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Salish Sea Ecosystem Conference

2018 Salish Sea Ecosystem Conference
(Seattle, Wash.)

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Samish Indian Nation Department of Natural Resources' efforts to remove marine debris and creosote using GIS in the San Juan Archipelago, Washington State

Casey Palmer-McGee

Samish Indian Nation, United States, cpalmer-mcgee@samishtribe.nsn.us

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Palmer-McGee, Casey, "Samish Indian Nation Department of Natural Resources' efforts to remove marine debris and creosote using GIS in the San Juan Archipelago, Washington State" (2018). *Salish Sea Ecosystem Conference*. 483.

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Marine Debris Clean Up In Samish Traditional Territory

Samish Indian Nation Department of Natural Resources' efforts to
remove marine debris and creosote using GIS in the San Juan
Archipelago, Washington State

Casey Palmer-McGee, GIS Analyst
Samish Indian Nation

Lengtíxw tse Schténgexqen Á7leng
House of Watching Over All the Territory

Samish Traditional Territory

- Depicted here is Samish Traditional Territory.
- Samish Department of Natural Resources focuses on preserving, protecting, and enhancing culturally significant natural resources and habitats for current and future generations within this area.



Background: Traditional Ecological Knowledge

- Samish people have been stewards of the environment in the San Juan Archipelago for hundreds of generations.
- There is not a single beach in Samish Traditional Territory that has not seen the footprints of the ancestors.
- Removing toxins from Samish Territory insures that Samish People will be able to continue utilizing the bountiful natural resources of the Salish Sea that is such an important part of their cultural identity.



Background: Creosote

- Creosote is a petroleum based product commonly used as a wood preservative.
- Ingredients in creosote are known to cause cancer and is toxic to marine plants and wildlife.
- 1ft of creosote piling = 1 gallon of liquid creosote
- Finds it's way to shorelines
- Removing toxins from the environment is a major component of the Puget Sound Partnership's Action Plan



Background: Marine Debris

- Marine debris is human-created waste that has been released in seas, oceans or saltwater waterways.
- With the increasing use of plastic, human influence has become an issue as many types of plastics do not biodegrade.
- Serious threat to fish, seabirds, marine reptiles, marine mammals, as well as to boats and coastlines.
- More than half of the plastic ever produced in the US was produced in the last 13 years.



Partnerships and Relationships



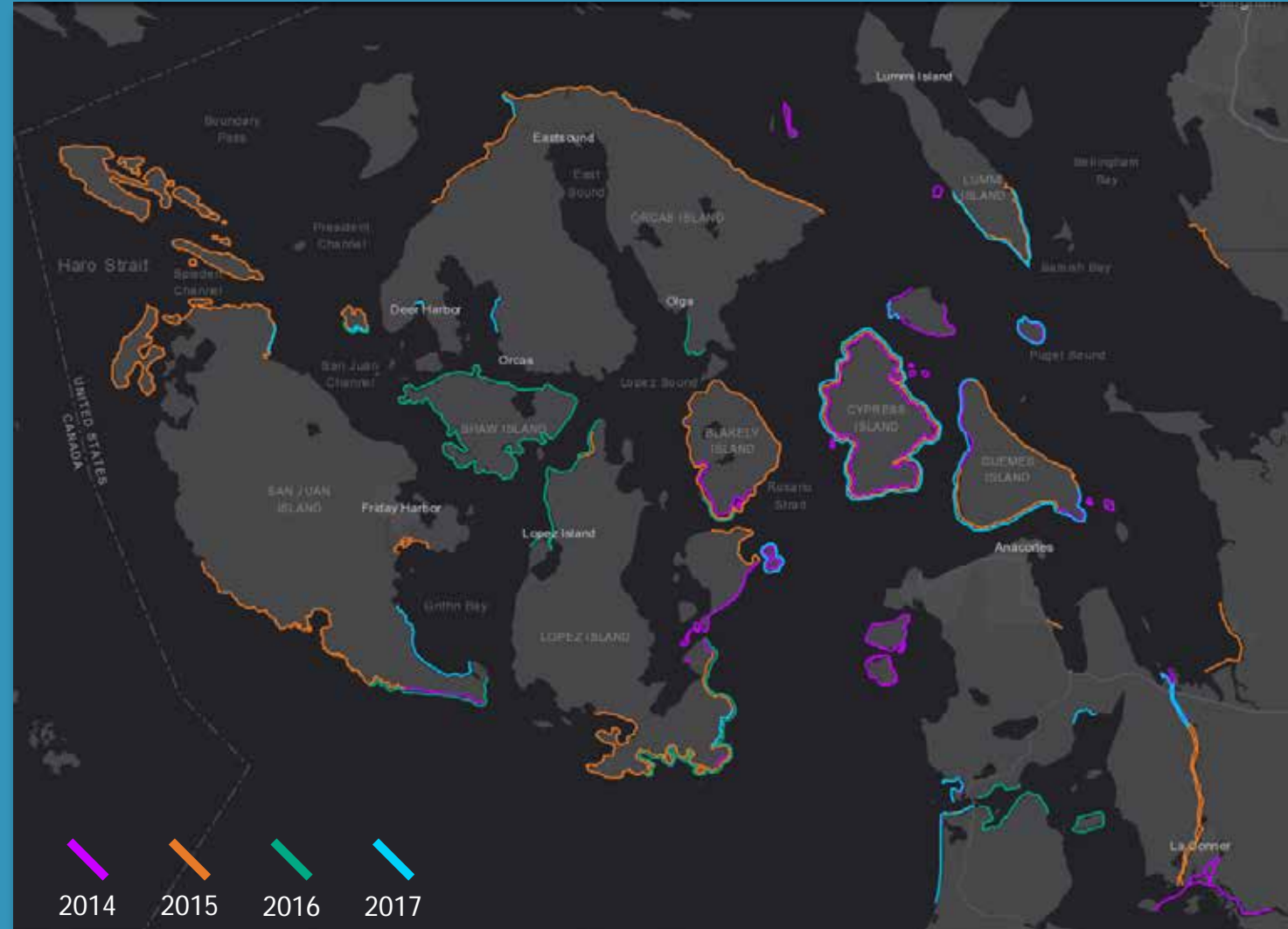
- Washington Dept. of Natural Resources
- Washington Conservation Corps
- Veterans Conservation Corps
- Earth Corps



So where
does GIS
fall into
this?



Where we have Cleaned



Our 2017 Survey



What we found



Creosote Examples

2017-06-07 18:06Z
Lat: 48° 28' 28.8936" N
Lon: 122° 56' 37.2720" W
COMMENTS_0141



2017-05-31 21:18Z
Lat: 48° 29' 28.3704" N
Lon: 122° 56' 34.4280" W
COMMENTS_0115



2017-05-31 17:54Z
Lat: 48° 33' 5.6574" N
Lon: 122° 54' 11.6910" W
COMMENTS_0085

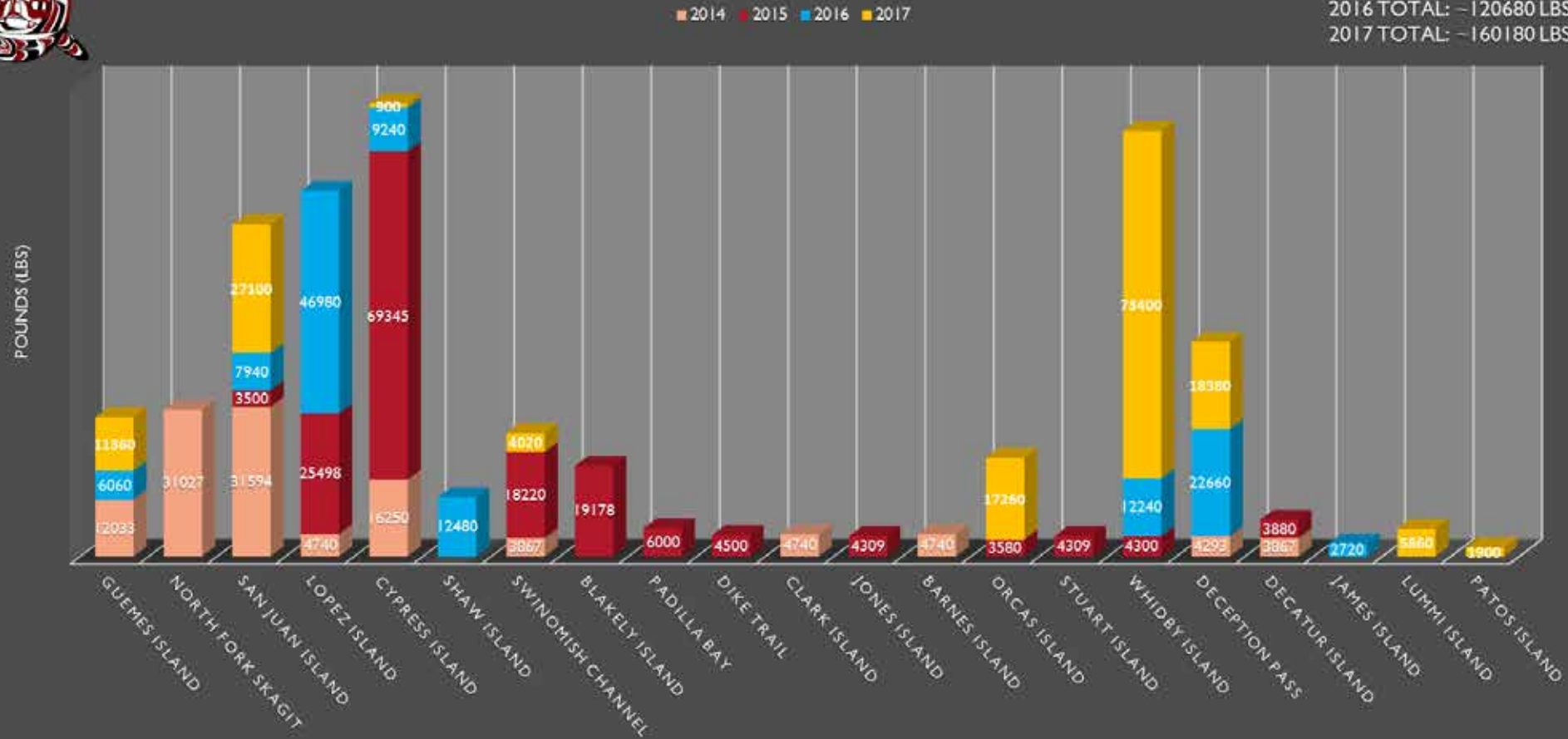


Total amounts removed on Islands per year



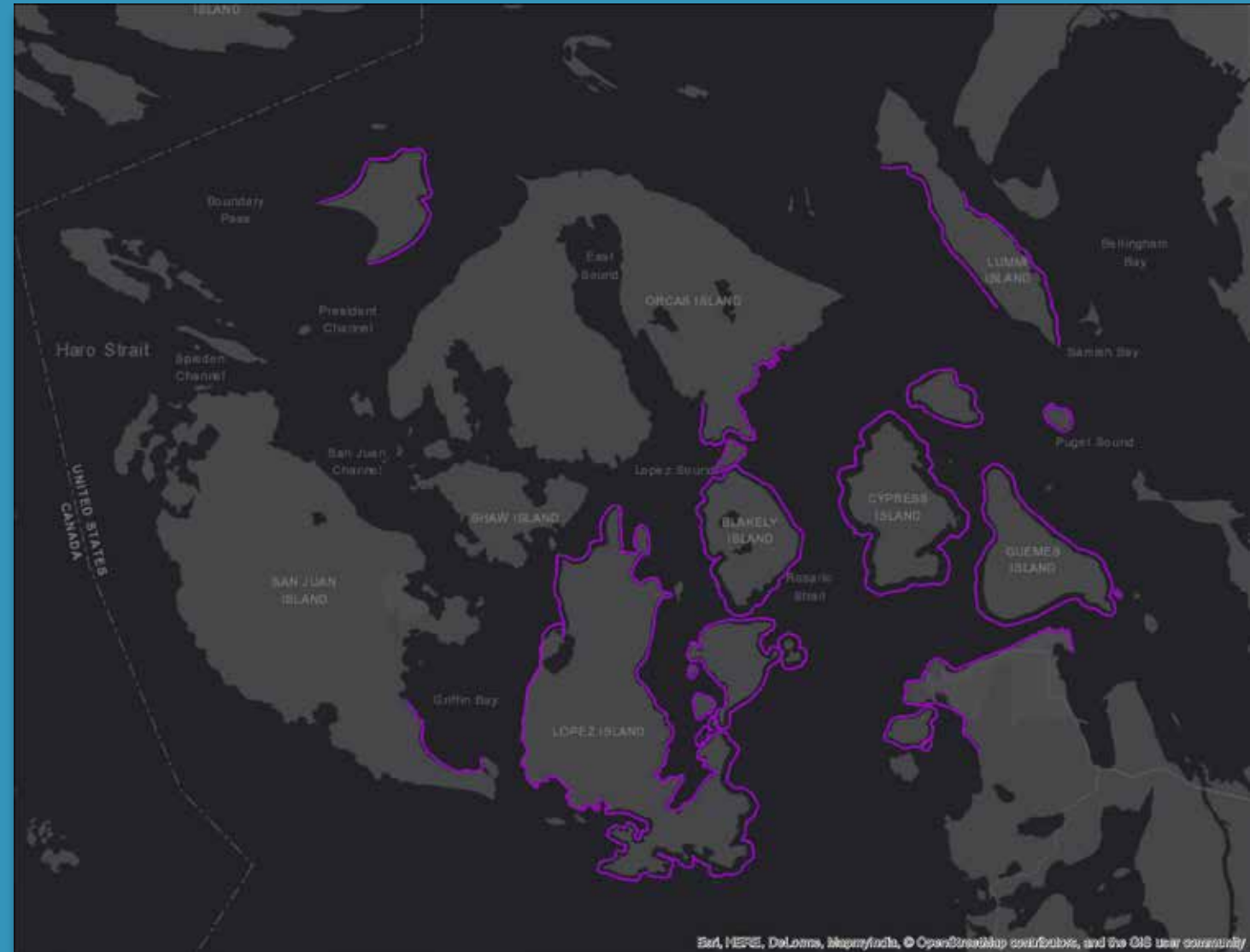
2014 THROUGH 2017 CREOSOTE CLEANUP

2014 TOTAL: ~117150 LBS
 2015 TOTAL: ~182080 LBS
 2016 TOTAL: ~120680 LBS
 2017 TOTAL: ~160180 LBS



Moving Forward: 2018

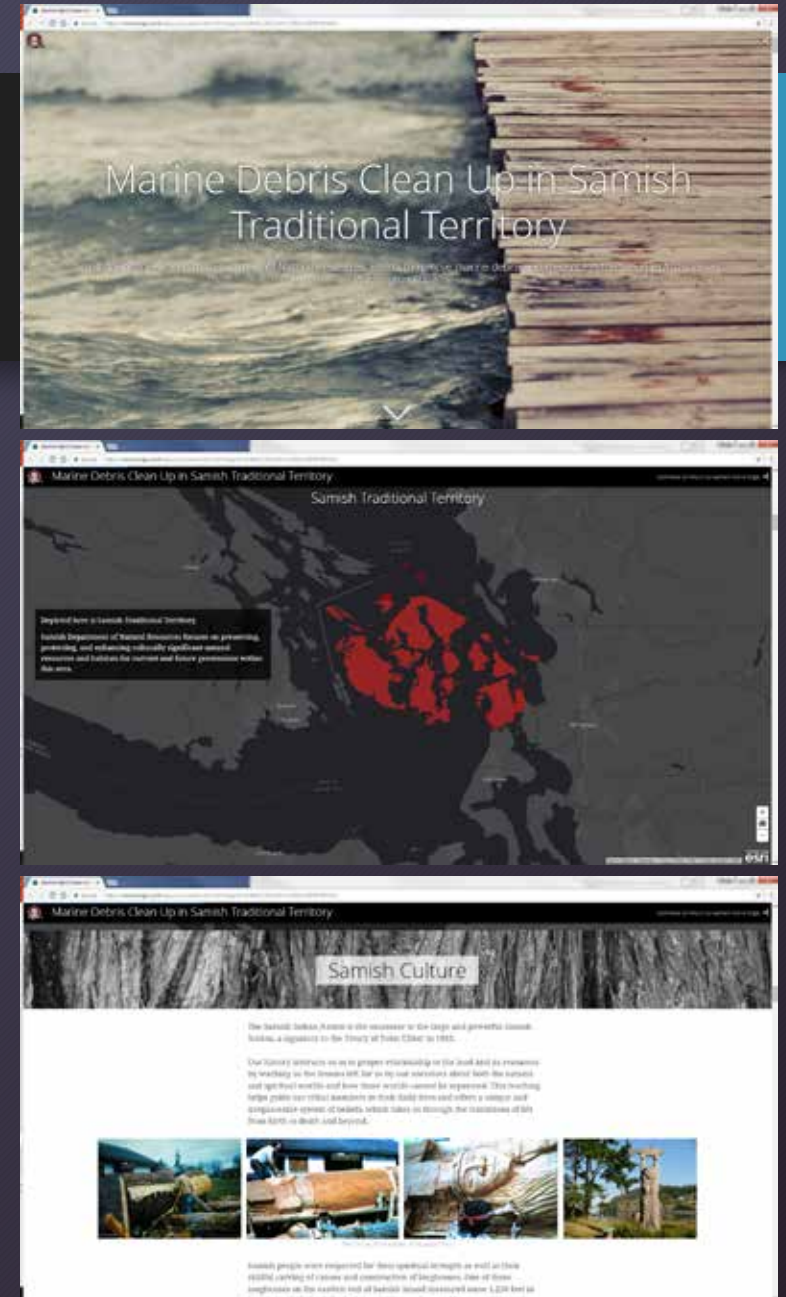
- We have already begun our surveys for the 2018 calendar year.
- There is still a lot of territory to cover.
- We will continue to build strong relationships with project partners and landowners throughout the project area.
- Most importantly, we will continue to remove toxins from Samish Traditional Territory to insure that everyone will be able to continue utilizing the bountiful natural resources of the Salish Sea.



ESRI GIS StoryMap

- An Esri Storymap was created as an outreach tool for the project
- It has been viewed over 2,500 times all over the world.
- It received the Grand Prize in the 2017 National Tribal Story Map Contest
- It received 2nd place in the 2017 International Story Map Contest
- Awarded by ESRI as one of the best Story Maps of 2017. This was a list of 18 out of more than a quarter million Story Maps produced during the year.

The Story Map can be found on our homepage of our website: www.samishtribe.nsn.us



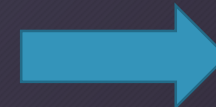
Partnerships



Funding Provided By:



PUGETSOUND
PARTNERSHIP



Questions?



Casey Palmer-McGee, GIS Analyst
Samish Indian Nation
Department of Natural Resources
cpalmer-mcgee@samishtribe.nsn.us