



National Park Service Alaska Region Fire Ecology Annual Report Calendar Year 2018

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A. Summary

Overview

The National Park Service (NPS) Alaska region fire ecology program provides science-based information to guide fire and land management planning, decisions and practices in order to maintain and understand fire-adapted ecosystems in Alaska.

During the 2018 field season, the Alaska NPS fire ecology program conducted monitoring in Yukon-Charley Rivers NPr (Figure 1), continued to collect seasonal fuel moisture samples, and assisted with fire research projects. The regional fire ecologists were involved with preparing monitoring protocols, research reports, instructing classes, and participating on several agency and interagency committees. This annual report provides a brief summary about the NPS Alaska 2018 fire season, fire ecology monitoring results, fire research projects, and fire ecology program activities and outreach.



Figure 1. Lichens 14 years after a fire (NPS photo 2018).

2018 Fire Season

The 2018 fire season was slow in Alaska, rain moderated fire activity throughout much of the summer. Sporadic dry spells allowed fires to gain some growth in June and late July. By the end of the season, a total of 360 fires were reported with 411,591 acres burned in Alaska, falling below the ten year average of approximately 1.26 million acres and the median annual area burned 576,353 acres.



Figure 2. View from the Yukon River of the smoke column building on the Andrew Creek Fire July 25, 2018. (NPS Photo, R. Nilsson).

Despite the relatively quiet fire season in Alaska for 2018, the National Park Service in Alaska had a moderate fire season. Overall, 24 wildfires spanned across seven park units for a total of 36,342 acres that burned within and adjacent to park boundaries with 21,305 acres burned on NPS owned lands (Table 1). Cape Krusenstern National Monument had six lightning caused fires in early June. This was unprecedented for the area, which has only had four fires since 1955. The largest fire within the park boundaries was Andrew Creek in Yukon-Charley Rivers National Preserve, which burned 7,869 acres (Figure 2). Western Area fire management staff accomplished fuels reduction at 14 sites and burned the Admin pile in Denali during 2018 and Eastern Area fire management staff accomplished fuels reduction projects at 12 sites in 2018 (Table 1).

Table 1. Wildfires, fuels treatments and prescribed fires in Alaska park units from 2018.

Park Unit	Number of Wildfires ¹	Total Acres Burned ¹	Number of Wildfires started on NPS Lands ²	Acres Burned NPS Lands ²	Number of Fuels Treatment Sites	Acres of Prescribed Fires
Bering Land Bridge	1	2.9	1	2.9		
Cape Krusenstern	6	287	6	287		
Denali	4	18,284	3	3,250.9	9	3.09
Gates of the Arctic	1	736.3	1	736.3	-	-
Kobuk Valley	0				2	
Noatak	1	517.6	1	517.6	3	
Wrangell-St. Elias	3	0.3	2	0.2	6	-
Yukon-Charley Rivers	8	16,514	7	16,510	6	-
Total for Region	24	36,342	21	21,305	20	3.09

¹ Includes total number of fires and acres of all wildfires that burned within or partially within the boundaries of the park unit. NPS boundaries include inholdings of lands not owned or managed by NPS. ² Number of wildfires started and acres burned on NPS owned lands (WFMI stats).

B. Monitoring & Inventory

Monitoring and inventories are utilized by the fire ecology program to provide feedback to the NPS fire management program on activities such as fuels treatments and to continue to gain a better understanding of the effects of wildfire on the landscape. Table 2 provides a list of the number of plots measured in 2018 and the total number of fire/fuels monitoring or inventory plots established in Alaska parks since 2003.

During 2018 the NPS Alaska fire ecology program measured plots in Yukon-Charley Rivers National Preserve. A brief description and preliminary results from the monitoring project are provided below.

Table 2. Fire effects and fuels treatment (TX) plot workload (2018) and total monitoring plots Installed 2003-2018.

Park	Monitoring Unit	Type of Plot (FMH, photo point, other)	Pre-burn/TX 2018	1yr Post 2018	Post (2-20 yrs) 2018	Annual Total	Total Plots
Lake Clark	Currant Cr Fire 2013	CBI, AKR Fire & Fuels Plots					43
	Kristin Cr Fire 2013	CBI & Cover					7
Wrangell-St. Elias	Carl Cr RX	AKR Carl Cr Plots					29
	Chakina Fire 2009	CBI & Cover					56
	Chakina 2009/Steamboat 2016	AKR Fire & Fuels Plots					42
	Susan Smith – Hazard Fuels Plots - TX	AKR SS Hazard Fuels Plots					13
	Headquarters – TX	AKR Hazard Fuels Plots					19
	Fire Effects – Paired Plots	AKR Paired Plots					2
	McCarthy University Subdivision - TX	AKR Hazard Fuels Plots					27
Yukon-Charley Rivers	2004 Woodchopper Fire	AKR Fire & Fuels Plots			6	6	7
	1999 Witch Fire	Fire effects - other					15
	2004 Fire – Paired Plots	AKR Paired Plots			1	1	5
	1999 Fires Landcover-CBI	AKR Fire & Fuels Plots					30
Denali	Headquarters – TX	AKR Hazard Fuels Plots					27
	VDM Highpower fire reburns	AKR Fire & Fuels Plots					10
	Landcover-CBI	AKR Fire & Fuels Plots					55
	BeaverLog Fire 2013	CBI & Cover					13
	Toklat R. East Fire 2013	CBI & Cover					25
Noatak	2010 Fires	CBI & Cover					34
	2004 Uvgoon Fire	AKR Fire & Fuels Plots					6
	2012 Uvgoon/ Kungiakrok Fires	CBI & Cover					22
	1977 Fires Racine Plots	Racine Plots					8
	1977 Fire Racine Plots	Racine Plots					8

Park	Monitoring Unit	Type of Plot (FMH, photo point, other)	Pre-burn/TX 2018	1yr Post 2018	Post (2-20 yrs) 2018	Annual Total	Total Plots
Bering Land Bridge	Fairhaven Ditch Cabins- TX	AKR Hazard Fuels Plots					4
Total			0	0	7	7	507

Yukon-Charley Rivers – 14 years after the Woodchopper Creek fire

During this past summer (2018), Alaska Region fire ecologists re-measured permanent fire effects plots that were established before and after the 2004 Woodchopper Creek fire in Yukon-Charley Rivers NPr. These sites were established to document the effects of fire on vegetation and soils at 4 black spruce sites and 2 paper birch sites. The objectives of the study were to:

- Document vascular and non-vascular plant cover changes
- Monitor tree seedling establishment
- Document changes in tree densities by diameter size class
- Document changes in active layer depths and soil temperatures

The plots sampled were of two general vegetation types prior to the fire mesic black spruce (Figure 3) and paper birch forests (Figure 4 and Figure 5). The general changes in vegetation cover by dominant life form are shown in the graph in Figure 6. Fourteen years after the fire the understory shrubs and dwarf shrubs have recovered to pre-fire cover levels in the black spruce stands. The dominant shrub cover was Labrador tea (*Ledum palustre*) (42% cover) and shrub birch (*Betula nana*) (12% cover) and dominant dwarf shrub was bog cranberry (*Vaccinium vitis-idaea*) (31% cover). Sedge cover increased to greater than pre-fire cover, primarily tussock cotton-grass (*Eriophorum vaginatum*) (17% cover).

The paper birch sites had two different impacts. The high severity site (Figure 4) had hydrologic changes and a pond formed in the middle of the site. The moderate severity site had young sapling paper birch (*Betula neoalaskana*) dominating the site with bluejoint grass (*Calamagrostis canadensis*) (42% cover) understory (Figure 5).



Figure 3. This black spruce forest was burned in 2004 by the Woodchopper Creek fire in Yukon-Charley Rivers NPr. A few monitoring sites were established in front of the fire. Photos from the monitoring site are shown from left to right; pre-fire (2004), 1 year post fire (2005) and 14 years post fire (2018).



Figure 4. This paper birch forest was burned in 2004 by the Woodchopper Creek fire in Yukon-Charley Rivers NPr. The site was established immediately after the fire in 2004. Photos from monitoring site are shown from left to right; 1 month post fire (2004), 4 years post fire (2008), and 14 years post fire (2018).



Figure 5. This paper birch forest was burned in 2004 by the Woodchopper Creek fire in Yukon-Charley Rivers NPr. The site was established immediately after the fire in 2004. Photos from monitoring site are shown from left to right; 1 month post fire (2004), 1 year post fire (2005), and 14 years post fire (2018).

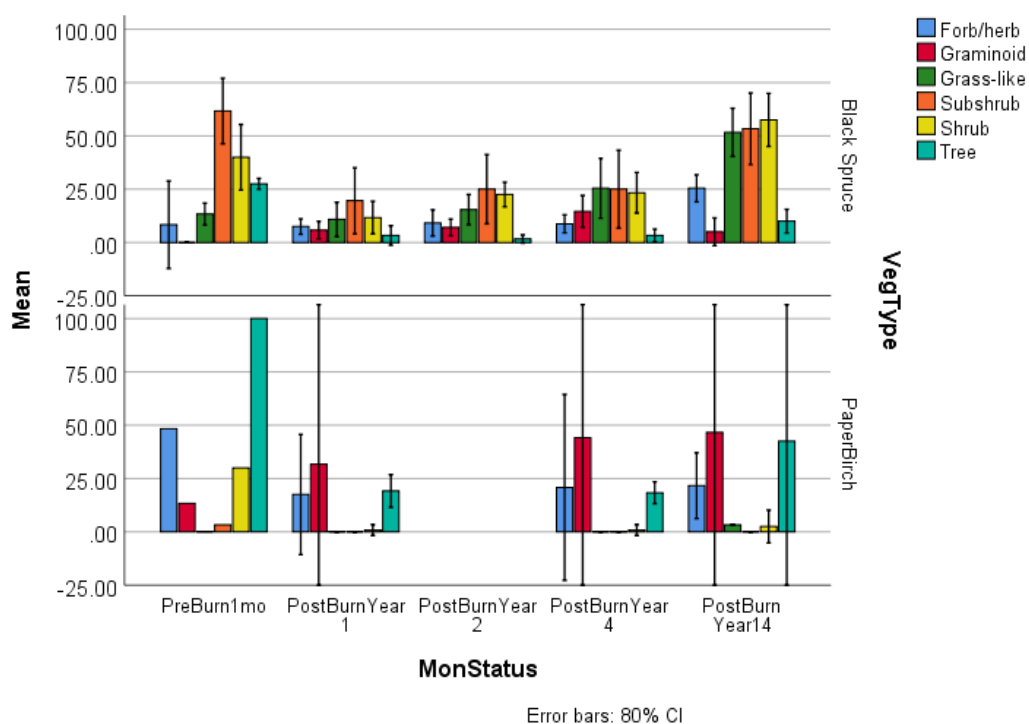


Figure 6. Point intercept vegetation cover data summarized for average cover by life form from the 2004 Woodchopper Creek fire monitoring plots in Yukon-Charley Rivers NPr.

Tree seedlings are important for the future forest that will occur after a fire. The average density of tree seedlings was quite variable (Table 4) among the plots and across the time since fire. The black spruce sites continued to have black spruce seedling establishment over the 14 years. Birch seedlings were prevalent the first year after fire, but seemed to die-off within the first year. The birch stands were dominated by birch seedlings. By 14 years post fire most of the seedling paper birch were tall enough that they were counted as trees rather than seedlings.

Table 4. Average seedling densities (trees less than 1.37 m tall) per meters squared by forest type and time since fire.

Forest Type and Time Since Fire	Number of Plots	White Spruce seedlings/m ² (80% Confidence Interval)	Black Spruce seedlings/m ² (80% Confidence Interval)	Paper Birch seedlings/m ² (80% Confidence Interval)
Black Spruce Plots				
Pre-Burn	2	0	0.67 (-1.38 - 2.72)	0
Post Burn 1 Year	4	0	1.08 (0.36 - 1.80)	6.25 (2.64 - 9.86)
Post Burn 4 Years	4	0	1.5 (1.34 - 1.65)	0.42 (0.16 - 0.68)
Post Burn 14 Years	4	1.62 (-0.86 - 4.11)	2.58 (0.03 - 5.14)	0.54 (-0.04 - 1.12)
Paper Birch Plots				
Pre-Burn	1	0.17 (-0.35 - 0.68)	0	1.0 (-2.08 - 4.08)
Post Burn 1 Year	2	0	0	98.7 (-49.06 - 246.39)
Post Burn 4 Years	2	0	0	68.2 (-55.45 - 191.79)
Post Burn 14 Years	2	0	0	3.7 (-1.98 - 9.31)

Data Management

Data for all 2018 monitoring projects were entered into FFI (FEAT/FIREMON Integrated) - a plot-level monitoring sequel server software tool designed to assist managers with collection, storage and analysis of ecological information (<http://www.frames.gov/partner-sites/ffi/ffi-home/>). Digital archives and metadata for the AK databases were uploaded to the NPS Data Store IRMA in March 2019. The Alaska Eastern Area fire ecology data set is located here and includes data for YUCH and WRST: <https://irma.nps.gov/DataStore/Reference/Profile/2259499> and the Alaska Western Area fire ecology data set includes data for DENA, NOAT, BELA, and LACL: <https://irma.nps.gov/DataStore/Reference/Profile/2259501>. The updated FFI databases reflect the recent data additions and QC to the AK NPS fire ecology databases (Table 6).

Table 6. Monitoring Data Entry and Number of Treatment Units Monitored for 2018

Park/Project	% 2018 Data Entered	% 2018 Data Quality Checked	# Prescribed Fires Monitored	# Non-fire Fuels Treatments Monitored	# Wildfires Monitored	# BAER Treatments Monitored
Yukon-Charley Rivers/Woodchopper Plots	100%	100%	0	0	1	0

C. Research & Technology

The AKR fire ecology program coordinates **research** and facilitates the use of scientific data, modeling and technology to address the needs of the fire management program. The primary focus

of 2018 has been to complete the data analysis and writing for a final report for the research study funded by the FWS-LCC to assess the extent, cause and impacts of shortened fire return intervals in boreal forests.

Both fire ecologists are part of the interagency Fire Research, Development and Application Committee (FRDAC) for the Alaska Wildland Fire Coordinating Group (AWFCG) and are on the board for the JFSP Alaska Fire Science Consortium.

Table 7. Research workload in 2018.

Park	Are research needs identified in FMP or Monitoring Plan?	# of Proposals Submitted in 2018	# of Proposals Funded in 2018	# of Research Projects Supported in 2018 ¹	Additional Comments
Wrangell-St. Elias NPPr	yes	0	0	1	FWS-LCC repeat fires.
Denali NPPr	Under revision	0	0	1	FWS-LCC repeat fires.
Yukon-Charley Rivers NPr	Yes	1	Partial	0	Reserve fund request for Andrew Creek

¹Number of funded research projects, new or ongoing, supported by the fire ecology program including logistical info or support, staffing, etc.

D. Communicating Results

Communicating results of projects or research is an important aspect the fire ecology program in order to provide **information and outreach** to fire managers, park staff, and the public. Table 8 lists the number of monitoring reports and presentations completed by park/affiliated group.

Through the work of the YUGA Education Program and funding by the NPS Fire Communication and Education grant, both teachers and students were able to learn about the effects and risks of fire in 2018.

In June, the assistant fire ecologist worked with a group of 7th and 8th graders to teach about the role of wildfire in boreal and arctic ecosystems as part of the *North for Science!* education program (<https://www.nps.gov/articles/learning-fire-ecology-in-alaska.htm>). In July, the fire ecologists participated in a program for teacher education in Yukon-Charley Rivers. Teachers from the Wild Side of Education Teacher's Workshop studied the effects of the 2004 Woodchopper Creek Fire near Coal Creek Camp in Yukon-Charley Rivers (Figure 12) (<https://www.nps.gov/articles/when-is-a-fire-likely-to-start.htm>).



Figure 12. Teachers in Yukon-Charley Rivers NPr record data from fire ecology plots. NPS Photo, M. Brodsky.

The assistant fire ecologist also provided hands-on field training sessions on fuel moisture sampling, data processing, and using the National Fuel Moisture Database with the NPS Western Area Fire Management staff in Denali and our local interagency partners, the State of Alaska – Division of Forestry fire technicians in Fairbanks.

See Appendix A for a list of reports, presentations, and other forms of communication completed in 2018.

Table 8. Communicating Results - 2018

Park	# of Project Monitoring Reports completed in 2018	# of Annual meeting(s) with Park staff	# of Formal presentations of results	Do you use Minitab?*
Yukon-Charley Rivers	0	0	1	No
Denali	0	0	0	No
Noatak	0	0	0	No
Lake Clark	0	0	0	No
Wrangell-St. Elias	0	0	1	No
Alaska Regional Office	0	1	0	No
Arctic Inventory & Monitoring Network	1	1	0	No

*This information will help to assess Minitab multi-user license needs.

E. Planning and Compliance

The fire ecology program participates in **planning** activities for the Fire Management and Park Land Management Programs. Table 9 has a list of parks with fire management plans and the status for fire monitoring plans and Desired Future Conditions within the plans or other planning documents (<http://www.nps.gov/policy/DOrders/draftDO2-1.html>).

Table 9. Fire Management Plan - Fire Monitoring Plan Status as of 2018

Park	Does Park have written Desired Future Conditions (DFCs)? (yes or no)	Date Park-level Monitoring Plan completed (or revised)	Total # of Project- or Community-level Monitoring Plans	Assisted with how many BAER plans in 2018?
Denali	Yes in RSS	2012	4	0
Gates of the Arctic	Yes - Interim Fire Desired Conditions in FMP	2014	1	0
Katmai	Yes – Suggested Fire Desired Conditions in FMP	2012	0	0
Lake Clark	No - Fire Management Objectives in FMP	2010	1	0
Western Arctic National Parklands	Yes - Interim Fire Desired Conditions in FMP	2012	4	0
Wrangell-St. Elias	No - Fire Management Objectives in FMP	2010	5	0
Yukon-Charley Rivers	No - Fire Management Objectives in FMP	2010	2	0

F. Fire ecology accomplishments and areas of focus

Fire Ecology Staffing 2018

The Alaska NPS Fire Ecology Program has a regional fire ecologist and a subject-to-furlough assistant regional fire ecologist. In general the fire ecology fieldwork has been accomplished with the assistance of the NPS fuels seasonal technicians or fire staff under the guidance of the regional fire ecologists. This has worked well, since the NPS Alaska Western Area (AWAFM) and Eastern Area Fire Management (EAFM) programs have generally hired multi-disciplinary fuels seasonal staff and allocated some of their time to fire ecology projects. Table 10 provides an overview of the personnel that work on or have assisted with fire ecology projects in 2018.

Table 10. Fire Ecology Staffing 2018

Ecologist and Monitors	Starting Date	Ending Date	# of Pay Periods	READ Qualified (Yes or No)	Training and Development
Jennifer Barnes (Regional Fire Ecologist)	1/1/2018	12/31/2018	26	No	ICS-400, Supervisory Training
Jennifer Hrobak (Assistant Regional Fire Ecologist)	1/1/2018	12/31/2018	24.5*	No	ICS-400,

*13 pay periods on base funding, additional pay periods on I&M funds, fire and other project funds.

Regional Fire Ecologists Accomplishment/Focus Areas

The Alaska regional fire ecologist facilitates planning, monitoring, research and outreach for the *region* and *park* programs. This position is responsible for monitoring plans, protocol development, compliance, administration, field instruction, field work, data analysis, and reporting on projects for the parks and region. In 2018, the regional fire ecologist published the Arctic Network Inventory & Monitoring (ARCN) fire monitoring protocols; planned and implemented field projects; and prepared presentations. Table 11 provides a summary of the Alaska Regional Fire Ecologist focus areas and accomplishments for the calendar year of 2018.

Table 11. Fire Ecologist 2018 Accomplishments/Focus Areas (J. Barnes)

Category	Percent Time	Accomplishments and/or areas of activities
Planning	20%	I&M Network Fire Monitoring Protocols – ARCN Compliance for field work Glacier Bay Fire Management Plan – meetings and prep
Presentations/ Reports	13%	Presentations: NPS, Public, Interagency Meetings Annual reports for Fire Ecology program and I&M network Teacher education classes – YUCH Articles for NPS High Latitude Highlights
NPS Meetings/ task groups	10%	AKRO Regional and Park Fire Meetings Regional Fire Ecologist conference calls I&M Technical Committee meetings
Interagency work	9%	S-495 online unit instructor AWFCG Fire Research, Development & Application Committee AWFCG Fire Modeling and Application Committee Alaska Fire Science Consortium (Board member) Interagency fire meetings

Category	Percent Time	Accomplishments and/or areas of activities
Wildfire assignments	2%	THSP (GSAN) 6 days – Alaska fires
Prescribed fire projects (implementation)	0	
Non-fire fuels projects (implementation)	0	
Research	6%	USGS/FWS-LCC Repeat Fire research coordination Proposal reviews and letters of support
Data collection	6%	YUCH Woodchopper Creek fire monitoring Fuel Moisture Sampling
Data entry	1%	Data entry supervision and database assistance QC of data
Data analysis	7%	NOAT Racine tundra fire plots WRST and DENA Repeat fire plots
Supervision/Admin	12%	Supervision STF GS-9 Fire Ecologist Paperwork and administrative (time, travel, email) Budget
Training	2%	ICS-400 Supervisory Training Annual NPS Spring Training (RT-130, etc.)
Travel out-of-park for plot or project work	2%	All field work requires a travel authorization, multi-day trips away from duty station.
Miscellaneous	10%	Two month detail as Regional Fire Management Officer AKR

Assistant Fire Ecologist Accomplishments/Focus Areas

The subject-to-furlough assistant regional fire ecologist works for the regional fire ecologist in Alaska. This position helps plan and implement fire effects and fuels monitoring projects. This position also assists in the development of park fire management plans, fire monitoring plans, and compliance for fire ecology activities.

The primary workload focused on presentations (including preparation time), writing reports and data analysis (primarily for repeat fire project). Other notable accomplishments include publishing the Fire Monitoring Protocol for the Arctic Inventory and Monitoring Network. Work in 2018 included 2 fire assignments in the local dispatch office (UYT) and two fire assignments in the Lower 48 (one of which was with the Alaska Type 1 IMT).

Table 12. Assistant Fire Ecologist Accomplishments/Focus Areas 2017 (J. Hrobak)

Category	Percent Time	Accomplishments and/or areas of activities
Planning	8%	WRST – Compliance for EAFM fuels/risk assessment projects YUCH – Teacher's Workshop Fire Ecology Session and Woodchopper Fire Effects Project (Compliance, Logistics, Flight Planning, Task Order, Gear Prep, Maps, Field Crew Coordination, Presentation & Field Demo, etc.) Annual Field Project Preparation (Trimble and Garmin updates, CartoPac, ArcGIS updates, data dictionary editing, camera settings, Garmin waypoint organization, etc.) GLBA Fire Management Plan sections.

Category	Percent Time	Accomplishments and/or areas of activities
Presentations/Reports	13%	ARCN Fire Frequency and Extent, Burn Severity, and Fire Effects Monitoring Protocol (Published) All presentations listed in Appendix A. (Outreach, Seasonal Training, etc) S-390 Course Unit D-310 Course Unit Fire Ecology Annual Report Repeat Fire Project Report (Prep for Publication) CFFDRS (CAN290) Course Units – Prep only (Class Cancelled) Annual Spring Training Preparation (Presentation materials, handouts, meeting logistics, etc.)
NPS Meetings/ task groups	5%	AKRO Regional Staff Meetings (weekly) AK Region Fire Management Meetings (monthly) Regional Fire Ecologist Meetings (monthly) AKRO Fire Annual In-Person Staff Meetings (semiannual) Miscellaneous Project Conference Calls (Andrew Creek Fire Integrated Project, Plant Ecologists Meeting, etc.)
Interagency Work	3%	Alaska Fire Science Consortium – Advisory Board Member AWFCG Fire Research, Development & Application Committee (Vice-Chair) AWFCG GIS Committee (Alternate) AWFCG Fire Modeling and Analysis Committee (Participant) Alaska Incident Management Team Meetings Alaska Interagency Fall Fire Review Alaska Fire Science Consortium Workshops NPS Representative for IARPC CAN 290 Course Cadre (Course Prep, Meetings, Instructor) US National Vegetation Classification System Meetings
Wildfire Assignments	29%	Two 14-Day Fire Assignments as RCDM to Lower 48. (Klondike Fire and North/Delta Fires) Two 5 day EDSD assignments in UYT Dispatch – needed to maintain proficiency)
Prescribed fire projects	0%	
Non-fire fuels projects	0%	
Research	0%	
Data Collection	3%	Fuel Moisture Sampling YUCH 2004 Woodchopper Monitoring plots
Data Entry/Processing	16%	FFI Data Entry (2017 WRST & NOAT; 2018 YUCH) FFI Database QC & project metadata Photo and GPS Processing (2017 WRST & NOAT; 2018 YUCH) Datasheet Scans/File Processing Fuel Moisture Sampling Data Entry 2018 NPS fire report data entry into WFMI
Data Analysis	12%	Repeat Fires Project – NW Boreal LCC Geospatial Data Analysis ARCN Fire Extent Monitoring Protocol through 2012/2013
Supervision/Admin	7%	Quick Time, Travel Authorizations/Vouchers, Credit Card Statements, Fire Physicals, Email, etc.
Training	7%	Aviation Courses (A-302) Annual NPS Spring Training (RT-130, First Aid, CPR, etc.)

Category	Percent Time	Accomplishments and/or areas of activities
		ATV/UTV Operator Bear Safety Training NASA Techniques for Wildfire Detection & Monitoring Shotgun Certification ICS-400 – Advanced ICS for Command & General Staff IS-800 – National Response Framework DOI Required Courses (FISSA+, Sexual Harassment, EEO, Privacy for Systems Managers, Records Management, CUI Awareness Training, Privacy Awareness) Women & Leadership Conference Online coursework for S-495 (dropped due to government shutdown)
Travel out-of-park for plot or project work	4%	Travel to YUCH field projects Travel to Coldfoot for North for Science Travel to L-48 for 2 Fire Assignments (California) Travel to Boise for Women and Leadership Conference Travel to NPS Fire Management Annual Meetings (Anchorage) Travel to DENA for Fuel Moisture Training
Miscellaneous	3%	

G. 2019 Fire Ecology Program Direction

The primary goal for 2019 data management for plot locations and FFI databases and writing up technical reports or publications from past field work. Field work planned for this year are in Yukon-Charley Rivers and Bering Land Bridge. See lists below for the proposed direction of the AKR fire ecology program for 2019.

Planning

- Glacier Bay Fire Management Plan and EA
- Field compliance and aviation planning

Projects and Data Entry

- Project: Andrew Creek and Dome Creek post fire monitoring in Yukon-Charley Rivers NPr
- Project: Bering Land Bridge Racine tundra plots
- Data Entry: Global fixes for known FFI database errors
- Data Entry: Complete QC of all FFI databases
- Data Entry: Convert additional databases to FFI

Reports/Outreach

- Report: Repeat fire in Alaska Parks
- Outreach: WRST Repeat Fire Project Story Map
- Presentations
- Report: WRST Fuels Treatment Effects

F. Overall Data Entry Status and FFI suggestions

Data Entry Status

Data from this field season along with older legacy data was entered and quality checked in both “FFI_AKRO” and “FFI_AKWest” databases in 2018.

Table 13 estimates the number of fire ecology/fuels plots and projects since the mid-1980s that have been entered into FFI or another database format for the Alaska region parks. The vast majority of data not currently included in FFI are from 2000-2003 era CBI plots. Other remaining non-FFI datasets are from fire effects projects that were implemented prior to 2003. Only one known project has not been entered into any database, which includes fire behavior, weather and vegetation observations from a 2007 fire in Yukon-Charley Rivers.

Table 13. Number of known fire ecology or fuels plots and number of projects from the Alaska NPS Region and database formats.

Database Type	Number of Plots	Number of Projects	% Plots	% of Projects
Access	513	8	34%	26%
Excel	15	1	1%	3%
FFI	985	22	65%	71%
Totals	1513	31		

It is desirable to convert some of the Access database projects into FFI, particularly the CBI plots. The highest priority is to have global fixes completed for data already entered into FFI. There are multiple projects with data entered in different units of measurement that need to be converted to meters and projects where belt and quad area fields need to be fixed to calculate density correctly (see below).

Appendix A. Reports, publications, or presentations completed in 2018 in conjunction with the Alaska Region Fire Ecology Program.

- Barnes, J. L., J. L. Hrobak, and B. Sorbel. 2018. Fire monitoring protocol for the Arctic Network: Fire extent, severity, and effects. Natural Resource Report NPS/ARC/NRR—2018/1716. National Park Service, Fort Collins, Colorado.
- Barnes, J.L. 2018. Once Burned...Twice Burned: Fire in Wrangell-St. Elias. (Presentation). WISE - Wrangell Institute for Science and Environment, Science Lecture Series. Glennallen, AK. February 2018.
- Barnes, J.L. 2018. Fire Ecology & Fuels Monitoring Program. (Presentation). NPS Alaska Fire Refresher. Fairbanks, AK. May 2018.
- Barnes, J.L. and Sorbel, B. 2018. Coffee with a Scientist: Wildland Fire in Alaska. (Presentation). Alaska Public Lands Information Center. Anchorage, AK. June 2018.
- Barnes, J.L. and J.L. Hrobak 2018. Fire in Alaska – Past, Present and Future. (Presentation & Field Day). Wild Side of Education teacher workshop. Yukon-Charley Rivers, AK. July 2018.
- Barnes, J.L. and J.L. Hrobak. 2018. When is a fire likely to start? Fires, Fire Ecology, and Education in Yukon-Charley Rivers. High Latitude Newsletter. Fall 2018. Web article: <https://www.nps.gov/articles/when-is-a-fire-likely-to-start.htm>.
- Hrobak, J.L. 2018. Alaska Field Logistics. (Presentation). NPS Spring Seasonal Training. Fairbanks, AK. May 2018.
- Hrobak, J.L. 2018. CFFDRS Fire Weather Index: Anticipating Extreme Fire Behavior in Alaska. (Presentation). NPS Spring Seasonal Training. Fairbanks, AK. May 2018.
- Hrobak, J.L. 2018. Fire Ecology & Fuels Monitoring Program. (Presentation & Field Exercise). NPS Spring Seasonal Training. Fairbanks, AK. May 2018.
- Hrobak, J.L. 2018. Fire Ecology in Alaska & 2005 Chapman Creek Fire. (Presentation & Field Day). North for Science Program. Coldfoot, AK. June 2018.
- Hrobak, J.L. 2018. Fuels Treatment Monitoring in Wrangell-St. Elias – Is willow good or bad? (Presentation). AWFCG Fire Research Development and Applications Committee – Winter Fire Effects Workshop. Fairbanks, AK. February 2018.
- Hrobak, J.L. 2018. North for Science! Learns About Fire Ecology in Alaska. (NPS Success Story). Web article. <https://www.nps.gov/articles/learning-fire-ecology-in-alaska.htm>. June 2018.
- Hrobak, J.L. 2018. Manual Facility Risk Assessment Data Entry for NPS Alaska. (Report & Demonstration). NPS Spring Seasonal Training. Fairbanks, AK. May 2018.

Hrobak, J.L. 2018. Unit 4 – Fuel Moisture. (Presentation, Unit Instructor). S-390 Introduction to Wildland Fire Behavior Calculations. Fairbanks, AK. April 2018.