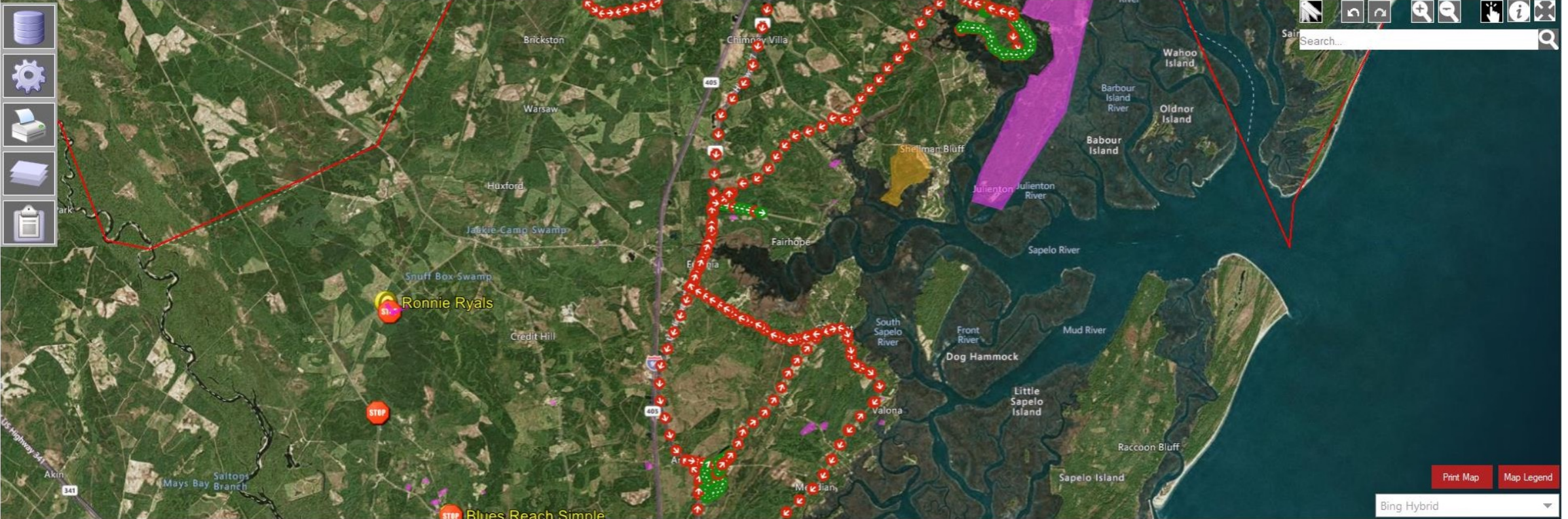


# GIS Mapping (Frontier Precision)

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- ArcGIS/ESRI Compatible
- Streamlined for low man hours
- Surveillance and lab functions
- Field Tablets for Larviciding and Surveillance
- Interactive warning system for no spray zones





Zone  
 Technicians

From  To 
Today This Week This Month

Select All Select None Refresh Session List Show Events Export

Start	Stop	Zone	Technician	Truck ID	Chemical
<input type="checkbox"/> 10/13/2022 7:47 PM	10/17/2022 1:12 PM	McIntosh	Jaden Hatcher	Peanut	PermaSease
<input type="checkbox"/> 10/25/2022 6:55 PM	10/25/2022 11:14 PM		Jaden Hatcher	Peanut	PermaSease
<input checked="" type="checkbox"/> 10/26/2022 7:06 PM	10/26/2022 10:46 PM		Jaden Hatcher	Peanut	PermaSease
<input checked="" type="checkbox"/> 10/31/2022 12:55 PM	10/31/2022 1:15 PM		Bryan	Peanut	PermaSease
<input checked="" type="checkbox"/> 11/1/2022 6:33 PM	11/1/2022 11:06 PM		Jaden Hatcher	Peanut	PermaSease
<input type="checkbox"/> 11/2/2022 4:07 PM	11/2/2022 4:15 PM		Jaden Hatcher	Peanut	PermaSease
<input type="checkbox"/> 11/2/2022 6:50 PM	11/2/2022 10:57 PM		Jaden Hatcher	Peanut	PermaSease

# Grant Work

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- During Site Visits McIntosh Staff (*read me*) participated in:
  - Lab Work
  - Surveillance
  - Source Reduction
- Reverse Site Visits
  - NPDES
  - Facilities Tour
  - County Leadership Meet



# Unique Challenges

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- Budget
- Limited workforce and Limited Pay
- Results in high turnover.
- Wearing Many Hats!!!
- Buy in from “stakeholders”
- Code Enforcement duties allow me to target property with mosquito habitat. I.e. tire dumps, abandoned pools, etc.

# Unique Solutions

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## Adoption of Task Management Software

- **Asana** – Project and Task Management
  - Makes monitoring multiple Dept. possible
  - Free version is powerful and feature rich
  - Replaces email, text, note taking, file storage, etc.
  - Integrates with Microsoft, Google, Biz Apps



### Projects Recents

- Create project
- Personel  
1 task due soon
- Joint Maintenance  
1 task due soon
- Barrington Park Improvements '23
- Zoning
- Mosquito Control
- Logging
- Long-Term Improvements
- Open Code Enforcement
- To do  
Private
- Parks Maintenance
- Edmunds

Show more

### My tasks 🔒

Upcoming | Overdue (14) | Completed

+ Create task

- Austin Place Trailer and Burnt Shed Open Co... Nov 20
- Jerry Quinn (Cypress Food Truck) Zoning
- Amanda Peterseim (Eagle Neck Hangar) Zoning
- Fairhope Drainage Zoning
- Steve Nelson near preister Logging
- Farm To do

Show more

### Tasks I've assigned

Upcoming | Overdue | Completed

+ Assign task

- Teepees - John Bagley Open Co... SM
- Fishermans Lodge Rd Open Co... SJ
- 9/18 Spray Requests Mosquit... ja
- Steve Mason RV (Trey Connell ISI Coastal Builders) Zoning SJ



# Mosquito Control

Set status

- Overview
- List
- Board
- Timeline
- Calendar
- Workflow
- Dashboard
- Messages
- Files

BB JG

Share

Customize

+ Add task Filter Sort Hide

Task name	Assignee	Due date	
10/6 Spray Butler Island Event Area			
9/18 Spray Requests	ja jadenhatcher...		
Friday or Saturday Spray mission	ja jadenhatcher...	Sep 16	
Darien larva sighting and drain treatment	ja jadenhatcher...		
Old Spray Machine to C&U's Engine Repair	ja jadenhatcher...	Aug 28	
8/25 Requests	ja jadenhatcher...		
Requests for 8/21-26	ja jadenhatcher...	Aug 26	
Upload Data from Tablet	ja jadenhatcher...		
Inventory and Order Chemical 1	BB Bryan Boone	Aug 24	
Requests for Aug 2-10 1	ja jadenhatcher...	Aug 9	
Check drains in coastal pine and treat if necessary	ja jadenhatcher...		
Larvicide City Drains	ja jadenhatcher...		
Cleaned out peanut	ja jadenhatcher...		
2 full darien spray missions	ja jadenhatcher...		
Checking ditches and treating drains	ja jadenhatcher...		
Mission prepping	ja jadenhatcher...		
Switch chug from oil to water based 1	ja jadenhatcher...		
Checking ditches for larva 1	ja jadenhatcher...		
Spray Barrington before the weekend	ja jadenhatcher...		
Spray Jones Rd including Lecount	ja jadenhatcher...		



✓ Mark complete



## Inventory and Order Chemical

Assignee BB Bryan Boone × Recently assigned ▾

Due date 📅 Aug 24 ×

Projects ■ Mosquito Control Untitled section ▾

Add to projects

Dependencies 🚧 Blocked by ▾ 🕒 Inventory Water Based · Aug 23

Description

Subtasks

✓ Inventory Water Based Aug 23 BB 💬

+ Add subtask

Comments ▾

BB **Bryan Boone** created this task · Aug 21

BB


Collaborators BB ja 👤 +


🔔 Leave task


8:55 📶 🔋 84


< Home Projects


Recents Starred All ☰


  
Mosquito Control


  
Open Code Enforcement


  
Zoning


  
Personel


  
To do

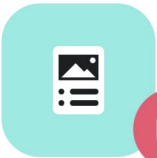
  
Joint Maintenance

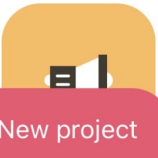
  
Logging

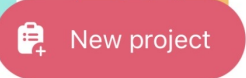
  
Parks Maintenance

  
Barrington Park Improvements...

  
Long-Term

  
Edmunds

  
Public Works








Home My Tasks Inbox Search Account

8:55 📶 🔋 84


# Home

**Projects** Recents ▾

-  Mosquito Control
-  Open Code Enforcement
-  Zoning
-  Personel
-  To do


See all

**My tasks** Due soon ▾



Home My Tasks Inbox Search Account

8:56 📶 🔋 84

<  **Mosquito Control** List ▾ 👤 ☰ ⋮

✔ All tasks
☰ Filters
↕ Sort
📄 Fields

Task name	Assignee	Due date
✔ 10/6 Spray Butler Island Event Area	-	-
✔ 9/18 Spray Requests	<span>ja</span> jadenhatch...	-
✔ Friday or Saturday Spray mission	<span>ja</span> jadenhatch...	Sep 16
✔ Darien larva sighting and drain tre...	<span>ja</span> jadenhatch...	-
✔ Old Spray Machine to C&J's Engin...	<span>ja</span> jadenhatch...	Aug 28
✔ 8/25 Requests	<span>ja</span> jadenhatch...	-
✔ Requests for 8/21-26	<span>ja</span> jadenhatch...	Aug 26
✔ Upload Data from Tablet	<span>ja</span> jadenhatch...	-
⌚ Inventory and Order Chemical	<span>BB</span> Bryan Boone	Aug 24
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✔ Check drains in coastal pine and t...	<span>ja</span> jadenhatch...	-
✔ Larvicide City Drains	<span>ja</span> jadenhatch...	-
✔ Cleaned out peanut	<span>ja</span> jadenhatch...	-
✔ 2 full darien spray missions	<span>ja</span> jadenhatch...	-
✔ Checking ditches and treating dra...	<span>ja</span> jadenhatch...	-
✔ Mission prepping	<span>ja</span> jadenhatch...	-
✔ Switch chug from oil to water based	<span>ja</span> jadenhatch...	-
✔ Checking ditches for larva	<span>ja</span> jadenhatch...	-

+ New task

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Nelson Cunnington · Follow

A Big Fan of Science · 2y



A mosquito typically weighs 5 milligrams. If you converted one into pure energy, therefore, you'd get

$$E = mc^2$$

$$E = 0.005 \times (3 \times 10^8)^2$$

$$E = 450 \times 10^{12} \text{ j}$$

or about 100 kilotons of TNT, or the equivalent of one of these:



A W-76 nuclear warhead. A bit of a drastic solution to your mosquito problem.

If, say, you just fused all the hydrogen in a mosquito's body into helium, though:

Mass of a mosquito is 5mg. Proportion of water in a mossier's body is 60%, one ninth of that mass is hydrogen, making a mass of 0.333 mg of hydrogen.

Fusion of hydrogen into helium produces the equivalent of 626 tons of TNT per kilo,... (more)



Upvote · 20



1



4



In reality that is all energy mosquitoes can release:

- $3.1 \times 10^{-13}$  kilowatt hours
- $2.6 \times 10^{-16}$  tons of TNT
- $7 \times 10^{-15}$  gallons of jet fuel
- $2.7 \times 10^{-10}$  kcal

The explanation is that the atoms that made the mosquitoes are very stable. We can only release energy when it is made by isotopes or other nuclear unstable atoms. Life unfortunately are made by stable atoms.

But to make your happy, you can actually throw it into a neutron star:

Mosquito will weight 595238 tones when it collides with the star. The atoms that made the mosquito will certainly be converted into a paste of particles with some of it coming out as a neutrino.

Another option is to put the mosquito at Cern particle accelerator and make the atoms break into small particles and beyond. You will spend more energy than make it.

