

Toolik Field Station Report 2016

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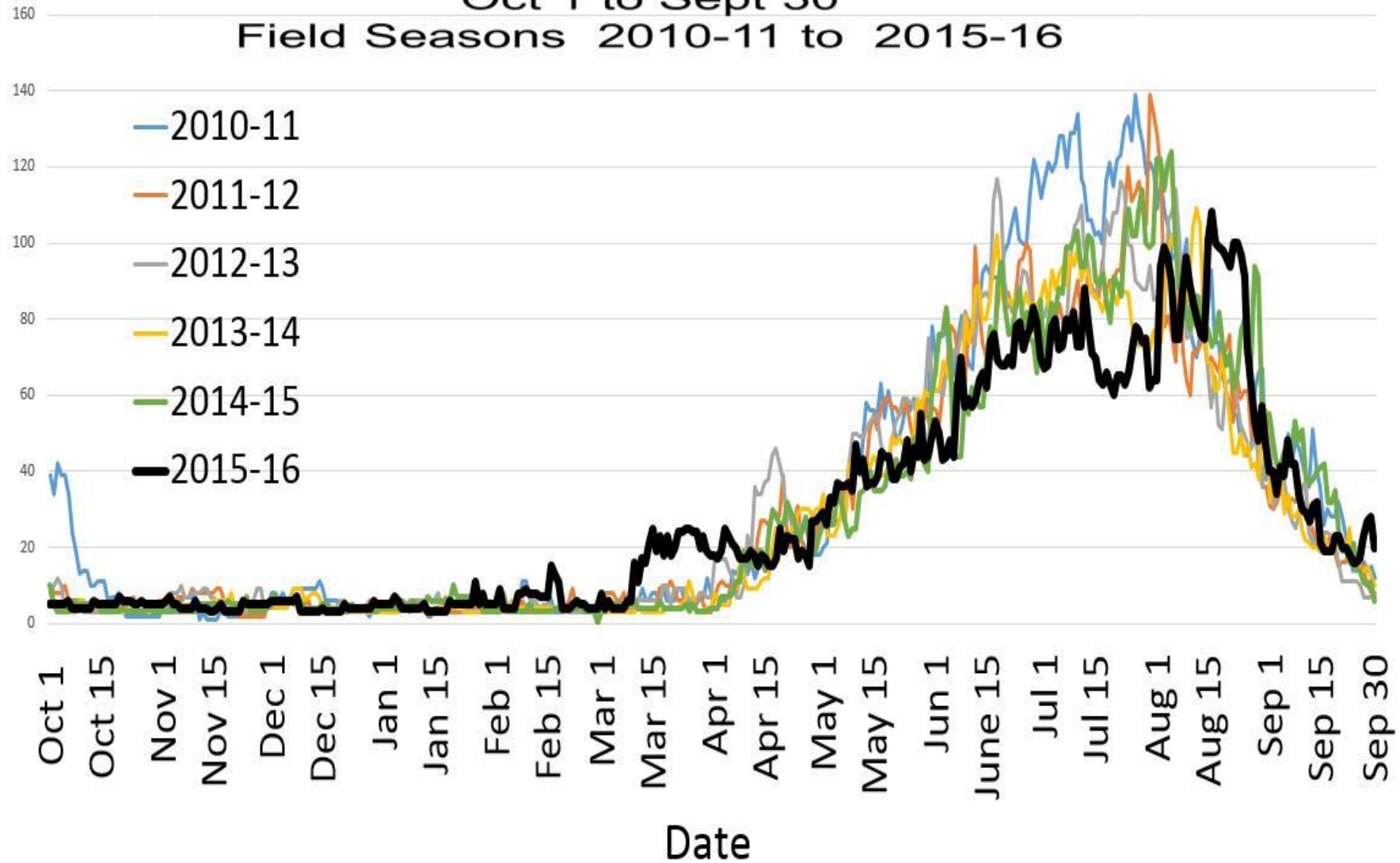


Toolik Field Station Resident Population

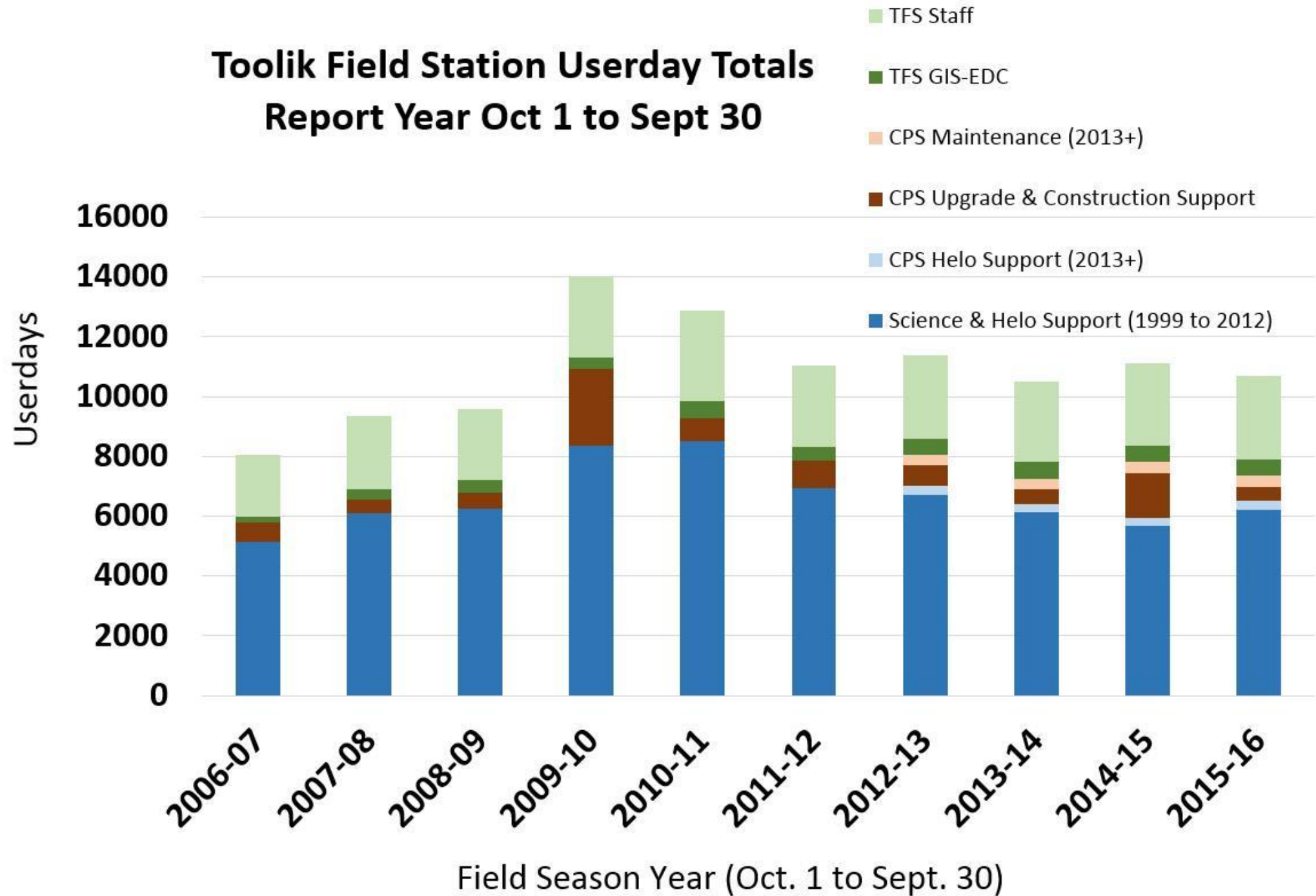
Oct 1 to Sept 30

Field Seasons 2010-11 to 2015-16

Daily Resident Population



Toolik Field Station Userday Totals Report Year Oct 1 to Sept 30

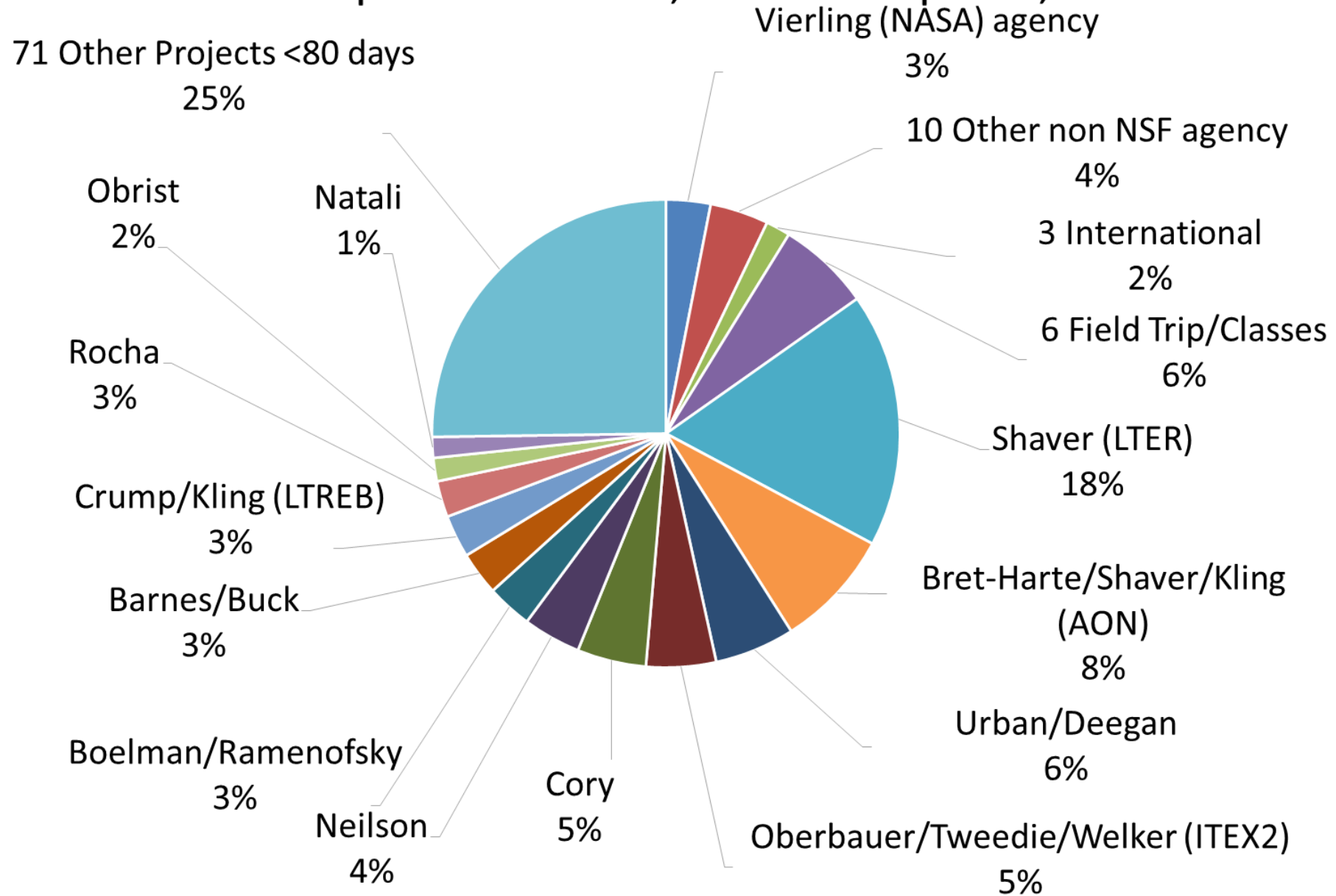


Report Year

Oct 1 to Sept 30

METRICS 2015-16		
	USERDAYS	INDIVIDUALS
TFS/IAB/UAF Staff & Service	2788	31
TFS GIS	555	8
CPS Maintenance	369	2
CPS Upgrade & Support	470	13
CPS Helicopter	305	9
CPS Garage Contractors	7	3
Science	6196	372
	10690	438

PROJECTS Report Year Oct 1, 2014 to Sept. 30, 2015



PROJECTS WITH 2015 END DATES

Bret-Harte 1048361 Bret-Harte 1107892	Wallenstein 1545238
Boelman 0908444 (Team Bird)	Koltz 003 Dissertation Research
Bowden 1065682	Welker 1332268
Harms 1108200	Cherry 1332274
Hinkel 1107607	Godsey 1259930
Neilson 1204220	Oberbauer 0856710 (AON) Oberbauer 1432982
Gough 0908602	Arp 1107481
Frey 1107596	Walter-Shea 1107792
Conde 1140075	Bristow 1243476
Sturm 1023052	Vierling NNX12AK83G
Chin 1203861	

PROJECTS WITH 2016 START DATES

Bret-Harte 1503912 (Collaborative Research: Carbon, Water, and Energy Balance of the Arctic Landscape at Flagship Observatories in Alaska and Siberia)

Boelman 1603777 (Collaborative Research: Adding animals to the equation: assessing herbivore impacts on carbon cycling in northern Alaska)

Huryn 15033868 (Collaborative Research: Arctic Oases - How does the delayed release of winter discharge from aufeis affect the ecosystem structure and function of rivers)

Oberbauer 1504381 (Arctic Observing Networks: Collaborative Research: ITEX AON - understanding the relationships between vegetation change, plant phenology, and ecosystem function in a warming Arctic)

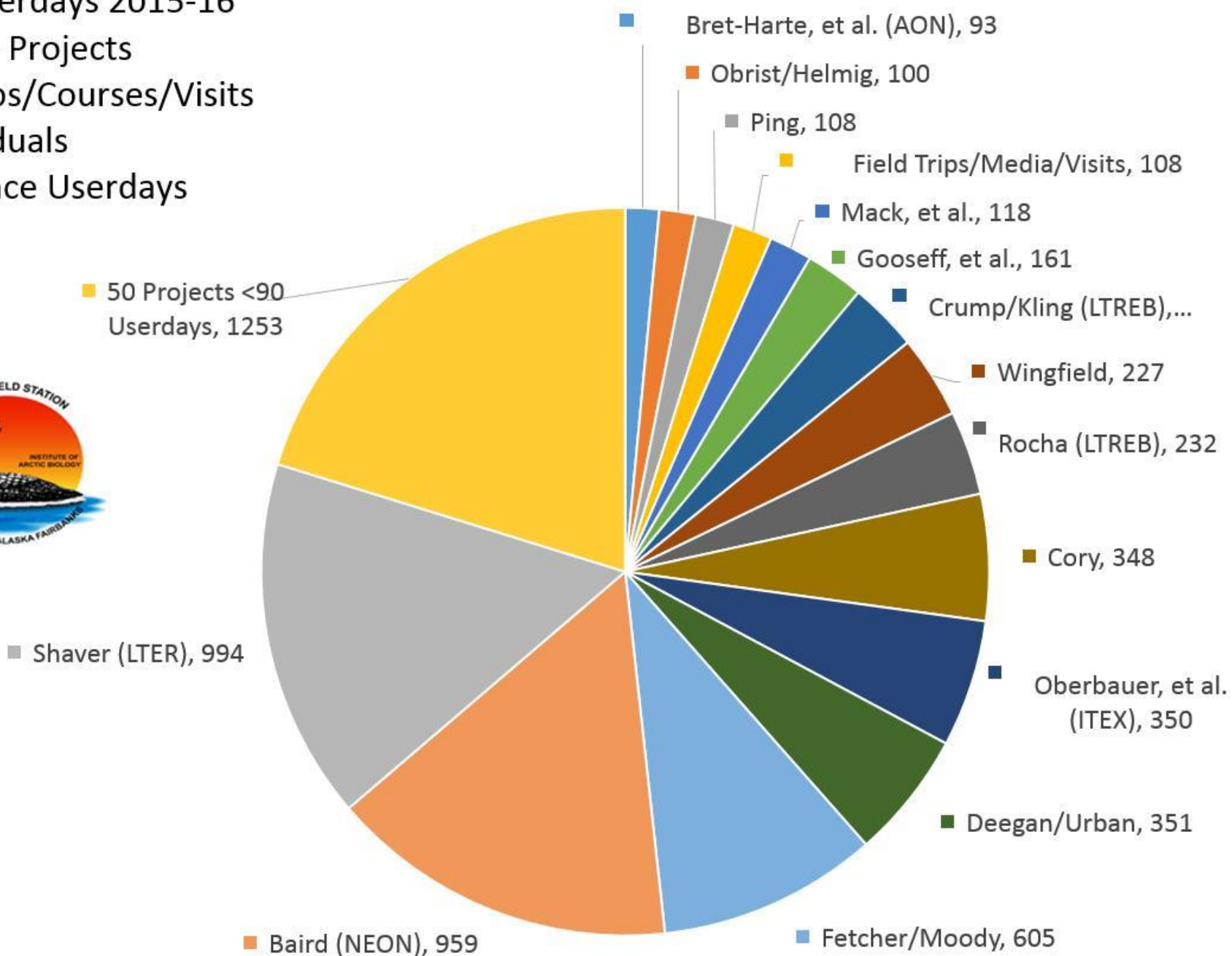
Rocha 1556772 (LTREB: Following the reorganization and resynchronization of biogeochemical cycles after an unprecedented tundra fire)

Alexeev 1204202 (Engaging a New Generation of Arctic Researchers)

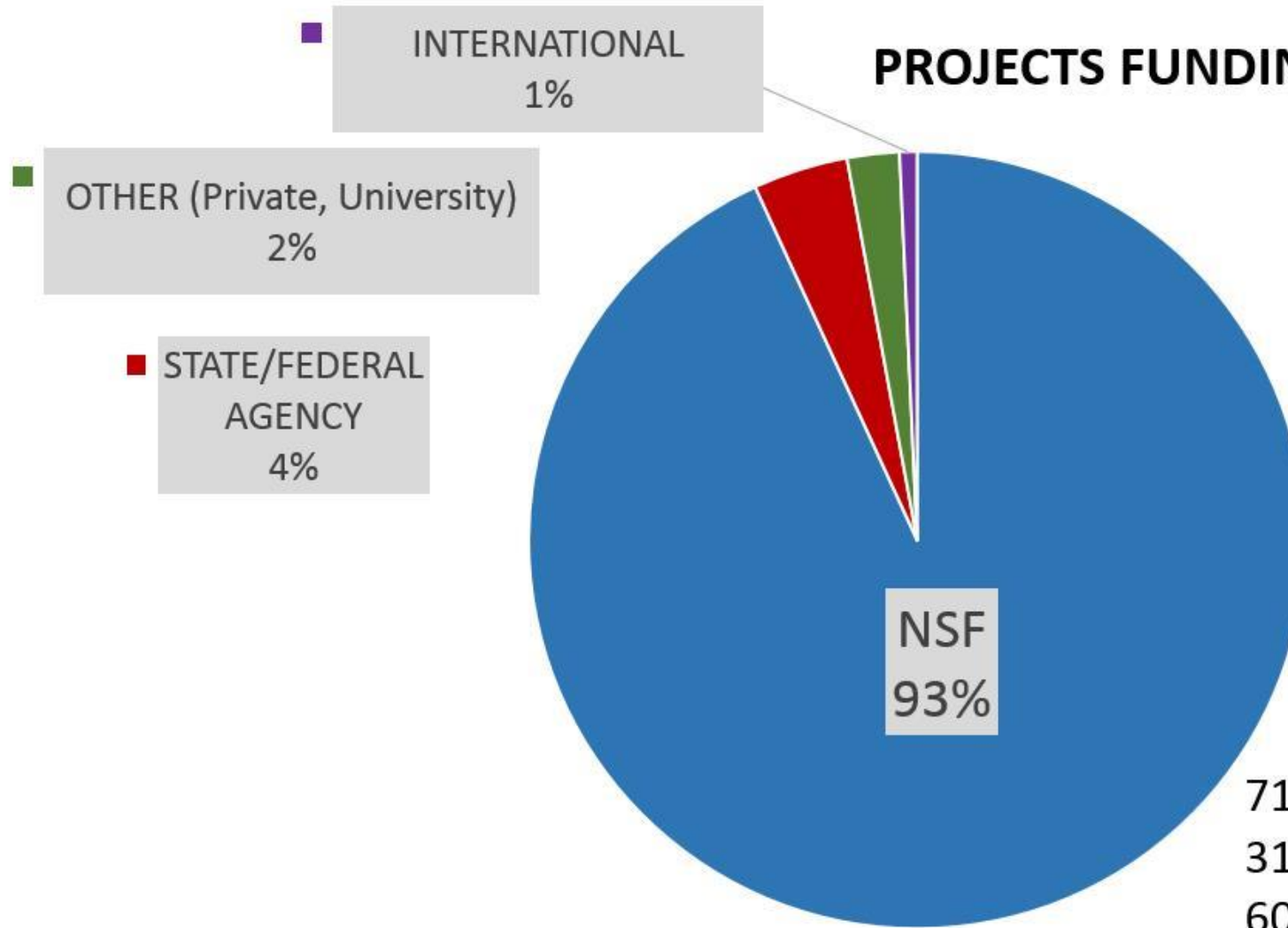
Huang 1503846 (Collaborative Research: Reconciling conflicting Arctic temperature and fire reconstructions using multi-proxy records from lake sediments north of the Brooks Range, Alaska)

NEON (Tower Construction and Domain Science)

Science Userdays 2015-16
 71-Science Projects
 9-Field Trips/Courses/Visits
 372-Individuals
 6196-Science Userdays



PROJECTS FUNDING SOURCE 2015-16



71-Science Projects

312-Individuals

6078-Science Project Days

NOTE: No field trips or media projects presented.

Manager's Perspective

- A successful season with typical challenges, a medical emergency and many short notice reservations
- Launch of Toolik Information System benefitted lab assignment process (and more)
- NEON tower and site construction increased activity starting in March and completing in early October 2016
- NEON science (aquatics) field work began this summer

Projecting Station Use

- TFS will continue to explore ways to increase the accuracy of station use projections. Late development or notice of plans creates challenges in maintaining the most efficient operational and staffing plans for the station.
- Re-think TFS reservation deadline policy, encourage and give tools for projects to make reservations earlier (even if tentative), and continue to maintain regular communication with NSF/CPS on current funding scenarios.

Incident Response

- A science user of TFS suffered a broken leg from a fall. TFS staff response was well coordinated and all aspects went well. It illustrates need to review protocols for other serious situations
- Staff will expand drills and scenarios for incident response, and explore the possibility of a year round medic/safety/HazMat coordinator to provide continuity, development, and review of protocols

Shipping

- Southbound and outbound freight: Regulatory requirements and standards for shipping regular, HazMat and international shipments have become stricter, and scheduling for time sensitive shipments is increasingly important
- Expect expanded and more formalized procedures for southbound shipping in 2017
- Existing TFS staff position expanded to be point of contact for freight shipping, backhaul coordination, TFS representative of Team Logistics

Toolik Utilities

- Electricity: Produced 519 Mwh, down 2% from 2015
- Fuel: Burned 63,053 gallons, down 2% from 2015
- Water: Produced 191,699 gallons of treated water. 17.9 gallons/userday, up from 15.3 gallons/userday in 2012 (minimum adequate range for human consumption established by the United Nations: 13-26 gallons/day)
- Garage: Added roughly 3,000 ft² of garage space, yet both electricity and heating fuel were down 2% from 2015. There are a lot of factors at play, but garage efficiencies and facility consolidation are important contributors.

Account Details

first name

P. I.

last name

Researcher

email

piresearcher@alaska.edu

institution/agency

UAF

gender

Female

dietary concerns

(check all that apply)

- ☐ vegetarian (eats fish)
- ☒ vegetarian (does not eat fish)
- ☐ celiac disease
- ☒ gluten intolerance
- ☐ allergic to milk
- ☐ allergic to nuts
- ☐ allergic to shellfish
- ☐ allergic to seafood
- ☐ other (describe in comments)

additional dietary needs/concerns

additional contact info

Dashboard

Upcoming Reservations

4 booked

Name	Dates	Project
Researcher, P. I.	4/14/2017 4/16/2017	Mosquito Effects
Smith, Joe	4/14/2017 4/16/2017	Mosquitos vs Darkness
Jones, Jenny	5/13/2017 5/20/2017	Mosquito Effects
Smith, Joe	5/10/2017 5/18/2017	Mosquitos vs Darkness
Placeholder	7/14/2017 7/16/2017	Mosquito Effects
Placeholder	7/14/2017 7/16/2017	Mosquitos vs Darkness
Placeholder	8/13/2017 8/20/2017	Mosquitos vs Darkness

Current Projects

2 current

Title	Dates
Effects of mosquitoes on Arctic researchers and indicators of insanity in high latitudes	1/9/2014 12/31/2017
Comparison of summer mosquitoes and winter darkness on the mental stability of Arctic researchers	6/30/2015 5/1/2020

Training

1 / 1 completed

Name	Link	Completed
Sexual misconduct and Title IX	take the training	YES

TFS Science Support & Maintenance report



TFS Maintenance Highlights

- **Ongoing work in Lab 6 & 7**
Replaced boilers for better seasonal efficiency and easier maintenance
Fume hoods and exhaust fans functional after some troubleshooting
Control work remains to “tie it all together”
- **Health Club and Science Workshop heaters swapped.**
Oil fired Toyo better suited for year-round Health Club and easier to fuel
Propane fired Rinnai better suited to seasonal use in the Workshop
- **New vacuum truck waste haul contractor.**
Slower to fill trucks, but overall cost reduced from roughly \$0.95
To \$0.65 per gallon, although station water usage continues to rise
- **New wireless access points installed in ATCOs 5 & 6 and an outdoor unit on the generator module for better signal in weatherports and dorms**

TFS Science Support Highlights

- **Winter support for overwintering and autonomous projects remains abundant and continues to grow – both for in camp and assistance out in the field**
Support for Obrist/Helmig, MacIntyre, Conde, Hampton, Deegan, AON, Stanford, Georgia Tech, NEON, and more. 105 different requests for 20 different funded projects (a slight increase over the 84/18 last year).
- **Usual suite of summer season science support projects – including fabrication, field support, technical support, and equipment repair. 231 summer requests for 53 different funded projects (also a slight increase over 216/51 last year)**
- **Increasing demand for modern snowmachines and good ice augers. Two new augers purchased this spring, one snowmachine arriving this winter.**

TFS Science Support & Maintenance

Questions?

