SPAR Annual Report

FISCAL YEAR 2019

DEC | SPILL PREVENTION AND RESPONSE

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SPILL PREVENTION AND RESPONSE

OIL AND HAZARDOUS SUBSTANCE RELEASE PREVENTION & RESPONSE FUND ANNUAL REPORT

FISCAL YEAR 2019

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1.0 DIRECTOR'S NOTE

During FY19, the Division of Spill Prevention and Response (SPAR) continued to respond to oil and hazardous substance spills, accessing the Oil and Hazardous Substances Release Prevention and Response Fund (the Fund) when needed, and seeking cost recovery from responsible parties, as required by statute.

The Fund has two accounts. The Prevention Account largely funds the day-to-day operations of SPAR. The Response Account funds response to spills or threats of spills of oil or hazardous substances that are an imminent threat to human health and the environment. SPAR does not receive Unrestricted General Funds. At current levels of spending and revenue, the Prevention Account balance is projected to reach zero within three to five fiscal years. As a result, the Governor's proposed FY21 budget for SPAR includes a deletion of seven positions. Even with that spending reduction, the Prevention Account is still projected to run out of money by FY24. The shortfall must be addressed in the near term to avoid serious operational impacts. The options include implementing new or amended legislation creating additional revenue, using other operating fund sources (i.e. Unrestricted General Funds), and/or decreasing operational costs. Relying solely on spending cuts will result in reducing spill prevention work, spill response, and work to clean contaminated sites with commensurate increased impacts to human health and the environment.

If you have recommendations to improve SPAR services, provide better protection to Alaskans and the environment, or provide a more secure financial future for work on spill prevention and response and contaminated sites, we welcome your ideas.

Denise Koch

DEC SPAR Director

2.0 RESPONSE FUND HISTORY AND STRUCTURE

HISTORY OF THE RESPONSE FUND

The Oil and Hazardous Substance Release Prevention and Response Fund (the Response Fund) was created by the Legislature in 1986 to provide a readily available funding source to investigate, contain, clean up and take other necessary action to protect public health, welfare and the environment from the release or threatened release of oil or hazardous substances. Alaska statute 46.08.030 states: "It is the intent of the legislature and declared to be the public policy of the state that funds for the abatement of a release of oil or a hazardous substance will always be available." (SLA 1986 Sec.1 Ch. 59). Since 1989, the statutes governing the Response Fund have been amended several times to further define the usage, management, and funding sources.

STRUCTURE OF THE FUND

In 1994, the Alaska legislature amended the Response Fund structure by dividing it into two separate accounts: the Response Account and the Prevention Account. These accounts fund the Department's mission in distinct ways and have separate revenue sources.

THE RESPONSE ACCOUNT

The Response Account is used to finance the state's response to an oil or hazardous substance release disaster declared by the governor or to address a release or threatened release that poses an imminent and substantial threat to public health, welfare, or the environment. If the Response Account is accessed for any incident other than a declared disaster, the Commissioner of Environmental Conservation (or their designee) must provide the Governor and the Legislative Budget and Audit Committee a written report summarizing the release, and the state's actions and associated costs, both taken and anticipated, within 120 hours of that access.

The Response Account receives revenue from two sources:

1. a surcharge of $0.01 per barrel that is levied on each taxable barrel of oil produced in Alaska deposited into the response surcharge account;

2. costs recovered from parties financially responsible for the release of oil or a hazardous substance deposited into the response mitigation account

The legislature must annually appropriate revenue from the response surcharge and response mitigation accounts into the Response Account.

The $0.01 (one cent) per barrel surcharge is suspended when the combined balances of the response surcharge account, the response mitigation account, and the unreserved and unobligated balance in the Response Account itself reaches or exceeds $50 million.

The Commissioner of Administration reports the balance of the Response Account at the end of each calendar quarter and makes the determination if the $0.01 surcharge shall be suspended. The combined balance of the Response Account as of December 30, 2019 was $29.4 million. The $0.01 surcharge remains active currently.

THE PREVENTION ACCOUNT

The Prevention Account may be used to investigate, evaluate, clean up, and take other necessary action to address oil and hazardous substance releases that have not been declared a disaster by the governor or do not pose an imminent and substantial threat to the public health or welfare of the environment. The Prevention Account may also be used to fund Alaska's oil and hazardous substance release prevention programs and to fund activities related to cost recovery.

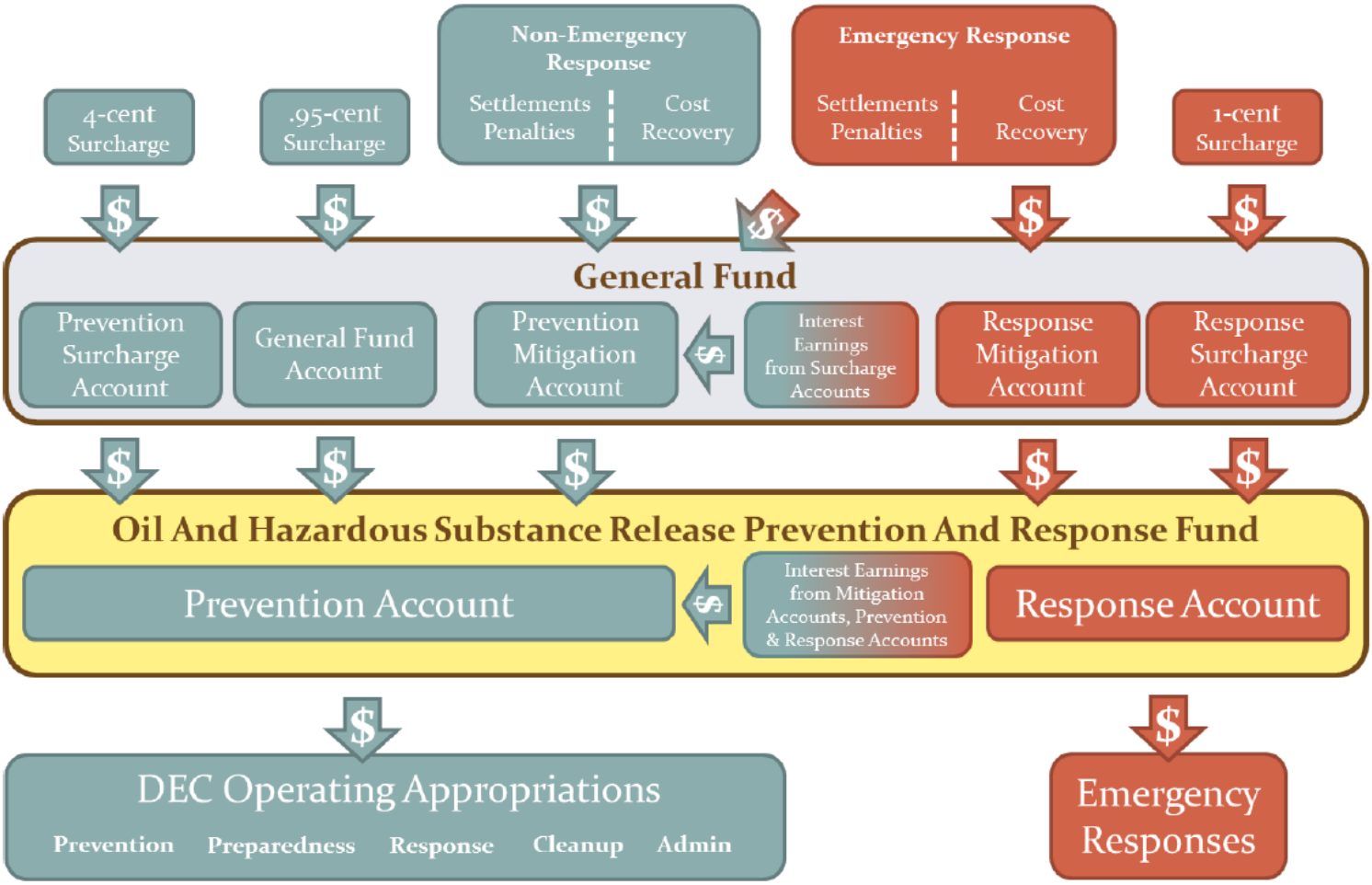
The Prevention Account receives funding from four sources:

1. a surcharge of $0.04 per barrel that is levied on each taxable barrel of oil produced in the state which is deposited in the prevention surcharge account
2. a surcharge of $0.0095 per-gallon on refined fuel sold, transferred or used at the wholesale level in Alaska (municipalities and electrical co-ops were exempted)
3. fines, settlements, penalties, and costs recovered from parties financially responsible for the release of oil or a hazardous substance deposited into the prevention mitigation account
4. interest earned on the balance of each of the following accounts deposited into the general fund and credited to the Prevention Account: (a) the prevention account; (b) the prevention mitigation account; (c) the response account; and (d) the response mitigation account

The legislature must annually appropriate revenue from the prevention surcharge and prevention mitigation accounts into the Prevention Account. The Department receives annual appropriations from the Prevention Account to fund the Division of Spill Prevention and Response.

The Prevention Account had an unobligated balance of $8.5 million at the end of FY2019.

RESPONSE FUND FLOW CHART



3.0 RESPONSE FUND HEALTH

IMMINENT OPERATIONAL IMPACTS FROM REVENUE SHORTFALL

The Prevention Account is facing a critical revenue shortfall that will deeply impact the Department's ability to protect human health and the environment within the next three to five years. This is due in part to the continued decline in oil production.

In 2015, House Bill 158 was passed to address the shortfall by implementing a surcharge on refined fuel. It was broadly agreed this was a reasonable approach as most releases resulting in contaminated sites are associated with refined fuel, as opposed to crude oil.

At the time of passage, the refined fuel surcharge was estimated to bring in approximately $7.5 million annually to fund the department's prevention and response activities. Unfortunately, the state overestimated annual fuel consumption. In addition, while the legislation intended to collect the surcharge on all refined fuel, a statutory omission inadvertently exempted municipalities and electric co-ops from the surcharge. Altogether, the state has been collecting approximately $1 million less per year than anticipated when the legislation passed.

EMERGENCY RESPONSE FUNDING AFFECTED BY DIRECT APPROPRIATIONS

For most of the Response Account history, the account had been accessed only when DEC determined that it was necessary to mitigate an imminent and substantial threat to life, health, and safety of Alaskans or the environment. Then in 2018, the Legislature made a $5 million capital appropriation from the Response Account to export soil at the Wrangell Junkyard to a landfill in the Lower 48 instead of a previously identified on-island disposal site. Because there was not a viable responsible party for this site, the Department could not recover any of this expenditure.

There was also a $9.4 million supplemental capital appropriation from the Response Account in 2019 to address per- and polyfluoroalkyl substance (PFAS) contamination at airports owned by the Alaska Department of Transportation and Public Facilities (DOTPF). Traditionally, state agencies have pursued their own funding, often unrestricted general funds, to pay for cleanup of sites where the state is the responsible party. This is in line with the statutory expectation that responsible parties reimburse the state for costs from the Response Fund when responding to a release.

These large draws on the Response Account have a direct impact on the amount of available funds to immediately respond to releases that pose a substantial threat to Alaskans. It also increases the duration that the $0.01 per barrel of oil surcharge remains in effect.

RESPONSE FUND FINANCIAL TABLES

Table A - AS 46.08.060
Fiscal Year 2019 Expenditures

This table summarizes the expenditures for appropriations funded by the Oil and Hazardous Substance Release Prevention and Response Fund (Response Fund) in Fiscal Year 2019.

	Appropriation	Budgeted[1]	Expended
Operating Funds			
Spill Prevention and Response	181610700	$ 13,825,500	$ 13,326,084
Administrative Services	181100700	$ 1,861,600	$ 1,654,157
State Support Services	181200700	$ 430,800	$ 430,800
		$ 16,117,900	**$ 15,411,041**
Prevention Account Capital Funds			
Statewide DOTPF PFAS Response	182190007		$ 165,565
Cook Inlet Pipeline Infrastructure Assessment	182190003		$ 87,538
Oil & Haz Substance 1st Responder Equipment & Preparedness	182130026		$ 86,512
Home Heating Oil Tank Spill Assistance Pilot Project	182190004		$ 81,056
Prince William Sound Tanker Escort Plan Review	182180001		$ 20,915
			$ 441,586
Response Account Capital Funds			
Wrangell Junkyard Contaminated Site Cleanup	182190006		$ 4,935,969
Wrangell Junkyard	18ER16100		$ 2,679,807
Miller Salvage Leaking Drums	18ER18120		$ 724,556
Flint Hills	18ER10200		$ 667,910
APL Yard Diesel Release Kodiak	18ER19017		$ 34,626
MP33 Seward Hwy Vehicle Accident	18ER19016		$ 30,702
Old Exit Glacier RD HHO Release	18ER19005		$ 26,933
Crowley Deadhorse Lease Tract Spill	18ER18200		$ 16,317
Gambell DSL Smell Sheen Release	18ER19001		$ 16,107
FV Nordic Viking Sinking Seward	18ER19010		$ 10,466
Colville Franklin Bluffs	18ER19003		$ 10,275
Abandoned Drums Bethel DOTPF	18ER17100		$ 10,192
Savoonga Native Store Release	18ER18320		$ 9,471
Point Lay PIZ 30 Unknown Diesel Spill	18ER19019		$ 8,441
Hilcorp Endicott COTP 2.5 Barrel Release	18ER19008		$ 7,330
3350 Black Knight Dr Houston HHOT	18ER19020		$ 6,276
Hilcorp Milne Point Moose Pad	18ER19012		$ 4,986
BP Fpad 850gal Crude/Meth	18ER19002		$ 3,694
BPXA EOA DS 2-2	18ER19011		$ 3,122

	Appropriation	Budgeted[1]	Expended
Hilcorp E Pad Test Header Pipeline Discharge	18ER19021		$ 2,922
Kalubik Creek #1 Submerged Drums	18ER18140		$ 2,805
X-49 Crude Oil Release	18ER19024		$ 2,787
Big State Logistics MP36 Dalton Hwy Release	18ER19023		$ 2,595
Red Dog 10k gal Slurry Release	18ER19009		$ 2,451
Kobuk IRA Building Release	18ER19018		$ 2,240
Colville Dalton Hwy N Coldfoot Tanker Rollover	18ER19014		$ 2,189
308 W 2nd St NOME HHOT	18ER18350		$ 2,185
Stallion Track 52 Hydrocarbon	18ER19004		$ 2,115
Kotzebue Catholic Church	18ER18390		$ 1,929
BPXA DS4 Well 2A Crude Release	18ER19022		$ 1,687
Kaktovik PW Pump House	18ER17200		$ 1,671
Arctic Pipe Inspection Pad Release	18ER18160		$ 1,613
Beaver School Tank Farm Diesel Release	18ER19013		$ 1,430
Caelus ODS K-41 Diesel Discharge	18ER17800		$ 1,136
Askinuk Tank Farm Gasoline Rls	18ER18370		$ 1,100
Koyukuk City Fueling Station	18ER19006		$ 1,097
Bloom Enterprises Petro Fire	18ER17110		$ 877
504 E L St Nome HHOT	18ER18380		$ 787
505 E 1st Ave NOME HHOT	18ER18360		$ 730
Huslia Fuel Release AVEC	18ER18400		$ 472
Birch Creek 300 Gallon Diesel Fuel Release	18ER18190		$ 390
BPXA - Lisburne L5, Well #13	18ER17900		$ 373
206 Gone Again HHO Release	18ER19007		$ 257
MP 318 Richardson Highway US Army Tanker Rollover	18ER18310		$ 224
CPAI CPF3 10Kgl Prod Water	18ER18220		$ 199
NWABSD Kotzebue Teach Housing	18ER18230		$ 187
Big State Dayville Road Fuel Truck Rollover	18ER18290		$ 94
AT&T Mile 55 Elliott Hwy	18ER17120		$ 91
BPXA DS16 Well 13 Release	18ER18240		$ 90
Anton Larsen Bay Mystery Slick	18ER19015		$ 5
			$ 9,245,906
Total 2019 Fiscal Year Expenditures:			**$ 25,098,533**

[1]Budgeted amounts are not included for Capital and Response Account appropriations due to the multi-year nature of the work.

Table B - AS 46.08.060
FY 2019 Prevention and Response Mitigation Revenues

This table summarizes the amounts and sources of funds received and recovered in the Oil and Hazardous Release Prevention and Response Fund (Response Fund) in Fiscal Year 2019.

Revenue Source		Revenue
Prevention Mitigation Account (Fund 3211)		
Cost Recovery	$	928,389
Judgements/Settlements	$	42,885
Fines and Forfeitures	$	5,018
Other/Miscellaneous	$	58
	$	**976,350**
Response Mitigation Account (Fund 3212)		
Cost Recovery	$	126,412
	$	**126,412**
Oil & Hazardous Release Response Fund (Fund 1052)		
Cost Recovery Late Fees	$	7,050
Other/Miscellaneous	$	823
	$	**7,873**
Total	**$**	**1,110,635**

Table C - AS 46.080.060
Revenue Source History

This table summarizes the various funding sources appropriated to the Response Fund since Fiscal Year 2016.

Fiscal Year	Mitigation Accounts	4 Cents Oil Surcharge	1 Cent Oil Surcharge	Refined Fuel Surcharge	Total
FY16	2,319.8	6,512.5	1,637.5	7,450.0	17,919.8
FY17	6,643.0	6,836.6	1,709.1	6,543.6	21,732.3
FY18	1,705.5	6,950.7	1,737.6	6,615.5	17,009.2
FY19	1,773.0	6,563.7	1,675.8	6,349.4	16,361.9

All figures above are in thousands.

Table D – AS 46.08.060

Summary of Response Fund Contracts in Excess of $10,000

This table lists contracts for response activities funded by the Response Fund that exceeded $10,000 in Fiscal Year 2019.

Contractor	Contract Number	Hazard ID	Spill ID	Project Title/ Description	Appropriation	Contract Amount	Payments
NRC Alaska	180000020	3295		Wrangell Junkyard Soil Removal	18ER16100 & 182190006	10,498,572	7,604,529
Ahtna Engineering Services	180000951	539	12309903201	North Pole Refinery	18ER10200	596,582	445,357
NRC US Holding Company	200000032	726	17309913206	Miller Salvage	18ER18120	519,469	408,921
NRC Alaska	190000541	726	17309913206	Miller Salvage	18ER18120	819,469	299,498
Shannon & Wilson	190000105	26627	16309922401	Eielson AFB	181610100	194,442	89,495
Ahtna Engineering Services	190000507	539	12309903201	North Pole Refinery PFAS	18ER10200	79,863	70,430
Stephanie Buss	190000108	26627	16309922401	Eielson AFB	181610100	130,375	53,174
Weston Solutions	190000113	22919		Former Mom & Pop's Grocery & Gas	181610100	82,899	48,301
BGES	190000020	4420		1433 Meadowood Dr	182170001	65,439	47,796
Ahtna Engineering Services	190000428	1535		River Terrace Laundromat	182140015	134,406	43,549
Shannon & Wilson	190000036	565		Galena Airport	181610100	74,232	42,493
Weston Solutions	190000402	26615	16239923801	13201 E Soapstone Rd HHOT	182170001 & 182190004	134,347	39,052
Nortech	180000507	25905		1003 2nd ST Douglas HHOT	182170001 & 182190004	38,575	38,575
Ahtna Engineering Services	180000954	3821		MC Commercial Cleaners	182170001	92,404	24,943
NRC US Holding Company	200000158		19239907202	MP33 Seward Hwy Vehicle Accident	18ER19016	30,000	23,378
Shannon & Wilson	180000902	289		Kaltag School	182170001	38,660	17,820
Ahtna Engineering Services	190000745	4503		Royal Master Laundrette	182140015	58,817	16,382
Env Compliance Consultants	190000147	4681		3359 Lineman Ave Drums	181610700	15,819	15,819
BGES	190000205	4084		Alaska Real Estate Parking Lot	182170001	38,660	14,640
Weston Solutions	190000840	26933		77 Same Old Road Gustavus	182140015	99,898	10,838
UXO Pro	180000697	26614		King Salmon Airport	181610100	25,187	8,142
UXO Pro	170007739	23529		Adak Naval Air Facility	181610100	62,610	7,255
UXO Pro	190000957	26627	16309922401	Eielson AFB	181610100	17,760	6,373
Nortech	180000327	26321		1282 Loon ST HHOT	182170001	32,725	6,021
UXO Pro	170007738	2637		Tanaga Island	181610100	43,005	5,757
Shannon & Wilson	190000974	4145		Wilhour Trust Property	182170001	29,968	2,554
UXO Pro	170007885	26306		Eareckson AFS	181610100	43,548	2,397
Weston Solutions	190000898	2152		Eskimo Creek Seep	182170001	16,757	2,117
Shannon & Wilson	190001020	26896	17309912901	Bloom Enterprises Fire	181610700	7,255	506

4.0 COST RECOVERY PROGRAM

OBLIGATION TO RECOVER

The Department has a statutory obligation to recover costs. Recovery of response costs are based on the provisions of AS 46.03.760(d), AS 46.03.822, AS 46.04.010, and AS 46.08.070. A person is liable under AS 46.03.760 and AS 46.03.822 for costs incurred by the Department or another state agency. Billable costs are the costs reasonably attributable to the investigation and cleanup of a site and/or the containment and cleanup of a spill incident. Billable costs also include legal costs, potentially responsible party (PRP) searches, obtaining site access, and enforcement actions. Billable costs are those of direct activities, support of direct activities, and interest charges for delayed payments. Recoverable monies are the costs incurred by the Department, it's contractors, or other entities acting at the direction of the Department.

COST RECOVERABLE EXPENSES

Most site charges are cost recoverable and are billed to responsible parties. Non-personal services charges that are directly attributable to the site (travel, contractual, and supply charges) are billable. Most personal services charges are billable, but not all. Below is an outline of typical billable personnel activity types along with a general description (please note that this list is not exhaustive):

- **Site Discovery/PRP Identification:** New site information review, research and PRP identification, site intake activities.

- **Incident Management Team (IMT):** Time spent in an Incident Command Post (ICP), or remotely supporting the ICP, during a response.

- **Field Work:** Time spent traveling to/from field sites and time spent at spill sites for assessment, oversight, discussion, sampling etc.

- **Assessment/Characterization**: All activities associated with site characterization and selecting a remedy/cleanup alternative for a site. It includes correspondence and meetings with PRPs to develop and approve site characterization or assessment plans and reports, remedial investigations, risk assessments, feasibility studies, proposed plans and records of decision. It covers development of site contracting documents and working with DEC contractors.

- **Cleanup/Corrective Action**: All activities associated with developing, approving, and overseeing removal action and cleanup plans and reports, including issuing final "Cleanup Complete" determinations. For federal sites, this code includes activities associated with the review and comment on documents related to Base Realignment and Closure, and other property transfers (for example, Finding of Suitability to Lease, Finding of Suitability to Transfer, and Finding of Suitability for Early Transfer).

- **Case Management**: Time spent working on a spill case in the office typically during the project management phase of a spill response. Activities include updating spill files,

communicating with responsible parties, reviewing reports, and other site-specific work performed at the office.

- **Program Management and Development:** All non-administrative management activities including, but not limited to database/information management, staff management, site budget and financial management, contract management, and development of policy, guidance, and regulations as it relates to the management of a project or site.

- **Monitoring:** All activities associated with long term monitoring at sites after any necessary active cleanup has been completed, including requesting, reviewing, and commenting on monitoring plans and reports for soil, groundwater or in-situ remediation systems. It includes site inspections during long term monitoring activities.

- **Enforcement:** Notices of Violation, compliance orders, litigation preparation, testimony (including depositions), and settlement agreements. Note – some instances related to enforcement (litigation-related or post litigation) may not be cost recoverable.

- **Institutional Controls (IC) Compliance Review**: Work consists of verifying that: deed notices or covenants have been filed with the Alaska Department of Natural Resources (DNR) Recorders Office; IC attachments appear on the public website; land use conditions have not changed; PRPs or landowners are complying with periodic reporting; IC tasks are being completed, such as site inspections, and IC integrity is maintained, such as engineering controls (signs, fencing, caps, and other measures). Note – if institutional controls are violated, then the personnel time is cost recoverable. In most other cases this time is not cost recoverable.

While the Department makes every effort to recover response and oversight costs from responsible parties, there are numerous reasons why billable costs are not recovered. A responsible party's inability to pay is the primary reason. In FY2017, the Department, in partnership with the Department of Law, established an internal inability to pay process that includes negotiations with the responsible party to recover partial costs and/or establish an installment payment plan. The Department further refined that process to include making ability-to-pay determinations for individuals and businesses by using Environmental Protection Agency (EPA) financial modeling software. Other reasons for low recovery rates relate to third party liability issues, unclear responsible party determination, and disputed liability.

4.1 Cost Recovery Information by Industry

Chart 1: Costs Billed in FY2019 by Industry Type

The industry types shown below reflect the type of facilities where releases have occurred. The "Residential" category includes home heating oil tank spills and other types of residential spills where cost recovery has not been exempted.

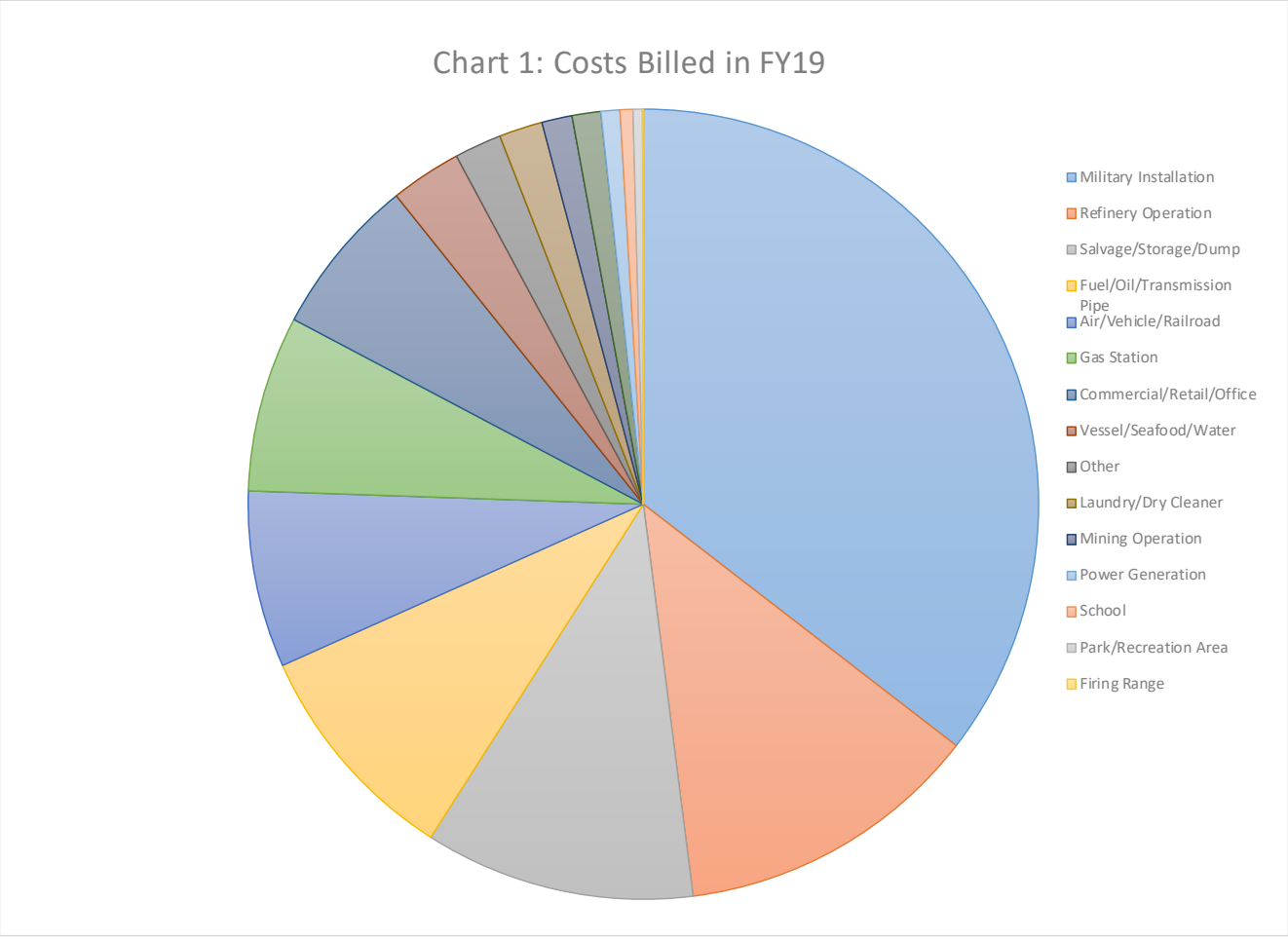


CHART 2 AND TABLE 1: COSTS BILLED IN FY2019 VS RECOVERED BY INDUSTRY TYPE

The chart and table below compare the amount of costs billed to responsible parties during the fiscal year with the total amounts of payments received during the fiscal year. Given the fact that projects span multiple years and costs are billed on a monthly basis, the payments received may relate to prior fiscal year expenses.

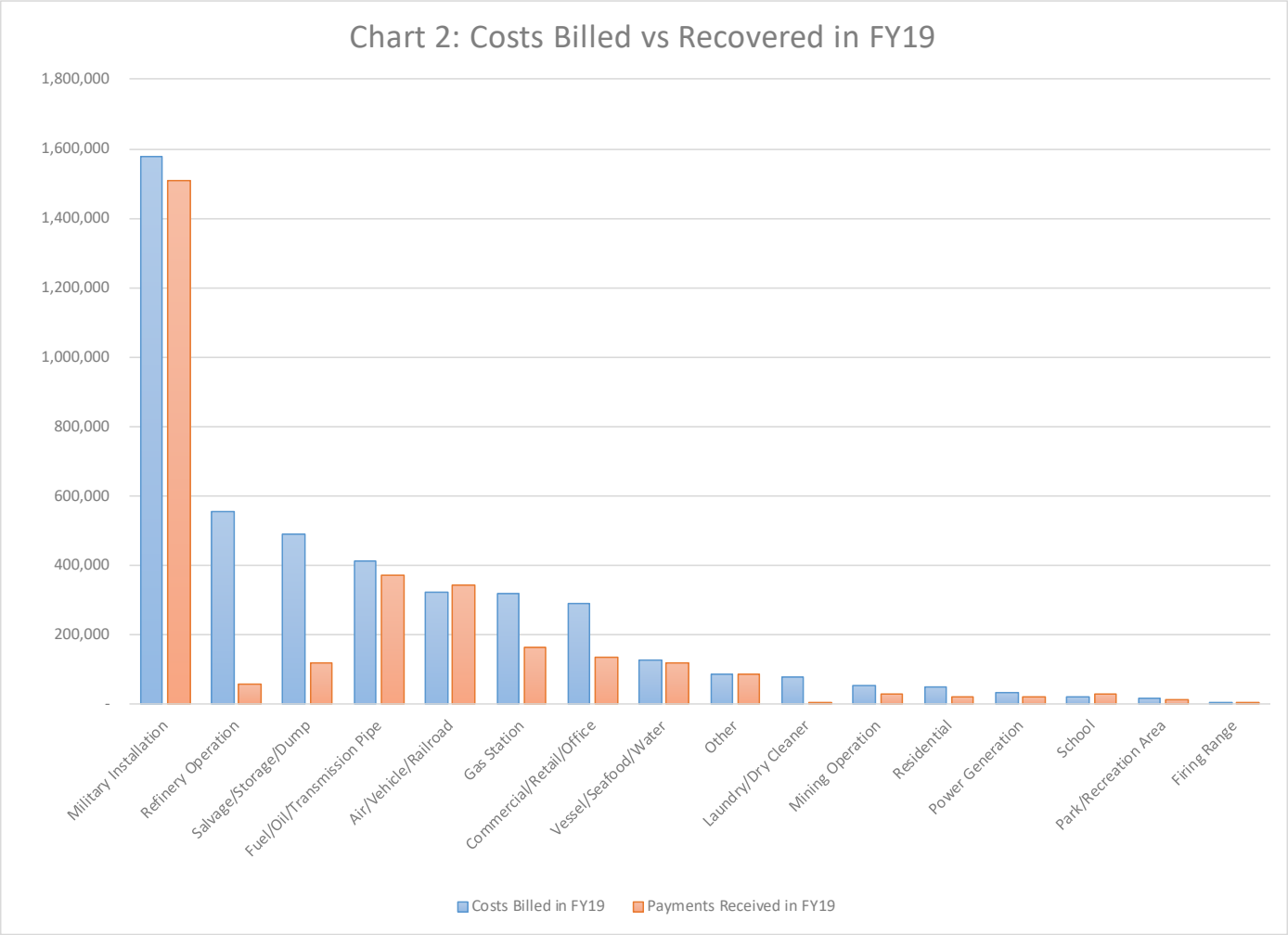


Table 1: Response Costs Recovered via Cost Recovery, Grants and Reimbursable Service Agreements *Revenue collected during the fiscal year for FY2019 invoices*		
Industry Type	**Costs Billed**	**Payments Received**
Military Installation	1,578,165	1,507,275
Refinery Operation	557,471	60,106
Salvage/Storage/Dump	491,787	118,646
Fuel/Oil/Transmission Pipe	412,437	373,983
Air/Vehicle/Railroad	321,740	345,944
Gas Station	320,477	163,220
Commercial/Retail/Office	289,874	136,338
Vessel/Seafood/Water	129,354	119,651
Other	85,712	85,999
Laundry/Dry Cleaner	79,149	3,121
Mining Operation	55,200	30,128
Residential	52,212	23,456
Power Generation	34,489	23,128
School	23,408	28,648
Park/Recreation Area	17,170	14,961
Firing Range	1,497	212
Grand Total	**4,450,141**	**3,034,817**

5.0 FY19 Major Responses and Accomplishments

5.1 Prevention Preparedness and Response Program

The Division recorded 1,947 new spill cases statewide and carried over 300 cases from previous fiscal years; of these, 1,678 were closed during this reporting period. There were 55 cases transferred from the Prevention, Preparedness, and Response Program (PPRP) to the Contaminated Sites Program (CSP). Working with industry, the Department managed 129 Oil Discharge Prevention and Contingency Plans (ODPCP) and 215 Nontank Vessels (NTV) streamlined contingency plans statewide. The Department managed the annual renewal of Financial Responsibility Certificates for 142 owners of 338 facilities for ODPCPs; 227 for NTVs; and 151 owners of 266 Underground Storage Tank facilities. A total of 44 exercises and trainings with industry were held to improve spill response capabilities and 21 facility inspections were conducted to help prevent spills.

Crowley Fuels LLC, Ketchikan terminal tank farm overfill prevention testing November 29, 2018 (Photo/DEC)

The F/V Masonic grounded in the Spanish Islands, SE Alaska spilling an estimated 2,000 gallons of diesel and 150 gallons of lubricant oils on board. May 7, 2019 (Photo/ U.S. Coast Guard Air Station Sitka)

Prevention and Preparedness

Exercises: Planning, Conducting, and Evaluation

The Alaska Department of Environmental Conservation Exercise Guidance Manual (Guidance) was first published in late FY18 and incorporating the Guidance into our exercise program was a priority for PPRP in FY19. During the fiscal year, improvements have been made in exercise planning, conduct, and evaluation. The Department is gathering a robust dataset of lessons learned that can be used by exercise planners to implement innovative strategies and processes or to fill capability gaps identified from previous exercises. This process promotes continual improvement in three primary ways. First, the Training & Exercise (T&E) Group authors an annual report that identifies general trends in response readiness that can be compared between years to gauge improvement. Second, it identifies gaps in training or knowledge and/or improvements specific to each plan holder's exercise that can be shared with the plan holder via the Department of Environmental Conservation

Exercise Letter. Third, it identifies gaps in training, knowledge or resources that Department staff may need. T&E incorporates that information into internal PPRP training plans for the upcoming year.

Alyeska TAPS Pipeline Deployment Exercise showing a deflection boom set in the Gulkana River, Alaska October 15, 2018 (Photo / DEC)

INTERAGENCY SPILL RESPONSE PLANNING

Throughout the year, PPRP partnered with the U.S. Coast Guard (USCG) and the Environmental Protection Agency (EPA) to develop a planning framework that provides a common response platform for local, state, and federal response to oil and hazardous substance releases throughout the state. In order to align with the National Contingency Plan and fulfill statutory requirements for the State and Regional Master Plans (AS 46.04.200 and AS 46.04.210), a statewide Alaska Regional Contingency Plan (RCP) and four Area Contingency Plans (ACPs) were promulgated in late 2018. The ACPs were revised and validated by four corresponding Area Committees. Each Area Committee established a standing multi-agency Administration Subcommittee to facilitate management and implementation of the new plans. Along with the USCG, EPA, and the Department, additional membership varies, but typically includes state and federal agencies, such as Alaska Department of Fish and Game (DFG), the U.S. Department of Interior (DOI), industry partners, and Rural Community Assistance Corporations in the Prince William Sound and Arctic Western Alaska Areas.

PPRP hosts web-based versions of the ACPs, providing an opportunity to efficiently manage and update the ACPs. The PPRP website includes Contingency Plan References and a Tools web page with information on: contact information, response job aids, permit information, and the Sensitive Areas Compendium. It also hosts information useful to the variety of industry response plans such as: Oil Discharge Prevention and Contingency Plans (DEC), Facility Response Plans (USCG), Vessel Response Plans (USCG), Oil Spill Response Plans (Bureau of Safety and Environmental Enforcement), as well as Spill Prevention, Control, and Countermeasure Plans (EPA). Together the new plans and the web-based resources greatly improves the functionality and accessibility of the response planning for all Alaskans. The references and tools page can be found at : http://dec.alaska.gov/spar/ppr/contingency-plans/response-plans/tools/

Community Right to Know: Hazardous and Toxic Chemical Inventories for Communities in Alaska

The Emergency Planning & Community Right-to-Know Act (EPCRA) was established by Congress in 1986 and was designed to help local communities plan for potential threats posed by the storage and handling of toxic chemicals. EPCRA requires that certain facilities report their hazardous chemical inventory information annually on a Tier II form. Information from this program is used to develop community emergency plans and provide critical information to first responders, such as fire departments, regarding onsite hazards when they respond to emergencies. In Alaska, facilities submit their inventories to the Department for the use of the State Emergency Planning Commission, Local Emergency Planning Committees, and fire departments with jurisdiction over each facility.

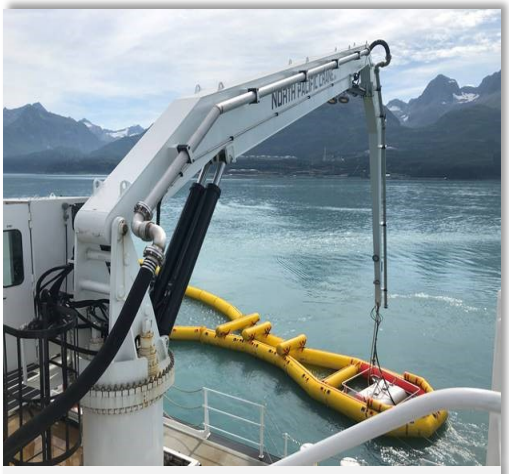
PPRP selected E-Plan as its Tier II database provider. The switch to E-Plan represents a significant improvement by making it easier for facilities to report and for increasing the ease of access to those inventories for emergency planners and responders.

Regulation Development and Revision

PPRP initiated a change aimed to improve efficiency and relieve burdensome regulatory obligations for small capacity vessels that often provide fueling services to remote communities in Alaska. Currently all vessels carrying bulk fuel, not for use by the vessel itself, must operate under an Oil Discharge Prevention and Contingency Plan regardless of the volume or type of fuel cargo. The initiative intended to better align planning requirements with the risk presented by this specific subset of vessels. The Noncrude Tank Vessel and Oil Barge regulation package detailing these changes went out for public comment and was adopted during FY19. The regulations were sent out to public comment for a supplemental public notice on January 6, 2020, and the public comment period will close on January 23, 2020. The proposed changes amend existing regulations to allow noncrude tank vessels and noncrude oil barges with a storage capacity of less than 500 barrels to apply for a streamlined oil discharge prevention and contingency plan. In order to receive an approved streamlined plan, the vessels will need to carry specific initial response equipment and have at least two personnel trained to deploy the on-board response equipment during transit or transfer of oil.

Unannounced Spill Response Exercises in Prince William Sound

The Department initiated unannounced prevention and response system exercises to ensure that ODPCP commitments for a tanker spill could be met by Edison Chouest Offshore (ECO). These included a tabletop exercise to ensure the capacity of ECO to provide adequate personnel during the later hours of a response and field exercises to test operational response capabilities. In August 2018, an Open Water exercise was conducted to evaluate ECO's ability to activate multiple tugs to tow the assigned oil spill response barges and deploy spill response equipment within timeframes committed to within the PWS Tanker ODPCP. In November 2018, a winter Open Water exercise was conducted to test ECO's management of multiple open water task forces to operate without daylight for extended hours while donning personal protective equipment (PPE).



Alyeska SERVS practices deploying a current buster with oil recovering skimmer during an exercise August 2019 (Photo/DEC)

During all exercises, ECO and SERVS successfully demonstrated their ability to deploy resources and tactics on very short notice.

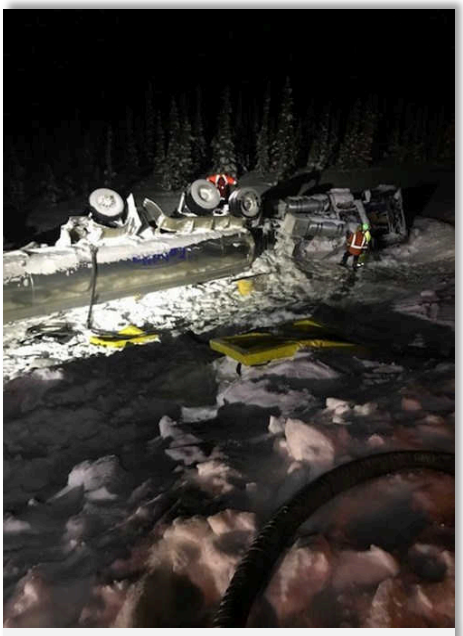
PWS Tanker Plan Exercise

In Prince William Sound there was a change of ownership of tanker vessels from SeaRiver Maritime Inc. to Crowley Alaska Tankers, LLC (Crowley). In October 2018, Crowley Alaska Tankers hosted a Prince William Sound Tanker Exercise as their first exercise after the change occurred. The exercise was a full-scale Incident Management Team that simulated how Crowley would initiate a response to a large-scale crude oil release from a tanker. The primary focus for the exercise was to demonstrate the initial response capabilities specifically focused on communication processes, response operations management, public affairs, and command and control of the incident by the Crowley's Incident Management Team. This simulated incident was managed by a Unified Command that consisted of Crowley, the Department and the U.S. Coast Guard. Crowley successfully met all exercise objectives.

Response

International Airport AFFF System Test Discharge

In late fall 2018 FedEx tested their hanger's fire suppression system at the Anchorage International Airport (AIA) during which 100,000 gallons of a waste Aqueous Film Forming Foam (AFFF) and water solution was routed to a buried containment vault pending final disposal. Sometime over the next 6 months the integrity of the vault failed, and 90,000 gallons of the solution discharged into the ground. When discovered, Department Responders worked with FedEx to sample the remaining liquid for PFOS and PFOA concentrations and develop a disposal plan. The AIA Area has already been designated by the Department as an area where groundwater cannot be used for drinking water limiting potential ingestion pathways from this release. PPRP is working with FedEx to dispose of the contaminated water that was recovered from the vault and to ensure that the vault is repaired or taken out of service. Most of the contaminated water in the vault is believed to have discharged through the storm drain into the Cook Inlet. Use of the site for testing firefighting foam over many years will require further investigation and remediation in the Contaminated Sites Program.



Colville Dalton Highway Truck Rollover. The vehicle was transporting 10,001 gallons of Ultra-Low Sulfur Diesel Fuel and departed the Dalton Highway and descended approximately 70 feet down the embankment. Fortunately, only 2 gallons of fuel were released through a cracked hatch. February 12, 2019 (Photo/Colville)

Northwood Maintenance Facility, Magnesium Chloride Solution

The November 2018 Anchorage-area earthquake damaged piping on two 12,500-gallon Municipality of Anchorage tanks containing a solution of the deicer magnesium chloride. Magnesium chloride is a water-soluble salt that occurs naturally in brine and seawater which can have negative impacts on terrestrial plants and vegetation. The spill occurred on property already being managed as a Contaminated Site. By the time the spill was reported to the Department the salt solution had flowed down an embankment at the facility and drained into the ground and snow. The Department and municipality monitored vegetative impacts during the 2019 growing season. Minimal impacts were observed. The department will continue monitoring in 2020 and if minimal impacts are reserved, the case will be closed.

Teck Alaska Inc. Red Dog Mine equipment Failure

On November 16, 2018 equipment failure at the Red Dog mill building resulted in the release of an estimated 10,000 gallons of mill slurry. The slurry contains high concentrations of heavy metals including lead and zinc. The spill left the mill building, impacting the surrounding gravel pad and the exterior of the building. Snowfall complicated the initial response and the slurry was allowed to freeze before it was removed and recycled in the mill. Soil samples and a final visual assessment in the spring confirmed that all contamination had been removed.

Truck Incidents Across Alaska

Great quantities of refined fuel are trucked across Alaska for use in individual communities from marine tank farms and Alaskan refineries. The Department doesn't have prevention requirements in place for fuel tank trucks and other commercial trucks and fuel spills from tank trucks continue to be an issue for Alaska. Trucking accidents often happen along rural stretches of road and in poor weather conditions which complicates cleanup. Trucking companies are statutorily required to conduct adequate responses should releases occur but are not required to have pre identified response equipment, personnel or funding. When trucking companies are not capable to mount an appropriate response due to inadequate insurance or funding, the department will take over the response and bill the responsible party. This is a last resort in all cases.

The Department received 16 reports statewide of truck incidents where commercial trucks went off the roadway resulting in a release of fuel or hazardous substances. Nearly 4,000 gallons of fuel and hazardous substances were spilled from those incidents with an additional 700 pounds of a hazardous cargo released. The most common petroleum product spilled was diesel, often from the cargo tanks, at just over 3,500 gallons. Four of the 16 incidents were along the Dalton Highway; the Dalton Highway is the most common road location in FY19 for trucking incidents and has a 10-year average 7 incidents per year (data from FY05-FY15).

Dalton Highway Truck Rollover, contaminated soil being loaded into a dump truck for disposal June 14, 2019 (Photo/ DEC)

Tragically, a fatal truck accident occurred on June 3, 2019 when a Big State Logistics truck went off the Dalton Highway at MP 35.6. The accident released approximately 2,000 gallons of diesel in DOTPF's right-of-way (ROW). Diesel impacted a surface area in the ROW of approximately 122ft long by 20ft wide. Big State Logistics was responsible for delineating contamination within the road prism via borehole samples. Once the final report is submitted, DOTPF will determine if contamination can be removed without significant damage to the road prism or if it needs to be left in place. Pending cleanup results, the spill case may be transferred to the Contaminated Sites Program for long-term monitoring.

OUTREACH

PREVENTION OUTREACH

PPRP staff attended three week-long outreach trips in conjunction with the U.S. Coast Guard's Marine Safety Task Force. The hub-and-spoke approach to rural travel was very effective in conducting outreach, inspections, and spill prevention meetings in over ten communities around Aniak, Barrow, and King Salmon. Site visits included large facilities operating under a State-approved Oil Discharge Prevention and Contingency Plan as well as small facilities registered under the Department's Class 2 facility regulations.

DEC staff join the U.S. Coast Guard's Marine Safety Task Force to conduct outreach in 10 communities surrounding King Salmon, Alaska in June 2019 (Photo/Civil Air Patrol)

CLASS 2 FACILITY PARTNER OUTREACH

Beginning in June 2018 and throughout FY19, Class 2 Facility staff organized and chaired monthly call-in meetings for organizations professionally involved with smaller bulk fuel facilities. These meetings have sharply increased interagency communication and collaboration for the benefit of small bulk fuel facilities by providing assistance and increasing

operator training, recruitment, and multi-agency participation in the development of operator course curriculums. Participating agencies include the USCG, EPA, Denali Commission, Alaska Department of Commerce, Community and Economic Development (DCCED), and Alaska Energy Authority.

INTEGRITY AND ENGINEERING UNIT

SPAR's Integrity and Engineering Unit (IEU) staff conducted the second annual Cathodic Protection Surveys Audit. This audit helps industry keep preventative surveys current and reduces spills through equipment failures. This is accomplished by raising awareness to the regulated community about the importance of appropriate intervals for these surveys and the expectation that deficiencies, identified by corrosion professionals during such surveys, are remedied.

The IEU also provided technical support and oversight to industry for an offshore flow line replacement project off the North Slope. The flow line had developed significant internal corrosion after about seven years of operation. The ODPCP Holder determined that the best solution was to insert a new smaller pipe into the existing carrier pipeline resulting in a three pipe-in-pipe configuration - a carrier line with two casings with leak detection at each interstice. IEU staff provided preliminary review of the design concept and provided advice regarding the reliability of the "pipe-in-pipe-in-pipe" configuration from both the aspects of containment and functional failure scenarios. The Program's ODPCP plan manager reviewed leak detection system changes, testing, and confirmation of Plan commitment compliance throughout the repairs process. The Plan Holder safely completed the repair project in November 2018.

5.2 CONTAMINATED SITES PROGRAM

STATEWIDE PFAS

SPAR began requesting sampling and analysis for per-and polyfluoroalkyl substances (PFAS) in 2009. By 2016, the Department established soil[1] and groundwater[2] cleanup levels for the two most studied PFAS: perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA).

In 2016, EPA issued a final Lifetime Health Advisory Level (LHA) for PFOS and PFOA in drinking water and advised people to limit consumption of water containing more than 70 parts per trillion (0.07 µg/L) of PFOS, PFOA, or a combination of the two. The EPA LHA is lower than the Department's groundwater cleanup levels of 0.4 ug/l for PFOS and PFOA individually. The Department currently uses as the LHA as the Action Level for determining when a responsible party should provide residents with alternative drinking water.

In FY19, the Contaminated Sites Program continued to identify and respond to PFAS contamination at sites across the State. Most PFAS impacts identified to date are attributed to the use and discharge of Aqueous Film Forming Foam (AFFF). Staff coordinated with the DOTPF and the Department's Drinking Water program to evaluate current and former state airports for potential risk from exposure to PFAS in drinking water. CS staff conducted research, outreach, and drinking water sampling in Cordova, Dillingham, Kenai, King Salmon, Valdez, and Yakutat. When PFAS were detected above the action level, staff coordinated with DOTPF, Department of Administration (DOA) Risk Management Division, and the Department of Health and Social Services (DHSS). Through this coordination, the State of Alaska was able to immediately provide bottled drinking water, conduct additional sampling to define the extent of drinking water impacts, and conduct public outreach (including holding public meetings to answer questions in affected communities and providing information on State webpages).

Additionally, the Department continued working closely with the U.S. Air Force (USAF), City of Fairbanks, DOTPF, Alyeska Pipeline Services Co. and other responsible parties on their efforts to evaluate groundwater and drinking water for PFAS contamination, provide alternative drinking water, and work towards long term solutions for treated or alternative drinking water sources.

As of FY19, groundwater formerly used for drinking water in the communities of Dillingham, Fairbanks, Gustavus, King Salmon, and Moose Creek/Eielson Air Force Base contained PFAS concentrations above the LHA. Additional details on some of these response efforts are provided further in the report and drinking water sample results can be found here: https://dec.alaska.gov/spar/csp/pfas/sample-results/. As a result of these efforts, over 400 PFAS impacted drinking water wells have been identified and thousands of residents who had unknowingly been drinking PFAS contaminated water now have access to alternative drinking water.

Staff continued tracking nationwide information about PFAS toxicity, laboratory analytical methods, treatment technologies, regulatory standards and guidance, and public concerns. SPAR staff participated on the Interstate Technology and Regulatory Council (ITRC) PFAS work group along with state, federal, and industry counterparts. Staff also participated on the Association of State and

[1] 18 AAC 75.341, Table B1
[2] 18 AAC 75.345, Table C

Territorial Solid Waste Management Officials (ASTSWMO) work groups, which collaborate on environmental policy and regulatory issues, including PFAS, with EPA, the Department of Defense (DOD) and other stakeholders. Staff participated in regularly scheduled calls and web-meetings regarding PFAS with EPA and other states.

Staff coordinated with ITRC to provide PFAS and Petroleum Vapor Intrusion workshops to government employees, consultants and the public both in Fairbanks and Anchorage during April 2019. The workshops were very well attended and received.

FAIRBANKS INTERNATIONAL AIRPORT (FIA) PFAS

In the summer of 2018, the airport began construction of water mains and service connections to College Utilities for any residents with wells that contained PFAS above the EPA LHA of 70 parts per trillion for the sum of PFOS and PFOA. Most service connections were complete by the end of the 2018 field season. However, additional homes were connected during the 2019 field season, including homes that did not exceed applicable action levels but are in the affected neighborhood. Currently, all properties in the neighborhood that had wells are connected to public utilities regardless of PFAS concentrations, except a small number (<5) of locations where a unique solution is required due to homeowner concerns or where property owners were not responsive. The FIA, in conjunction with DOA Risk Management, continues to negotiate with these homeowners who have PFAS exceedances in their wells to determine a long-term drinking water solution. The FIA also completed construction of an impermeable cap over the fire training pit and its contents, which included PFAS-contaminated sediments that had accumulated within the pit in addition to contaminated soil that was excavated from a hotspot nearby. Prior to cap construction, the pit was dewatered, and the water treated at an NRC facility in Anchorage, which discharges to the Anchorage Wastewater Utility. The cap is intended to prevent water accumulation in the pit and migration of additional PFAS from this area by reducing infiltration. Additionally, FIA has begun a pilot study on the use of PlumeStop™, an activated carbon slurry product that is injected into the subsurface with the intent of stopping the migration of contaminants through the area of injection. If effective, the pilot project may be scaled up and used to prevent or limit PFAS migration at hotspots throughout the plume and may be applied at other PFAS contaminated sites as well.

EIELSON AIR FORCE BASE (AFB)

CSP continued its regulatory oversight and partnership with the United States Air Force (USAF) and U.S. Environmental Protection Agency (EPA) to ensure proper management of contaminated sites at Eielson Air Force Base. Extensive community and agency coordination continued throughout FY19 regarding a significant PFOS and PFOA plume in groundwater that was discovered in 2015. PFOS and PFOA contaminated groundwater has migrated off base into the Moose Creek community. Since that time, upgrades to the Eielson AFB water treatment plant and efforts to provide alternate water or treatment systems to residential well users in Moose Creek have addressed the drinking water exposure pathway. An "Interim Record of Decision for Community of Moose Creek, Alaska, Long Term Water Supply" was finalized in June 2019, and describes the USAF's intent to expand the City of North Pole's public drinking water system to the community of Moose

Creek. Public meetings in Moose Creek have been ongoing to keep water-users informed. The current schedule calls for breaking ground on the water system expansion in Spring 2020, with an anticipated completion date of Fall 2021. Also, in 2019, CSP requested sampling of the surface waters that are adjacent to and within the Eielson AFB-Moose Creek PFOS/PFOA plume as part of the USAF's expanded site inspection effort. The USAF has agreed to the surface water sampling, and the results will provide valuable information about the extent of contamination and the potential for exposure to people and ecological receptors. In 2019, the USAF continued to build and prepare to receive the F-35A Fighter Squadrons, and CSP staff worked closely with the USAF to expeditiously review work plans to ensure timely, appropriate management of contamination during construction. Previously unknown PFAS contaminated soil was identified during the construction project and was stockpiled for future treatment or disposal. Additionally, as noted below in Chart Set #4, during construction dewatering approximately 4.6 million gallons of PFAS contaminated groundwater was removed and subsequently discharged back on Eielson AFB property effectively causing re-infiltration in the original area of contamination. While significant, the environmental impact was less than if it had been a new release.

NRC Alaska Moose Creek Facility Thermal Remediation of PFAS Contaminated Soil

The Moose Creek Facility was established in North Pole, Alaska in 1990 by OIT, Inc. (OIT) to thermally treat petroleum contaminated soils and other related materials. The Moose Creek Facility was acquired by NRC, Alaska, LLC in April of 2019. In November of 2017 OIT completed a preliminary test trial of the thermal remediation of PFAS-contaminated soil. The test trial was completed to demonstrate proof of concept and to evaluate operational requirements to thermally remove per- and poly fluoroalkyl substances (PFAS) from contaminated soil on a commercial scale. The results demonstrated PFAS could be removed from the soil to below levels of concern. A second test trial was completed in May of 2018 to evaluate operating capacities, establish operational procedures, and quantify air emissions. Data collected during the 2018 test trial again indicated successful treatment and was used to prepare plans and a permit application to comply with the Department's Air Quality and Spill Prevention and Response requirements in treating PFAS contaminated soil. An Air Quality Control Minor Permit (AQ0325MSS02) was issued in March of 2019, and the existing Facility Operations Plan was revised to allow remediation of PFAS-contaminated soils and subsequently approved in April of 2019. Following regulatory approval, the facility began commercial operations to treat PFAS-contaminated soil. For more information visit: https://dec.alaska.gov/spar/csp/pfas/air-quality/.

North Pole Refinery

The sulfolane groundwater contamination originating from the former North Pole Refinery continues to be one of the largest contaminated groundwater plumes in the State, impacting 500-600 homes in the greater North Pole area. The State of Alaska filed suit against Flint Hills Resources Alaska and Williams Alaska Petroleum, Inc. in 2014, over the presence of sulfolane in groundwater. In early 2017, the State of Alaska, the City of North Pole and Flint Hills Resources settled legal activities to provide for the expansion of the City's public piped water system. The expanded piped water distribution will serve neighborhoods already impacted by sulfolane contamination, as well as those that may be impacted in the future. Construction of the expanded system began in 2018 and

Phase I/II was completed in 2019. Nearly 200 impacted properties have been hooked-up to the utility, and additional properties will be hooked-up throughout CY 2020. The State of Alaska's legal claims against the former refinery operator, Williams, went to trial in October 2019 in Alaska Superior court and the judge issued his decision on the case, in favor of the State, in early January 2020.

Chronic toxicology studies of sulfolane undertaken by the National Toxicology Program were completed and some preliminary results were reported in 2019, but additional conclusions are not expected to be available until 2020 or later. Monitoring for sulfolane in groundwater continues both on the refinery property, and off the property in the greater North Pole area. Because a former fire training center was on the refinery property, where fire-fighting foams were used in the past, the Department conducted some limited sampling of water wells within the vicinity of the sulfolane plume and piped water expansion footprint, to understand the distribution of PFAS compounds in North Pole area groundwater. Results demonstrate that point-of-entry water treatment systems installed by Flint Hills Resources in residential homes for sulfolane removal also remove PFAS from well water to below the Department's Actions Levels; PFOS and PFOA were not detected in treated drinking water. Additional PFAS, however, have been detected in North Pole area groundwater. The Department is working with parties responsible for the contamination to further define the PFAS plume off the former North Pole Refinery property.

WRANGELL JUNKYARD

On April 19, 2019, CSP issued a cleanup complete determination for the Wrangell Junkyard lead contaminated site. This marks the conclusion of the department's effort to address the risks at this site dating back to 2000, when CSP staff first conducted a site inspection. In the intervening years, the Department partnered with EPA and the City and Borough of Wrangell to establish the degree and extent of contamination from lead, other heavy metals, PCBs and petroleum from this former unpermitted salvage site that had operated since the 1960s. Extensive lead contamination covered the 2.51-acre site with levels as high as 155,000 mg/kg, and lead and other contaminants were found on three adjacent properties and leaching into the nearby intertidal area where recreational shellfish gathering occurs. In 2015, when EPA determined that funding could not be made available for a Time Critical Removal Action, the Department initiated state-lead cleanup through a term contract with NRC Alaska using the emergency response account of the Oil and Hazardous Substances Release Prevention and Response Fund. The volume of lead contaminated soil found was ultimately more than four and a half times the EPA's initial estimate. The 2016 Department-led cleanup excavated all contaminated soil at the site and adjacent properties to residential cleanup levels and stabilized it with a product called EcoBond, which rendered the material no longer a Resource Conservation Recovery Act (RCRA) hazardous waste. By the fall of 2018, the Department's contractors had shipped some 30,000 tons of

Final site conditions at Wrangell Junkyard in October 2018. (Photo/NRC Alaska)

contaminated soil, wastes, and debris from the site to a disposal facility in the Lower '48. The total cost to clean up and restore the site was approximately $17.5 million. The property is now ready for beneficial reuse and redevelopment by the City and Borough of Wrangell to support the community's economic development goals.

BPXA Resource Conservation and Recovery Act (RCRA) Administrative Order on Consent for Prudhoe Bay Unit

In 2007, BPXA entered an Administrative Order on Consent (AOC) with the EPA RCRA Program. The AOC outlines requirements that must be met by BPXA as operator of the Prudhoe Bay Unit facility, which is an onshore oil and gas field on the North Slope utilized for development and production of oil and gas. In FY19, CS reviewed and commented on site-specific documents, as well as documents applicable to the entire AOC. Finalizing these documents requires extensive coordination with EPA, BPXA and its partners and consultants, the Department's Solid Waste Program, and DNR. Staff worked closely with the parties to plan and oversee site work to fully characterize and cleanup or properly manage contaminated media in accordance with state requirements.

Kotzebue Former HIS/BIA Hospital-School Pipeline Release

CS continued to host technical working group meetings during FY19 to identify the next steps for the project and engage responsible parties. In winter 2018/2019, the technical working group completed an updated tank and pipeline inventory for the entire site. During summer 2019, the Indian Health Service (IHS) in collaboration with Maniilaq Association and Bureau of Indian Affairs (BIA) developed and implemented a groundwater characterization and underground storage tank (UST) removal work plan. The UST adjacent to Lot 4 of the property was removed and contaminated soil was removed from around the tank. The contaminated soil is being treated locally in an offsite land farm. Pre-existing groundwater monitoring wells were located, re-surveyed, and sampled for petroleum. A groundwater report is forthcoming in FY20.

Pitka's Point

CS coordinated with DCCED and the Alaska Department of Education and Early Development (DEED), to conduct characterization at the former Pitka's Point school and adjacent buildings which comprise the site. DEED worked with DOTPF to hire a contractor to write a site characterization work plan, conduct field work, and to write a report. Field work conducted in 2019 included removal for 750 cubic yards of contaminated soil along with asbestos abatement and facility demolition. The characterization report is forthcoming in FY20. Upon completion of the cleanup, the property will remain in Municipal Land Trust ownership.

Former APA Cannery (Ugashik)

During October 2018, CSP finalized a compliance order by consent (COBC) with Big Heart Pet Brands addressing characterization and cleanup of the Former Alaska Packers Association Cannery in Ugashik. Big Heart Pet Brands is a successor in interest of the former operator. In accordance with the COBC, Big Heart Pet Brands submitted a work plan for characterization and cleanup of lead contaminated soil at the site. It removed an estimated 101 cubic yards of lead contaminated soil from the property in summer 2019. In addition, Big Heart Pet Brand emptied the historic above ground storage tanks of bunker C fuel, cleaned them, and disposed of the fuel off site. Approximately 40,000 gallons of bunker fuel was removed. Big Heart Pet Brands developed and provided the current property owner with a Department-approved work plan to assist them in completing the remaining characterization and cleanup of fuel contamination on the property.

Red Devil Mine

In FY19, CS staff worked with staff from Bureau of Land Management (BLM), EPA, DNR, and the Department's Solid Waste Program to complete the Remedial Investigation/Feasibility Study (RI/FS) phase of the site cleanup. Since the start of the RI/FS phase in 2010, several technical issues arose where CSP disagreed with BLM. In FY19, great strides were made in resolving almost all the issues. In FY20, CSP will participate in BLM's public meetings in Kuskokwim River villages to gather community input on the proposed cleanup alternative for the site.

500-lb bomb uncovered by US Navy personnel in Adak during munitions cleanup work. (Photo/US Navy)

Adak Former Naval Complex

The Former Adak Naval Complex, Operable Unit B-2 (OUB-2) Non-Time Critical Removal Action (NTCRA) for unexploded ordnance began in 2013 with an anticipated duration of two years. Due to the significantly larger amount of ordnance being recovered than anticipated and difficulty in working in the marshy tundra areas, the project completion date has continuously been extended. During removal activities in 2019, two 500-lb bombs were unexpectedly encountered. This type of ordnance has not previously been found in the area, was not anticipated and cannot be excavated using operator-driven equipment. Based on the discoveries, removal operations were halted for 2019 and will re-start in 2020 using remote controlled excavators. These changed conditions are anticipated to extend the project through 2021 at a minimum.

The Navy, in consultation with the Department and EPA, is undertaking a review of all 65 open Adak sites to determine whether the established paths forward for each requires revision in the context of risk, exposure, the monitoring data, regulatory updates and emerging contaminants. A

series of meetings are planned in 2020 to review the sites leading into the next Five-Year Review (planned for 2021).

HOME HEATING OIL TANK PILOT PROJECT

CSP staff continued to work with homeowners under the Home Heating Oil Tank (HHOT) Pilot Project to assist with responding to heating oil releases that would cause an undue financial burden. CSP provided site characterization and response work at two residential properties in Fairbanks and one in Houston where the owners were determined to have an inability to pay for the necessary response. Staff continued outreach to other homeowners with HHOT spills and offered technical assistance and guidance on the investigation and cleanup process.

BROWNFIELDS PROGRAM

The CS Brownfields program is conducted under a Cooperative Agreement with the Environmental Protection Agency (EPA). Brownfields program staff continue to coordinate and network with EPA, municipalities, tribes, and tribal response programs (TRPs) to address contamination challenges throughout Alaska's communities and support reuse and redevelopment opportunities at brownfields sites. In response to requests by TRPs, Brownfields staff provided a two-day conference on a variety of contaminated site issues to 25 TRP staff and tribal members. Collaboration has continued with Alaska regional and village Native Corporations and federal agencies to seek solutions to contaminated lands conveyed from the federal government to Alaska Native Corporations under the Alaska Native Claims Settlement Act (ANCSA). The initial 2016 outreach efforts evolved into development of the Contaminated Lands Partnership Working Group in coordination with the Alaska Native Tribal Health Consortium, representatives from the Statement of Cooperation (SOC) agencies[3], ANCSA village and regional corporations, tribes, and other interested entities. The Department continues to verify the accuracy of ANCSA conveyed contaminated sites listed in the Bureau of Land Management (BLM) report to Congress (2016), coordinate with federal agencies on site lists, and incorporate appropriate site information into the Contaminated Sites database. Brownfields staff provided technical assistance to the Municipality of Anchorage, Kodiak Island Borough, and Matanuska-Susitna Borough for their efforts conducting site characterization and cleanup planning under their EPA coalition community wide assessment grants. Brownfields staff also provided technical assistance on four EPA Targeted Brownfield Assessments; including the Old Matanuska Town Site, Kathy O Mobile Home Park, L&L Mobile Home Park, and South Park Estates.

A significant cornerstone of the Brownfields program is the Department's Brownfield Assessment and Cleanup (DBAC) services that CSP provides to municipalities, native corporations, tribes, and non-profits to support community projects on brownfields sites. In FY19, CSP provided DBAC services in ten communities, including Chevak, Circle, Delta Junction, Gakona, Golovin, Kake, Kasaan, Klawock, Ruby, and Tanana.

[3] Statement of Cooperation – agreement between DEC, EPA, Department of Defense Agencies in Alaska, Alaska Air and Army National Guard, Federal Aviation Administration, U.S. Coast Guard, U.S. Department of Interior, U.S. Forest Service, and the Denali Commission to work together to protect human health and the environment and address and resolve environmental issues in Alaska.

6.0 TABLES, CHARTS, GRAPHICS, AND STATISTICS

Some spill cases involve releases of multiple substances. There were 1,947 spill cases which resulted in 1,966 oil and hazardous substance releases.

Some releases (such as gases and solids) are reported in pounds rather than gallons. For graphing purposes, spill quantities reported in pounds were converted to gallons using an estimated conversion factor.

TABLE 1: SPILL CASELOAD SUMMARY	
New spill cases (total spills reported in FY19)	1,947
Oil and hazardous substance releases (some spill cases involve releases of multiple substances)	1,966
New spill cases characterized by highest level of ADEC response:	
1) Field visit	139
2) Phone follow-up	463
3) Took report	1,345
Cases Carried Over from Previous Fiscal Years	300
Cases Closed in FY19 (does not include cases transferred to CS)	1,678
Cases where oversight costs were billed to the responsible party (cost recovery)	248
Enforcement Actions - Notice of Violation (NOV)	1
Enforcement Actions – Referral to LAW / Environmental Crimes Unit	0

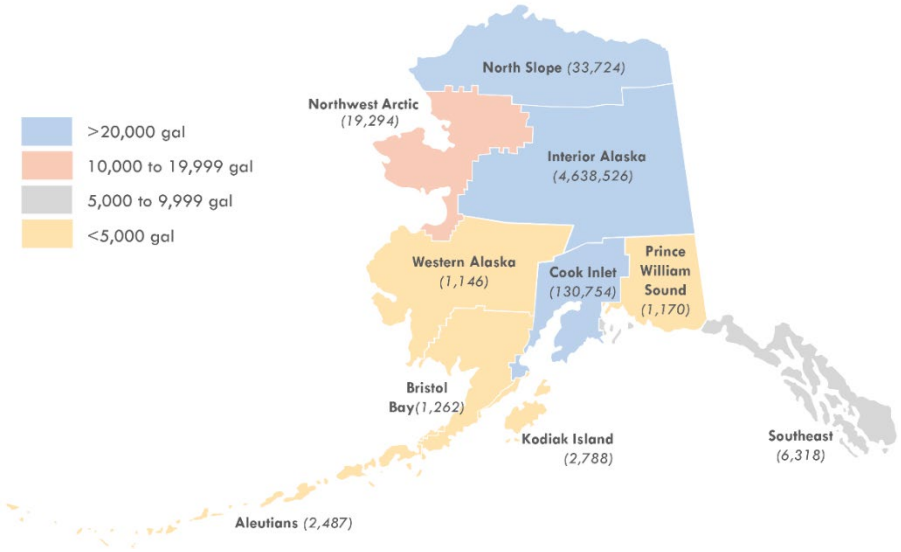
TABLE 2: OIL DISCHARGE PREVENTION AND CONTINGENCY (ODPCP) PLANS	
Total Active Plans	129
New Plans	0
Plan Renewals (plans are renewed every 5 years)	9
Major Plan Amendments	3
Other ODPCP Applications (includes vessel additions and short-term approvals)	19
Exercises	44
Inspections	21
Enforcement Actions - Notice of Violation (NOV)	1
Enforcement Actions – Referral to LAW / Environmental Crimes Unit	0

TABLE 3: NONTANK VESSEL (NTV) CONTINGENCY PLANS	
Total Active NTV Plans	215
New Plans	92
Plan Renewals (plans are renewed every 5 years)	81
Plan Amendments	6
Inspections	11
Enforcement Actions - Notice of Violation (NOV)	0
Enforcement Actions – Referral to LAW / Environmental Crimes Unit	1

TABLE 4: FINANCIAL RESPONSIBILITY CERTIFICATES (RENEWED ANNUALLY)	
Oil Discharge Prevention and Contingency Plan (ODPCP) for facilities	338
Nontank Vessels (NTV)	227
Underground Storage Tanks (UST) for facilities	266
Enforcement Actions - Notice of Violation (NOV)	3
Enforcement Actions – Referral to LAW / Environmental Crimes Unit	0

TABLE 5: PRIMARY RESPONSE ACTION CONTRACTORS (PRAC)	
New Registration and Renewals	5

GRAPHIC 1: TOTAL SPILL VOLUME BY GEOGRAPHIC ZONE FY19



GRAPHIC 2 AND TABLE 6: 10 LARGEST RELEASES IN FY19

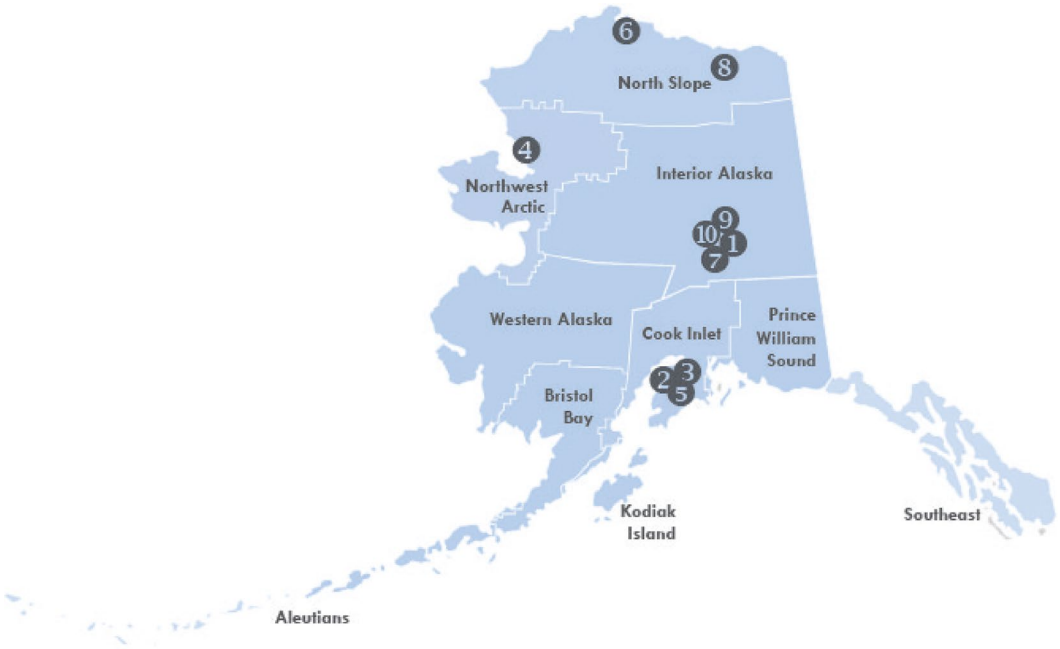
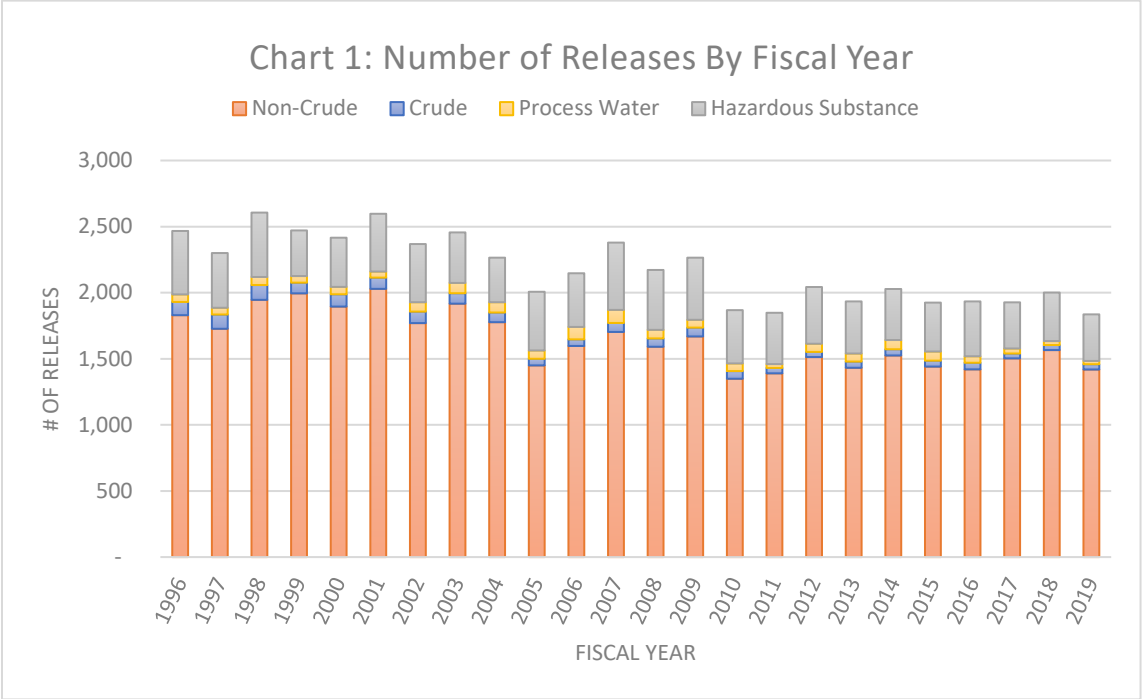


TABLE 6: LARGEST RELEASES IN FY19

MAP KEY	SPILL DATE	SPILL NUMBER	SPILL DESCRIPTION	PRODUCT	GALLONS
1	7/31/18	18309921202	Eielson Air Force Base PFOS/PFOA water discharge	PFOS/PFOA Hazardous Water	4,600,000
2	11/30/18	18239933411	International Airport AFFF water discharge system test	AFFF Hazardous Water	90,000
3	11/30/18	18239933409	Northwood Maintenance Facility, Magnesium chloride solution	De-Icer Solution	20,000
4	11/18/18	18389932001	Teck Alaska Inc. Red Dog Mine equipment failure	Lead Tailing Slurry	10,000
5	9/28/18	18239927101	International Airport, Alaska Airlines test release	AFFF Hazardous Water	8,000
6	1/6/19	19399900601	Hilcorp Milne Point, release of drilling brine from MoosePad	Drilling Muds	5,166
7	9/24/18	18309926703	Fort Knox Gold Mine flocculent release	Process Water & Contaminated Soil	5,000
8	11/27/18	18399933101	Released at 34k feet Jet A fuel by Air Canada over Arctic NWR[1]	Aviation Fuel	4,925
9	5/23/19	19309914302	Fort Wainwright, High Expansion Foam (HEF) and water mix	HEF Hazardous Water	4,000
10	8/21/18	18309923301	Eielson AFB release of PFOS/PFOA Water Mix	PFOS/PFOA Hazardous Water	3,600

[1] Fuel was presumed to have vaporized before impacting state and federal (Arctic National Wildlife Refuge) lands and/or waters.

CHARTS 1 AND 2: RELEASES AND VOLUME BY FISCAL YEAR



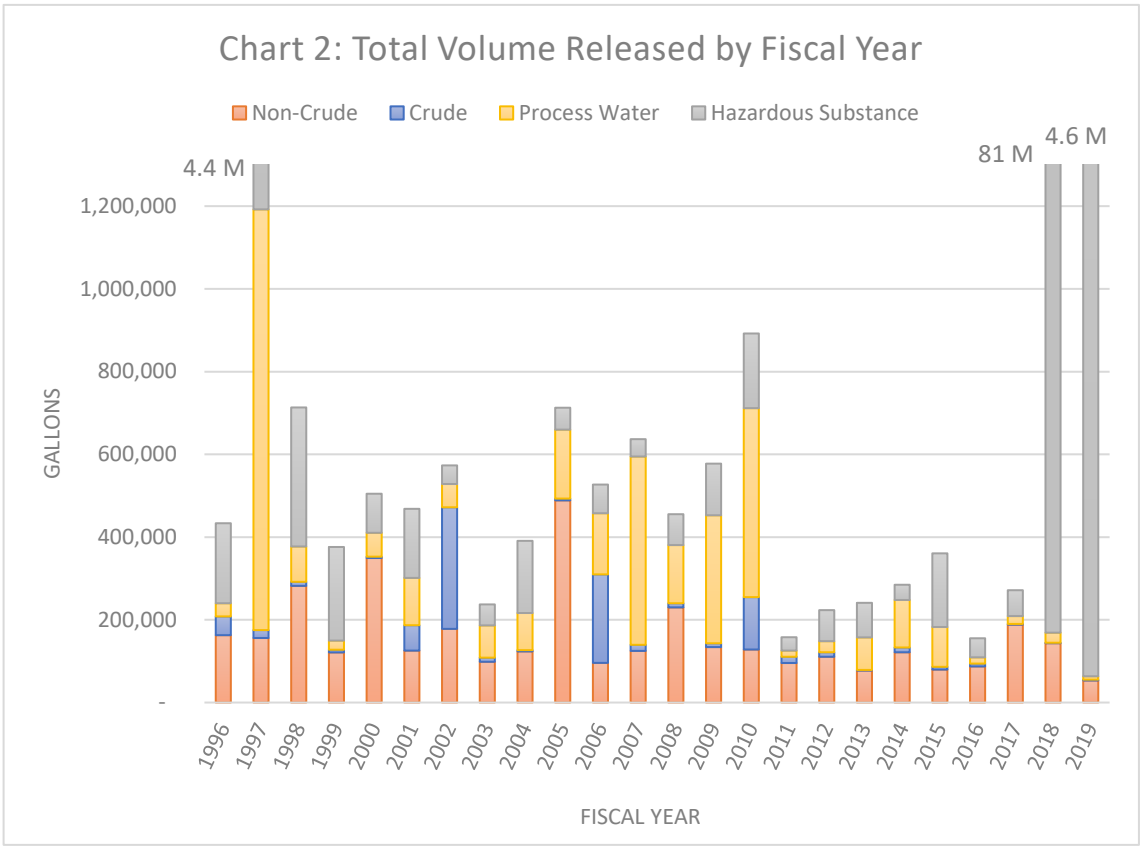
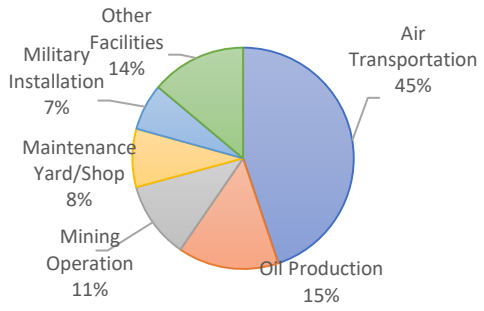


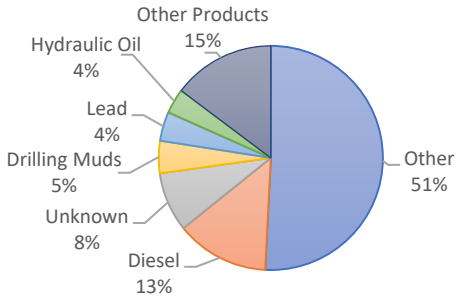
CHART SET 1: ALL PRODUCTS[1]

Oil and Hazardous Substances Releases: 1,966; Total Gallons: 4,838,009

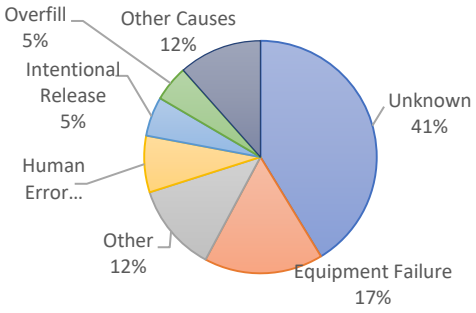
VOLUME RELEASED BY FACILITY TYPE



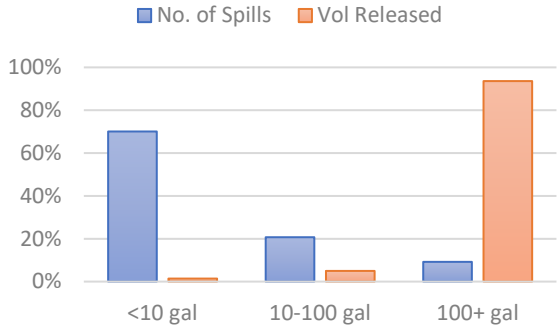
VOLUME RELEASED BY PRODUCT TYPE[2]



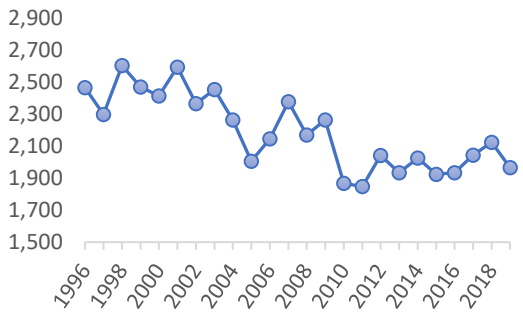
VOLUME RELEASED BY CAUSE[3]



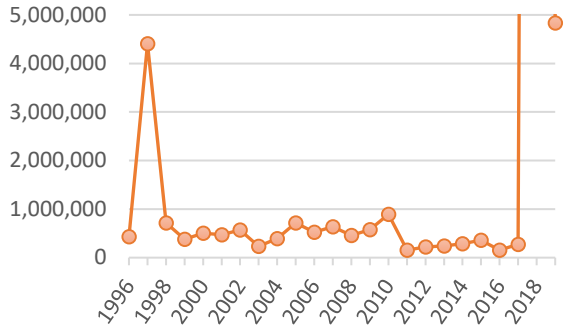
RELEASE TOTALS BY VOLUME CLASS



NUMBER OF RELEASES BY FISCAL YEAR



TOTAL VOLUME RELEASED BY FISCAL YEAR[4]



[1]For display purposes, charts 1-4 excludes the FY19 4.6 million-gallon PFOS/PFOA hazardous water discharge. All the remaining reported PFOS/PFOA or AFFF releases are currently categorized as "Other."

[2] Products <3% of the total volume are combined as "Other Products" for all FY19 data summaries. Product type "Other" represents spills of substances not specifically tracked in our database, most notably it includes PFOS/PFOA and AFFF releases. Database improvements will allow for those substances to be reported separately in the FY20 annual report.

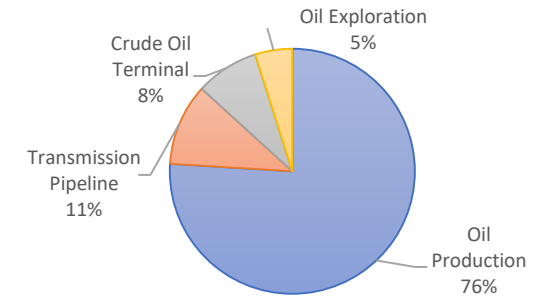
[3]Causes responsible for <3% of the total spills are combined as "Other Causes" for all FY19 data summaries. Cause Type "Other" represents causes not specifically tracked in our database.

[4]In 2018 and 2019 the large spikes are due to the 81 million and the 4.6 million gallons of PFOS/PFOA hazardous water discharge at Eielson Air Force Base; the large spike in 1997 is the result of two large spills, one in January when the Barge Oregon capsized and lost 25,000,000 pounds of Urea (solid) and the other in March when 995,400 gallons of sea water were released at ARCO DS-14 in Prudhoe Bay.

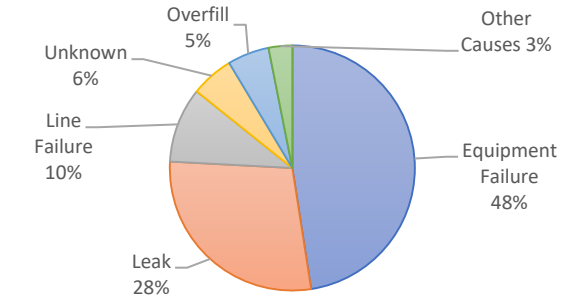
CHART SET 2: CRUDE OIL

Crude Oil Releases: 40; Total Gallons: 2,039

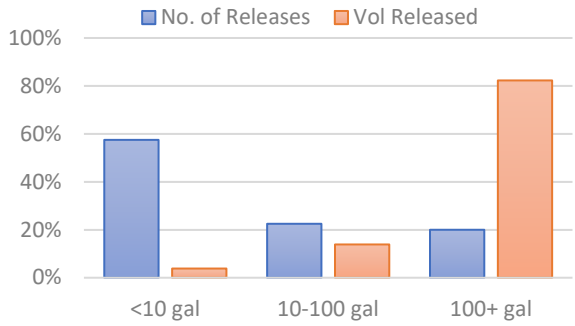
VOLUME RELEASED BY FACILITY TYPE



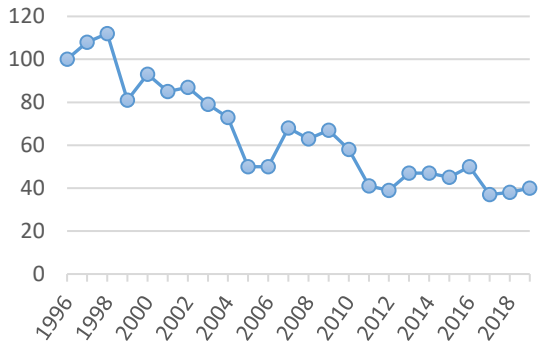
VOLUME RELEASED BY CAUSE



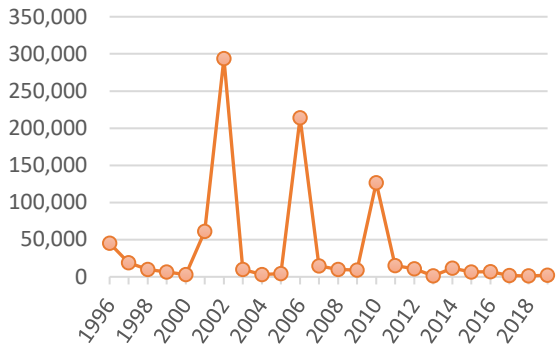
RELEASE TOTALS BY VOLUME CLASS



NUMBER OF RELEASES BY FISCAL YEAR



TOTAL VOLUME RELEASED BY FISCAL YEAR[1]

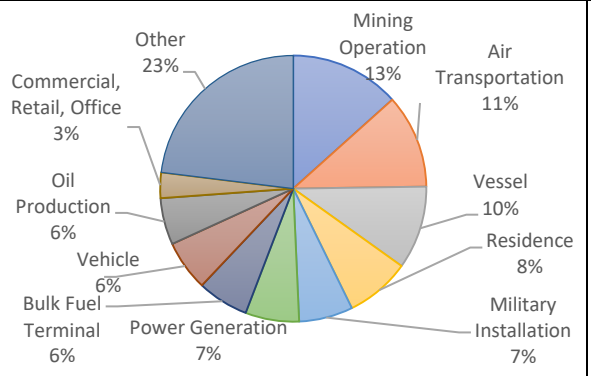


[1] The largest spill volumes resulted from a) Trans Alaska Pipeline (TAPS) bullet hole 285,600 gallons release on 10/4/2001, b) BP GC-2 oil transit line release of 212,252 gallons on 3/2/2006, and c) TAPS pump station 9 released 108,360 gallons on 5/25/2010 to secondary containment.

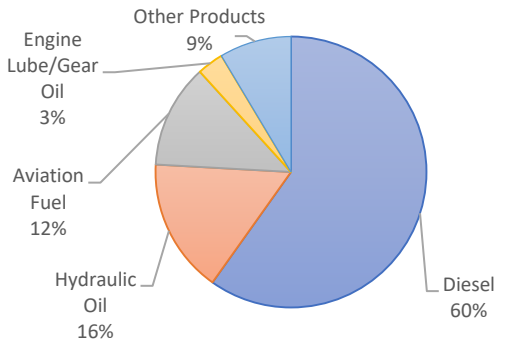
CHART SET 3: NON-CRUDE OIL

Non-Crude Oil Releases: 1,419; Total Gallons: 53,399

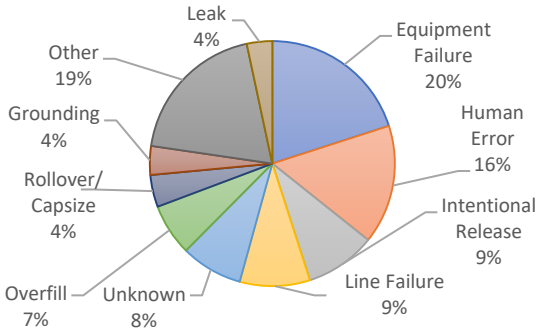
VOLUME RELEASED BY FACILITY TYPE



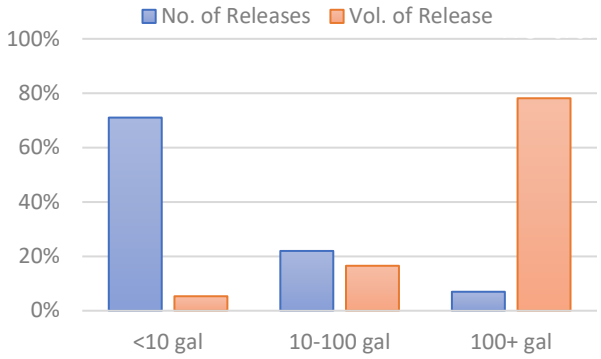
VOLUME RELEASED BY PRODUCT TYPE



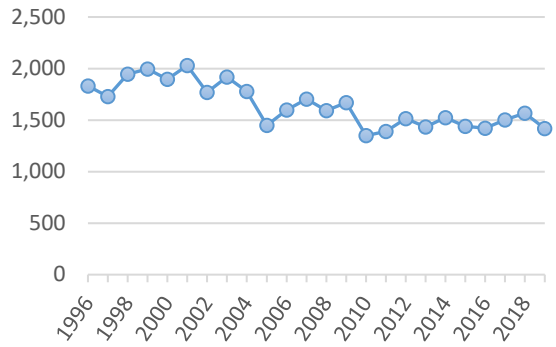
VOLUME RELEASED BY CAUSE



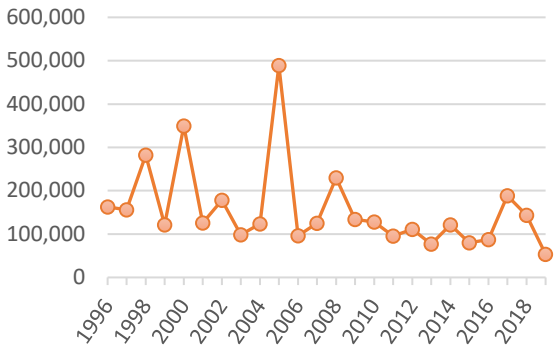
RELEASE TOTALS BY VOLUME CLASS



NUMBER OF RELEASES BY FISCAL YEAR



TOTAL VOLUME RELEASED BY FISCAL YEAR[1]

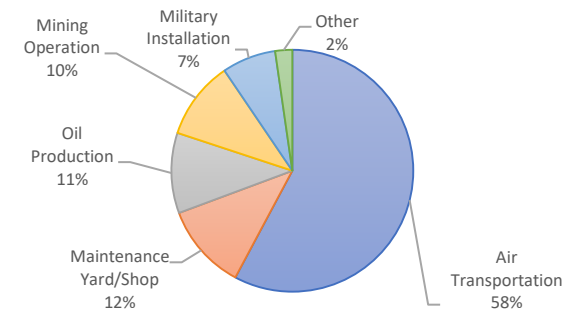


[1] The large spike in spill volume was the result of the breaking apart of the *M/V Selendang Ayu* on 12/8/2004 (FY05), which released 321,052 gallons of intermediate fuel oil 380 and 14,680 gallons of diesel.

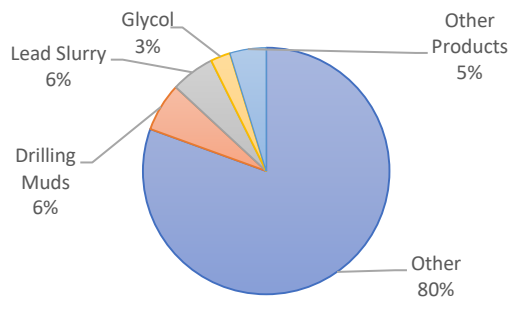
CHART SET 4: HAZARDOUS SUBSTANCES[1]

Hazardous Substance Releases: 532; Total Gallons: 4,774,091

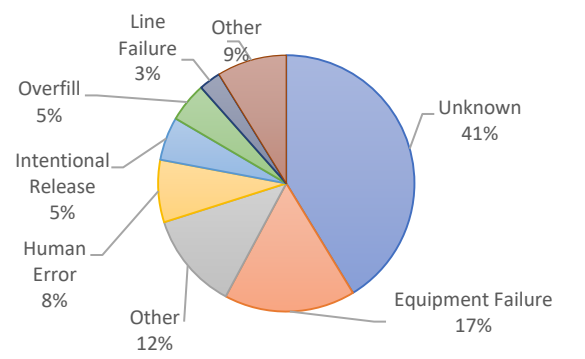
VOLUME RELEASED BY FACILITY TYPE



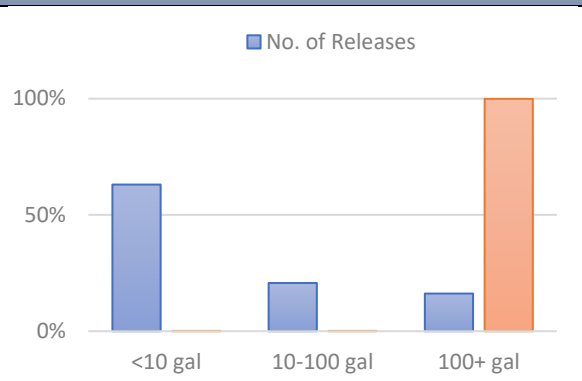
VOLUME RELEASED BY PRODUCT TYPE[2]



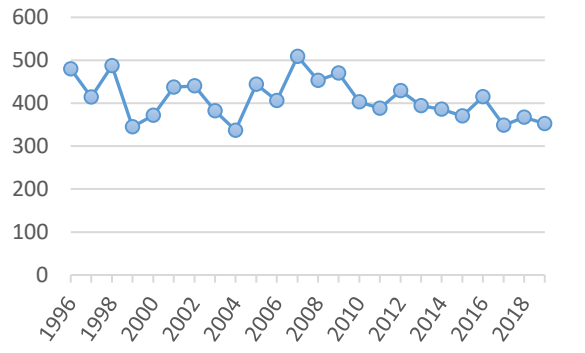
VOLUME RELEASED BY CAUSE



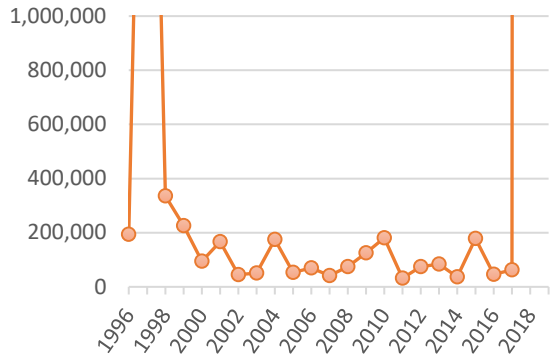
RELEASE TOTALS BY VOLUME CLASS



NUMBER OF RELEASES BY FISCAL YEAR



TOTAL VOLUME RELEASED BY FISCAL YEAR[3]

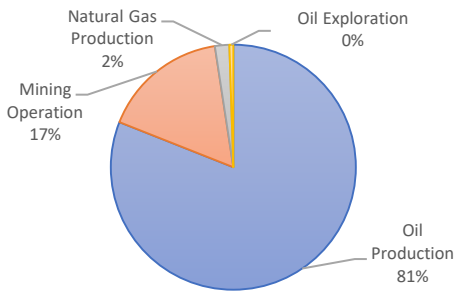


[1] For display purposes, charts 1-4 do not include the 4.6 million-gallon PFOS/PFOA hazardous water discharge.
[2] Products <3% of the total volume are combined as "Other Products" for all FY19 data summaries. Product type "Other" represents spills of substances not specifically tracked in our database, most notably it includes PFOS/PFOA and AFFF releases. Database improvements will allow for those substances to be reported separately in the FY20 annual report.
[3]The large spike in spill volume from 4.6 million-gallon (FY19) and 81 million-gallon (FY18) PFOS/PFOA hazardous water discharge that occurred at Eielson Air Force Base; the large spike in 1997 resulted from a spill in January when a barge capsized and lost 25,000,000 pounds of Urea (solid).

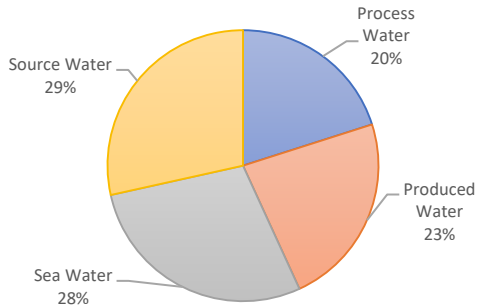
CHART SET 5: CONTAMINATED WATER

Contaminated Water Releases: 25; Total Gallons: 8,078

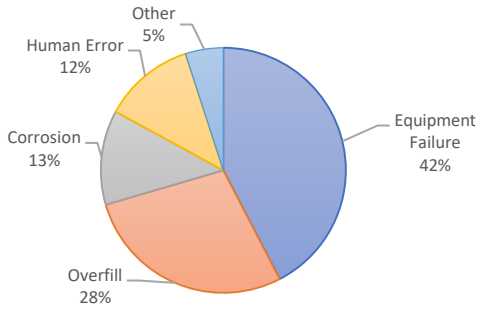
VOLUME RELEASED BY FACILITY TYPE



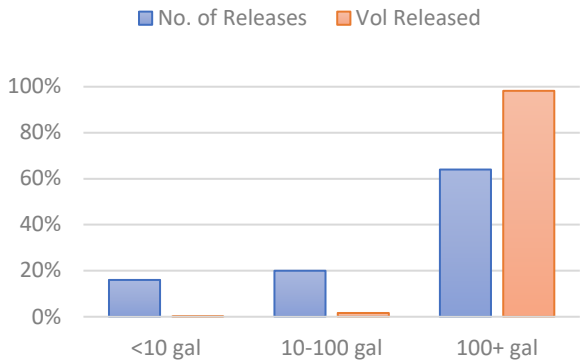
VOLUME RELEASED BY PRODUCT TYPE[1]



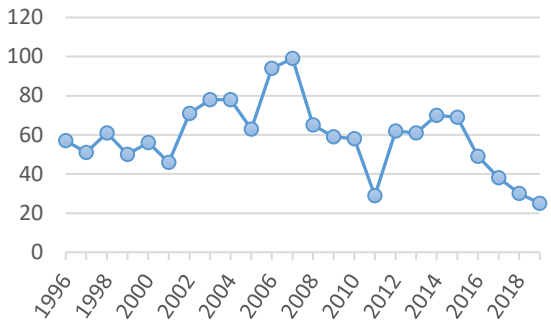
VOLUME RELEASED BY CAUSE



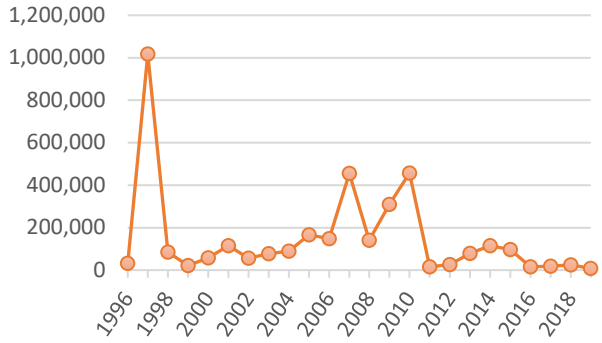
RELEASE TOTALS BY VOLUME CLASS



NUMBER OF RELEASES BY FISCAL YEAR

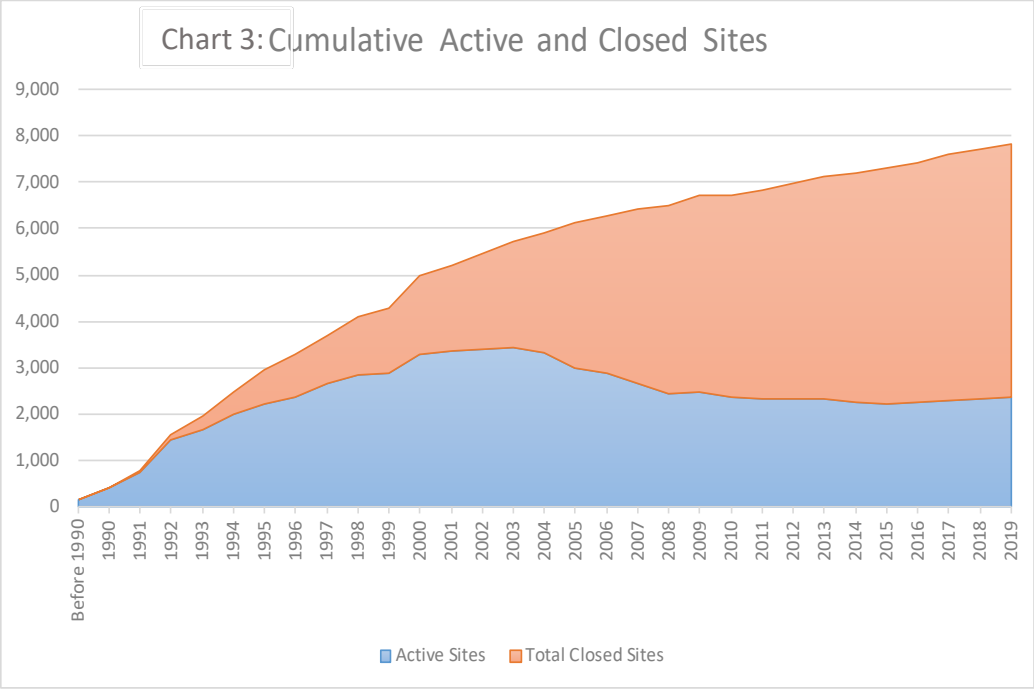


TOTAL VOLUME RELEASED BY FISCAL YEAR

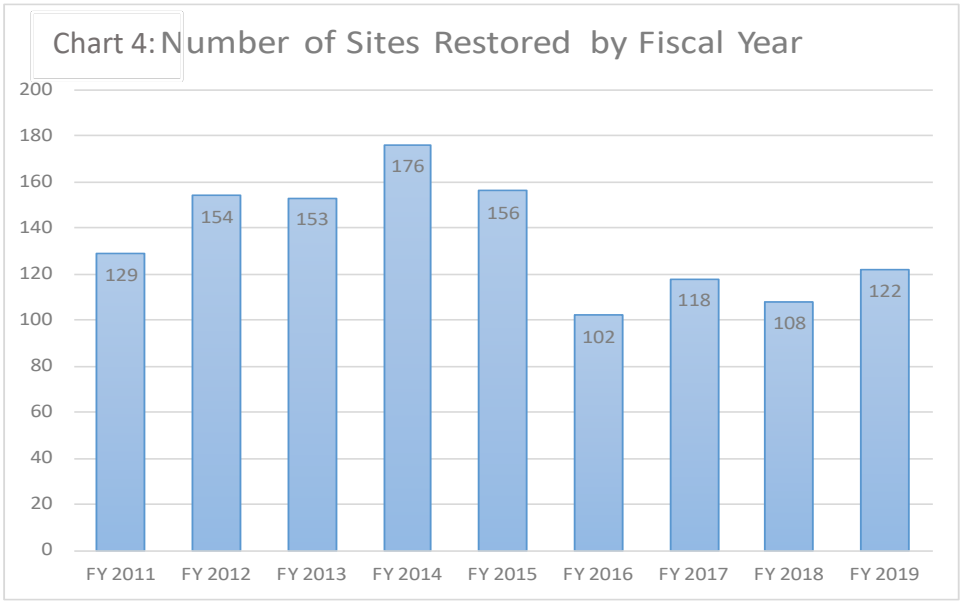


[1] Process Water: water used in industry processes that contains hazardous chemicals; Produced Water: water is separated during crude oil processing and may contain <1% crude oil and have saline concentration similar to seawater; Source Water: in North Slope oil production, water is extracted from aquifers and injected into an oil formation to maintain pressure, it contains elevated levels of salt and is toxic to fresh water tundra vegetation; Sea Water: sea water spilled to freshwater environments in volumes >55gal are recorded.

CHARTS 3 AND 4: CONTAMINATED SITE INFORMATION BY FISCAL YEAR



This chart depicts the open and closed sites trend since 1990. In 2005, the number of closed sites exceeded the number of open sites. This gap has widened steadily since 2005, indicating measurable progress and improvement in methods for reducing risk at the thousands of legacy contaminated properties in Alaska.



This graph shows the number of contaminated sites where cleanup was determined to be complete by fiscal year. Since 2014 there has been a decline in the number of site closures due to several factors including a concerted focus on shifting efforts to addressing risks at the highest priority sites, where complete exposure pathways (such as contaminated groundwater used for drinking, or subsistence resources are impacted). However, cleanup and closure of these sites is often challenging and complex due to the type and extent of contamination, remote site locations, the existence of multiple responsible parties and a need to determine which will conduct the work and how costs will be allocated, and lack of willing or financially viable responsible parties to clean up the sites. During FY19, 15% of the site closures were risk-based closures that include institutional controls to limit future activities that could result in exposure to residual contamination and 85% of the closures were suitable for unrestricted future land use.

Chart 5 and Table 7: Contaminants of Concern at Current Active Sites

The chart and table show the percentage and number of current active sites that have been impacted by various contaminants of concern. Petroleum hydrocarbons are by far the most common contaminant and are present at 75% of the active sites and other hazardous substances are a concern at 25% of the active sites. It is interesting to note the PFAS has been identified as a contaminant of concern at only 4% of the active sites, however, PFAS have been found to have impacted more drinking water wells than any other contaminants, with the possible exception of sulfolane.

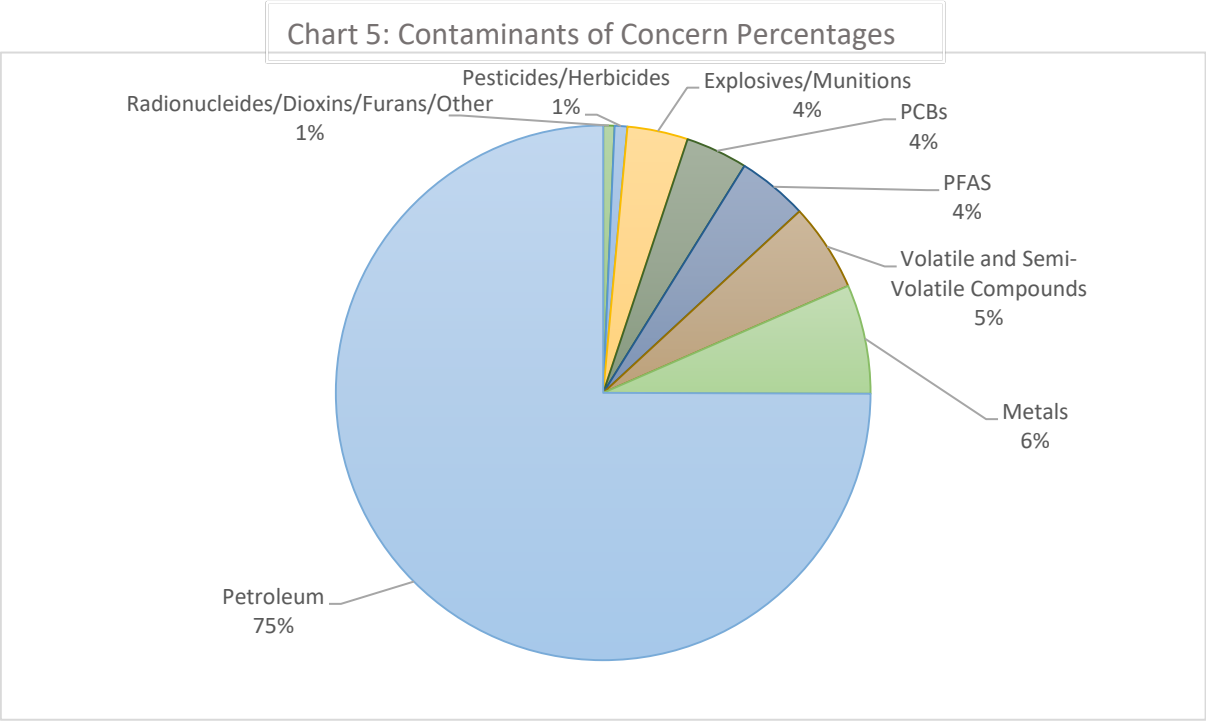


Table 7: Number of Sites with Contaminants of Concern

Contaminant of Concern	Number of Active Sites
Petroleum	1,759
Metals	155
Volatile and Semi-Volatile Compounds	125
PFAS	100
PCBs	88
Explosives/Munitions	86
Pesticides/Herbicides	18
Radionucleides/Dioxins/Furans/Other	16

7.0 ACRONYMS AND ABBREVIATIONS

A list of acronyms and abbreviations used frequently throughout this report can be found on our website at https://dec.alaska.gov/spar/reports.