

Stormwater Pollution Prevention Plan

for:

King Salmon Airport
King Salmon, Alaska
(907) 246-3325

SWPPP Contact(s):

Alaska DOT&PF
King Salmon Airport Manager
P.O. Box 65
King Salmon, AK 99613
(907) 246-3325
(907) 246-3023 (fax)

SWPPP Preparation Date:

1/18 / 2011

Contents

SECTION 1: FACILITY DESCRIPTION AND CONTACT INFORMATION	1
1.1 Facility Information	1
1.2 Contact Information/Responsible Parties.....	2
1.3 Stormwater Pollution Prevention Team	3
1.4 Activities at the Facility	3
1.5 General Location Map	4
1.6 Site Map.....	4
SECTION 2: POTENTIAL POLLUTANT SOURCES	4
2.1 Industrial Activity and Associated Pollutants	5
2.2 Spills and Leaks.....	5
2.3 Non-Stormwater Discharges Documentation	6
2.4 Salt Storage	6
2.5 Sampling Data Summary.....	7
SECTION 3: STORMWATER CONTROL MEASURES	6
3.1 Minimize Exposure.....	8
3.2 Good Housekeeping.....	10
3.3 Maintenance.....	11
3.4 Spill Prevention and Response.....	11
3.5 Erosion and Sediment Controls	13
3.6 Management of Runoff	14
3.7 Salt Storage Piles or Piles Containing Salt	14
3.8 MSGP Sector-Specific Non-Numeric Effluent Limits	14
3.9 Employee Training	15
3.10 Non-Stormwater Discharges	16
3.11 Waste, Garbage and Floatable Debris	16
3.12 Dust Generation and Vehicle Tracking of Industrial Materials	17
SECTION 4: SCHEDULES AND PROCEDURES FOR MONITORING	18
SECTION 5: INSPECTIONS	19
SECTION 6: DOCUMENTATION TO SUPPORT ELIGIBILITY CONSIDERATIONS UNDER OTHER FEDERAL LAWS	21
6.1 Documentation Regarding Endangered Species.....	21
6.2 Documentation Regarding Historic Properties.....	21
6.3 Documentation Regarding NEPA Review (if applicable)	21
SECTION 7: SWPPP CERTIFICATION	22
SECTION 8: SWPPP MODIFICATIONS	15
SWPPP APPENDICES	16
Appendix A – General Location Map and Site Map(s)	
Appendix B – 2008 MSGP	
Appendix C – NOI and Letters	
Appendix D – Visual Assessments	
Appendix E – Inspections	
Appendix F – Corrections	
Appendix G – Training	

Appendix H – Annual Report
Appendix I – Blank Forms
Appendix J – Miscellaneous
Appendix K – SPCC Plan (King Salmon)

SECTION 1: FACILITY DESCRIPTION AND CONTACT INFORMATION

1.1 Facility Information

Facility Information

Name of Facility: King Salmon Airport

Street: MP1 of the Alaska Peninsula Highway/ P.O. Box 65

City: King Salmon

State: AK

ZIP Code: 99613

County or Similar Subdivision: Bristol Bay Borough

Permit Tracking Number: _____ (if covered under a previous permit)

Latitude/Longitude (Use **one** of three possible formats, and specify method)

Latitude:

Longitude:

1. 58 ° 40 ' 35" N (degrees, minutes, seconds)

1. 156 ° 38 ' 55" W (degrees, minutes, seconds)

2. __ ° __. __ ' N (degrees, minutes, decimal)

2. __ ° __. __ ' W (degrees, minutes, decimal)

3. ° N (decimal)

3. ° W (decimal)

Method for determining latitude/longitude (check one):

USGS topographic map (specify scale: _____)

EPA Web site

GPS

X Other (please specify): FAA website

Is the facility located in Indian Country? **No**

If yes, name of Reservation, or if not part of a Reservation, indicate "not applicable." n/a _____

Is this facility considered a Federal Facility? **No**

Estimated area of industrial activity at site exposed to stormwater: 90 acres

Discharge Information

Does this facility discharge stormwater into an MS4? **No**

If yes, name of MS4 operator: _____

Name(s) of water(s) that receive stormwater from your facility: an unnamed creek runs through the airport, Eskimo Creek passes by the west end of the runway, both drain into the Naknek River which ultimately drains into Kvichak Bay.

Are any of your discharges directly into any segment of an "impaired" water? **No**

If Yes, identify name of the impaired water (and segment, if applicable): _____

Identify the pollutant(s) causing the impairment: _____

For pollutants identified, which do you have reason to believe will be present in your discharge? _____

For pollutants identified, which have a completed TMDL? _____

Do you discharge into a receiving water designated as a Tier 2 (or Tier 2.5) water? No

Are any of your stormwater discharges subject to effluent guidelines? No

If Yes, which guidelines apply? _____

Primary SIC Code or 2-letter Activity Code: 4581 (refer to Appendix D of the permit)

Identify your applicable sector and subsector: Sector S / S1

1.2 Contact Information/Responsible Parties

Facility Operator (s):

Name: Jay Knight, Alaska DOT&PF – Central Region

Address: King Salmon Airport MP

City, State, Zip Code: King Salmon, AK 99613

Telephone Number: (907) 246-3325

Email address: jay.knight@alaska.gov

Fax number: (907) 246-3023

Cell Phone: (907) 439-1129

Facility Owner (s):

Name: Troy Larue, Alaska DOT&PF – Central Region; Southwest District

Address: 4111 Aviation Drive

City, State, Zip Code: Anchorage, AK 99519

Telephone Number: (907) 269-0751

Email address: troy.larue@alaska.gov

Fax number: (907) 269-0750

SWPPP Contact:

Name: Jay Knight, King Salmon Airport Manager

Telephone number: (907) 246-3325

Email address: jay.knight@alaska.gov

Fax number: (907) 246-3023

Cell Phone: (907) 439-1129

SWPPP Preparer:

Name: Jennifer Hillman, Environmental Impact Analyst II

Telephone number: (907) 269-0714

Email address: Jennifer.hillman@alaska.gov

Qualifications: Jennifer has a B.S. in Environmental Policy, 4 years of experience working in a wide range of federal and state environmental policy issues, has achieved AK-CESCL certification (ID#10036), and completed SWPPP trainings through EPA including 'EPA's New Industrial Stormwater Permit: What You Need to Know about the MSGP 2008' and 'Monitoring and reporting for the 2008 MSGP'.

1.3 Stormwater Pollution Prevention Team

Staff Names	Individual Responsibilities
DISTRICT SUPERINTENDENT	Oversight of Airport Operations; SWPPP Implementation
AIRPORT MANAGER	Airport Operations, Control Measures and Corrective Actions, and Facility Inspections
CENTRAL REGION M&O ENVIRONMENTAL ANALYST	SWPPP Development, Facility Inspections and Annual Report
CENTRAL REGION M&O ENVIRONMENTAL SPECIALIST	SPCC Plan and Facility Inspections

1.4 Activities at the Facility

The King Salmon Airport is located just southeast of King Salmon, AK (Appendix A). The facility consists of one main 8,901-foot-long asphalt-surfaced runway (12/30) and a shorter 4,018-foot long asphalt-surfaced runway (18/36). There is also a 4,000-foot-long seaplane landing area designated NW/SE located on the Naknek River just south of the runways. There are 7 paved taxiways connecting the runways to several aprons: the 2 longer taxiways are 1,060 feet and 1,650 feet long, while the remaining 5 taxiways are between 385 feet and 650 feet in length. Leased areas are located along the 3 aprons. Outside activities include equipment fueling, runway maintenance, and deicing and sanding activities. Diesel fuel for equipment fueling is located in a 4,000 gallon aboveground storage tank (AST) located to the north of the Maintenance & Operations (M&O) building on a gravel surfaced area. Diesel fuel for heating the M&O building is located adjacent to the fueling tank in a 3,000 gallon AST. Pelletized urea and sand are stored indoors and the potassium acetate is stored in above ground storage tanks northeast of the runways (see Appendix A). Runway maintenance is limited to repainting runway markings (once a year) and sealing stress cracks in the asphalt surface (as necessary). These activities are performed in accordance with DOT&PF procedures and require dry weather. Deicing activities include mechanical plowing and the application of sand, urea, and potassium acetate on runways, taxiways, and aprons. Equipment maintenance takes place indoors in the Maintenance & Operations building, which has concrete floors and is located southwest of the runway intersection.

Drainage patterns for the King Salmon Airport are shown on figure(s) in Appendix A. There are 8 drainage areas at the King Salmon airport, which are designated as Watersheds A-H in Appendix A. Seven of these drainage areas have distinct outfalls and are designated as Outfalls A-H.

In general, storm water runoff from runways, taxiways, and aprons drains into grassy swales which parallel the runways. The storm water then either drains to isolated low vegetated areas or into one of several small unnamed creeks that eventually drain into the Naknek River. Flow in the vicinity of the maintenance building is part of Watershed A and is conveyed via sheet flow towards the south into a vegetated drainage ditch which flows to Outfall A.

1.5 *General Location Map*

The general location map for this facility has been placed in Appendix A.

1.6 *Site Map*

Site map(s) for this facility are placed in Appendix A.

SECTION 2: POTENTIAL POLLUTANT SOURCES

2.1 Industrial Activity and Associated Pollutants

Industrial Activity	Associated Pollutants
DOT&PF runway deicing and sweeping	Urea, E36 (potassium acetate), sand, sediment
DOT&PF equipment fueling	Diesel fuel, gasoline
DOT&PF snow removal	Diesel fuel, Hydraulic fluid
DOT&PF M&O building heating	Fuel oil
DOT&PF Fire fighting	Purple K (Potassium Bicarbonate)
DOT&PF Runway sanding/sweeping	Sand and sediment, hydraulic fluid, oils
DOT&PF Equipment maintenance	Hydraulic fluid, oil, diesel, anti-freeze
DOT&PF Float plane airport de-vegetation	Diesel fuel, hydraulic fluid
DOT&PF Runway maintenance	Paint, paint thinner, tar*, asphalt solvent, concrete*, crack sealant*
Tenant aircraft deicing	Propylene glycol
Tenant aircraft fueling & lubricants	Aviation fuel, lubricants

*Purchased commercially.

DOT&PF maintains Material Safety Data Sheets (MSDS) at the maintenance and airport stations which discloses uses and hazards associated with chemicals to prevent harm to human health and the environment including proper uses, clean-up, storage, and disposal.

2.2 Spills and Leaks

Areas of Site Where Potential Spills/Leaks Could Occur

Location	Outfalls
Vehicle fueling area	Outfall A
Snow storage area between apron and runway	Outfalls A, B and H

Description of Past Spills/Leaks

Date	Description	Outfalls
	No significant spills or leaks within last 3 years	

2.3 *Non-Stormwater Discharges Documentation*

The 2008 MSGP provides limitations on stormwater discharges under Subpart S 8.S.1. The MSGP 'authorizes stormwater discharges from only those portions of the air transportation facility that are involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling and lubrication), equipment cleaning operations or deicing operations.'

Specifically prohibited under Sector S (Air transportation) coverage of the MSGP is "discharge of aircraft, ground vehicle, runway and equipment washwaters; nor the dry weather discharge of deicing chemicals." Discharges associated with snowmelt are not dry weather discharges.

- Date of evaluation: July 1, 2010
- Description of the evaluation criteria used: Visual inspection of airport, airport perimeter, and all outfall locations during regular business hours and an average rain event.
- List of the outfalls or onsite drainage points that were directly observed during the evaluation: Outfalls A-H were observed.
- Different types of non-stormwater discharge(s) and source locations: Limited opportunity for non-stormwater discharge observation because the majority of non-storm water discharge is deicing fluids used during the winter season. One outfall location, location A, was observed to have non-storm water discharge. This is the outfall location for the maintenance shop drains.
- Action(s) taken, such as a list of control measures used to eliminate unauthorized discharge(s), if any were identified: No unauthorized discharges were observed at this time. The discharge from the shop drain is passed through an oil water separator before day lighting into a vegetated drainage ditch. See section 3.10 for further details.

2.4 *Salt Storage*

No salt is used at the airport facility for deicing purposes because these products are corrosive to aircraft surfaces and mechanical parts. Road salt is stored off site, approximately 100 yards south of the maintenance station in 2000 lb capacity super sacks. Salt is used on roads only.

Best Management Practice (BMP)	
Material Storage	<ol style="list-style-type: none"> 1. Salt is stored indoors or securely covered 2. Maintain the integrity of storage containers

2.5 *Sampling Data Summary*

Because this is the initial permit term for this facility, no stormwater discharge sampling data is available to report at this time.

SECTION 3: STORMWATER CONTROL MEASURES

3.1 *Minimize Exposure*

Due to fairly high average snowfall (approximately 45 inches) and relatively moderate coastal climate, urea is the primary deicing compound (average annual usage of 70 tons/year). Average use of E36 (liquid potassium acetate), which is restricted to Runway 12/30, is approximately 50,000 gallons/year. Sand is also used on all surfaces except Runway 12/20, alone or mixed with the deicers, to provide aircraft traction and to stretch deicers. The deicers are primarily only used on the runway itself, on an as-needed basis; mechanized clearing is the preferred method when weather conditions are suitable. Deicer storage is all located east of the runway intersection as shown in Appendix A. Potassium acetate is stored in three 50,000 gallon ASTs. Urea and sand are stored inside an adjacent storage building. Paints, solvents and other chemicals are stored within flammable storage lockers within the Utility Room at the south end of the State Shop; these lockers provide both fire and spill protection. Equipment or tools containing grease are stored in cabinets surrounding the maintenance bays, as are other combustibles such as motor oil stored in drums on racks.

DOT&PF airport equipment is all stored indoors in the SREB buildings at various locations around the airport and in the maintenance building. Equipment maintenance takes place indoors in the Maintenance & Operations building, which has concrete floors and is located southwest of the runway intersection. Equipment is kept in good working condition (minimizes leaks) and older equipment is replaced.

A spill kit available at the Maintenance & Operations building and an SPCC Plan is in place to minimize potential for fuel spills (Appendix K).

Best Management Practice (BMP)	
Deicing Runways and Pads	<ol style="list-style-type: none"> 1. Evaluate and optimize present chemical application rates 2. Use sand where possible to enhance friction 3. Plow and broom runways prior to application of deicing chemicals 4. Install and calibrate devices to meter the amount of pavement deicer being applied 5. Prioritize mechanical clearing when weather conditions are suitable 6. Use deicers which have less of an environmental impact (e.g. sodium formate and potassium acetate as opposed to urea and glycol). 7. Use ice detection systems 8. Ensure proper handling of deicing materials 9. Use airport traffic flow strategies and departure slot allocation systems
Materials Storage	<ol style="list-style-type: none"> 1. Store materials indoors.

	<ol style="list-style-type: none"> 2. Maintain integrity of storage containers 3. Create a centralized storage area for waste materials 4. Provide secondary containment around chemical storage areas 5. Locate storage areas away from high traffic areas and surface waters 6. Clearly label all containers 7. Provide fluid level indicators and maintain records of fluid levels to detect leakage 8. Properly dispose of chemicals that are no longer in use 9. Store and handle reactive, ignitable, or flammable liquids in compliance with applicable local fire codes, local zoning codes, and the National Electric Code. 10. Provide drip pans/pads where chemicals are transferred from one container to another to allow for recycling of spill and leaks. 11. Inspect storage containers 12. Train employees in spill prevention and control
<p>Vehicle and Equipment Storage</p>	<ol style="list-style-type: none"> 1. Store equipment indoors 2. Use drip pans under all vehicles and equipment for the collection of fluids 3. Use absorbents for dry cleanup for spills and leaks 4. Regularly sweep area to minimize debris on the ground
<p>Vehicle and Equipment Maintenance Areas</p>	<ol style="list-style-type: none"> 1. Perform all cleaning operations indoors or under covering when possible. Conduct the cleaning operations in an area with a concrete floor with no floor drainage other than to sanitary sewers or treatment facilities. 2. Park vehicles and equipment indoors or under a roof whenever possible and maintain proper control of oil leaks/spills. 3. Regularly inspect vehicles for leaks and maintenance needs. Use pans to collect leaks.

3.2 Good Housekeeping

Due to weather conditions, waste materials generated are kept indoors and/or in containers prior to proper disposal. Waste pick-up occurs on Wednesdays and scrap equipment is disposed of on an annual basis. Fuel tanks are fairly new and in good condition. Tanks and fueling area are regularly monitored for leaks and spills. Paved areas and maintenance shops are swept on a regular basis by M&O staff. In the event of spills or debris collections, sweeping will take place outside of the regular schedule.

Best Management Practice (BMP)	
Waste Management	<ol style="list-style-type: none"> 1. All waste is stored in a cover container in a central location 2. Regular waste pick up occurs 3. Proper disposal of damaged equipment 4. Proper disposal unused chemicals and fluids 5. Create a regular sweeping schedule to prevent build up of debris
Fuel Storage	<ol style="list-style-type: none"> 1. Maintain the integrity of storage containers 2. Use drip pans and absorptive materials beneath aircraft during fueling operations where leaks or spills can occur and where making and breaking hose connections. 3. Use fueling hoses with check valves to prevent hose drainage after filling 4. Provide spill kits and spill response trainings for personnel 5. Use spill and overflow detection devices 6. Clean up spills promptly 7. Store drums indoors when possible 8. Provide secondary containment for above ground storage tanks and drums 9. Clearly label contents 10. Regular monitoring for leaks and spills
Aircraft, ground vehicle, and equipment maintenance areas	<ol style="list-style-type: none"> 1. Prevent and contain spills and drips. 2. Do all cleaning at a centralized station so the solvents stay in one area. 3. Remove any parts that are dipped in liquid slowly to avoid spills. 4. Use drip pans, drain boards, and drying racks to direct drips back into a fluid holding tank for reuse. 5. Confine cleaning activities to designated areas outside drainage ways and away from surface waters. 6. Drain all parts of fluids prior to disposal. 7. Transfer used fluids to the proper container promptly; do not leave full drip pans or other

- open containers around the shop. Empty and clean drip pan containers.
- 8. Clean up leaks, drips, and other spills without using large amounts of water. Use absorbents for dry cleanup whenever possible.
- 9. Prohibit the practice of hosing down an area where the practice would result in the discharge of pollutants to a stormwater system.
- 10. Prohibit pouring liquid waste into floor drains, sinks, outdoor storm drain outlets or other storm drains or sewer connections.
- 11. Maintain an organized inventory of materials.
- 12. Eliminate or reduce the number and amount of hazardous materials and waste by substituting nonhazardous or less hazardous materials.
- 13. Store batteries and other significant materials inside.
- 14. Dispose of greasy rags, oil filters, air filters, batteries, spent coolant, and degreasers in compliance with RCRA regulations.

3.3 Maintenance

DOT&PF M&O facility has an SPCC Plan, which is in use and dated 1998. A spill kit is kept stocked and on-site, specifically in the Utility Room as well as other absorbents stored in the Bay for small maintenance related spills. Fuel tanks are inspected to ensure compliance, and the staff trained to inspect for leaks by the Central Region Environmental Program Specialist.

Equipment is regularly maintained and kept in proper working order, thereby minimizing leak potential. Equipment maintenance takes place indoors in the Maintenance & Operations building. Vehicles are stored indoors. In the event of leaking equipment, the contaminants will be contained until repairs can be promptly made. (For complete list of Best Management Practices see Appendix J)

Best Management Practice (BMP)	
Vehicle and Equipment Maintenance	1. Leaking equipment is kept indoors until repairs can be made

3.4 Spill Prevention and Response

Structural Controls (Inspection Procedures)

Tanks, lines, and pumps are inspected in accordance with the SPCC plan. A spill kit is staged in the Maintenance & Operations building, and all oil-handling employees are trained annually in spill prevention, control, and countermeasures.

Container Labeling

All containers with new products are labeled with the manufacturer's labeling. Container labeling is standard operating procedure at the airport and all containers are labeled when generated. Containers such as drums are labeled with USED OIL or Non-Hazardous Waste labels. No hazardous waste is generated during airport maintenance and operational activities. All tank containers are labeled with both the product type and tank number.

Preventative Measures

All equipment fuel tanks have secondary containment (double walled tanks), overfill prevention, and valves that prevent equipment overfills. Bollards surround the tanks providing additional spill protection. A spill kit is located in the Maintenance & Operations building. In addition, equipment fuel tanks are situated away from any roadways. Heating oil is stored in a double-walled AST next to the diesel fuel AST near the Maintenance & Operations building. Used oil from equipment maintenance is stored indoors in 55-gallon steel drums at the Maintenance & Operations building.

Spill Response Materials

Maintenance Facility: Located in Utility room

- Suits
- Absorbents
- Squeegees
- Broom
- Gloves
- Kitty litter is available around the shop

Cold Storage – Red River Facility (on the airport)

- Straw wattles
- Absorbent pads

Spill Response Procedures

1. Assess the situation. Confirm there is no potential risk from fires, confined spaces, safety hazards. If the cause of the spill can be fixed quickly (tank overfill), stop the release.
2. Get help. If you are alone at the site, find someone to assist you.
3. If possible, stop the spill. Spill kit(s) contain tank repair putty.
4. If stopping the spill is not possible, then contain the spill. Spill kit(s) contain booms or spill socks. The goal is to reduce the amount of ground surface that gets contaminated.
5. If there is equipment available, an earthen berm can stop the flow of oil.

6. Report the spill to Environmental Specialist, and then your supervisor. If the spill is a reportable quantity (see below), DOT&PF will need to notify the ADEC Response Team. Even if the spill is not reportable, log the spill and our response in the SPCC Plan.
7. Replace used materials after spill response.

Notification Procedures

The supervisor will notify ADEC immediately of any discharge of hazardous substance or oil to surface water. In the event of a release to land, the supervisor will notify ADEC immediately of a discharge of oil in excess of 55 gallons, or of any discharge of a hazardous substance. The supervisor will notify ADEC within 48 hours of a discharge of oil in excess of 10 gallons, but less than 55 gallons. If a discharge of oil from 1 to 10 gallons occurs, the supervisor will notify ADEC by writing within 30 days. The supervisor will notify ADEC within 48 hours of discharge in excess of 55 gallons to an impermeable secondary containment area or structure.

A spill kit is located in the Maintenance & Operations building. The spill kit is inventoried and maintained by M&O staff on a monthly basis. All staff is trained in spill response and is capable of locating and dispensing needed spill response. The airport has a SPCC plan in place and the plan is currently being updated to comply with changes within the SPCC regulations.

3.5 Erosion and Sediment Controls

The King Salmon Airport gets relatively low levels of precipitation annually and significant potential for erosion does not currently exist. In general, storm water runoff from runways, taxiways, and aprons drains into grassy swales which parallel the runways. The storm water then either drains to isolated vegetated low areas or into one of several small unnamed creeks that eventually drain into the Naknek River. Natural vegetation is maintained to prevent erosion and sedimentation. Water leaving the airport is channeled through low vegetated ditches with little slope to slow and filter water leaving the airport. Discharges are visually monitored.

Areas most susceptible to erosion and sediments are those actively disturbed sites due to construction activities. Appropriate BMPs during construction work, followed by re-seeding/installation of riprap or other methods of stabilization will be enacted as additional erosion and sediment controls.

Best Management Practice (BMP)	
Construction stormwater control	<ol style="list-style-type: none"> 1. Retain as much vegetation in the area as possible 2. Cover inlets of culverts and drains during construction/maintenance activities 3. Use of stormwater velocity dissipaters and retention devices such as riprap, silt fence, and straw wattles to slow water and allow sediments to settle

3.6 Management of Runoff

The King Salmon area gets relatively low levels of precipitation, with an average annual precipitation of approximately 20 inches distributed throughout the year. Flow from the grassy swales which parallel the runways drains to isolated low areas or into either the unnamed creek or Eskimo creek via sheet flow, these creeks eventually drain into the Naknek River. Several culverts are installed to assist in the transfer of water. There are 8 outfalls which concentrate conveyances. In the winter, plowed snow is first placed immediately to the sides of runways and taxiways and then is later blown further off to the sides into vegetated areas. Plowed snow from aprons is treated similarly except plowed or blown snow is not directed towards buildings. Drainage patterns for the King Salmon Airport are shown on figure(s) in Appendix A.

Best Management Practice (BMP)	
Vehicle and Equipment Maintenance Areas	1. No discharge of vehicle wash or rinse water to surface waters.

3.7 Salt Storage Piles or Piles Containing Salt

Because salts are corrosive to aircraft surfaces and mechanical parts, salt is not used on airport facilities for deicing activities. Salt at the M&O facility (stored separately from airport deicers/sand) is for use on roads only. Salt is not stored outside, but in supersacks.

See Section 2.4 for additional discussion.

3.8 MSGP Sector-Specific Non-Numeric Effluent Limits

Drainage patterns for the King Salmon Airport are shown on figure(s) in Appendix A. There are 8 drainage areas at the King Salmon airport, which are designated as Watersheds A-H in Appendix A. Seven of these drainage areas have distinct outfalls and are designated as Outfalls A-H.

In general, storm water runoff from runways, taxiways, and aprons drains into grassy swales which parallel the runways. The storm water then either drains to isolated low areas or into one of several small unnamed creeks that eventually drain into the Naknek River. Flow in the vicinity of the maintenance building is part of Watershed A and is conveyed via sheet flow towards the south into a vegetated drainage ditch which flows to Outfall A.

8.S.3.1.1 – Aircraft, Ground Vehicle and Equipment Maintenance Areas. All equipment maintenance takes place indoors. Equipment maintenance takes place indoors in the Maintenance & Operations building, which has concrete floors and is located southwest of the runway intersection.

8.S.3.1.2 – Aircraft, Ground Vehicle and Equipment Cleaning Areas. Dust and dirt is occasionally sprayed from equipment during the summer, as needed,

8.S.3.1.3 – Aircraft, Ground Vehicle and Equipment Storage Areas. Equipment is stored indoors the vast majority of the time. Exceptions would be occasionally parking equipment outside during the summer. Equipment utilized is relatively new and kept in proper working order.

8.S.3.1.4 – Material Storage Areas. Diesel fuel and heating oil are stored in double-walled ASTs and tar is stored in 55-gallon drums next to the Maintenance & Operations building. To the east of the runway intersection, liquid potassium acetate is stored in an AST and sand and urea area are stored in a storage building.

8.S.3.1.5 – Airport Fuel System and Fueling Areas. The equipment fuel tank (located near the Maintenance & Operations building) is relatively new and properly maintained, with an automatic shut-off device. A spill kit is on-site and an SPCC Plan in place.

8.S.3.1.6 – Source Reduction. Mechanical means are used to keep the runway clear of snow and ice, when possible. Urea is utilized when necessary to keep the runway safe due to climatic conditions. Potassium acetate is used on runway 12/30. Sand is used for traction and to stretch deicer use (except on Runway 12/30) when possible.

8.S.3.1.7 – Management of Runoff. The King Salmon area gets relatively low levels of precipitation, with an average annual precipitation of approximately 20 inches distributed throughout the year. Flow from the grassy swales which parallel the runways drains to isolated low areas or into one of several small unnamed creeks that eventually drain into the Naknek River. Several culverts are installed to assist in the transfer of water. There are 8 outfalls which concentrate conveyances. In the winter, plowed snow is first placed immediately to the sides of runways and taxiways and then is later blown further off to the sides. Plowed snow from aprons is treated similarly except plowed or blown snow is not directed towards buildings. Drainage patterns for the King Salmon Airport are shown on figure(s) in Appendix A.

8.S.3.2 – Deicing Season. The deicing season typically runs from mid-October through mid-May. Deicing chemical usage falls below the usage threshold required for benchmark monitoring.

3.9 Employee Training

Storm water training for airport staff will take place annually during the deicing season and will coincide with an inspection of the airport facility. In addition to training on the inspection process, training will include any updates to MSGP requirements, procedures for Quarterly Visual Assessment and discussion of operational activities at the airport facility. Training for airport staff will also include fuel handling and spill reporting procedures. Besides scheduled annual training, new staff will be trained on an as-needed basis. Staff training logs area found in Appendix G.

The level of training provided will be commensurate with each worker's assignments and responsibilities. Training may be accomplished in a number of ways:

- Through workshops, classes, working groups, conference calls, and/or shop level tailgate briefings.
- Through discussions and presentations at pollution prevention team meetings, periodic environmental compliance briefings, and similar group gatherings.
- Through signs/posters posted in significant locations in facilities.
- Through providing written copies of BMPs.
- Through online training such as EPA webcasts.

3.10 Non-Stormwater Discharges

Allowable non-stormwater discharges include discharges from firefighting activities and pavement wash waters where no detergents are used and no spills or leaks of toxic or hazardous materials have occurred (unless all spilled material has been removed) see 1.1.3 of the MSGP. Covered discharges according to 8.S.2 of the MSGP for Sector S (airport) specific discharges only allows those stormwater discharges from portions of the air transportation facility that are involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations or deicing operations.

During the July 2010 site inspection, discharge was observed leaving the maintenance facility. A point source discharge from a pipe leaving the facility daylighted into a vegetated ditch located to the south of the maintenance shop. Water leaving the shop passes through an oil/water separator and control measures are in place to limit and eliminate hazardous materials from entering the discharge. The oil/water separator is inspected and maintained in proper working order and best management practices are in place. In addition signs are posted stating that no pouring of grease, oil or solvents is permitted in shop drains.

This discharge is partially associated with stormwater covered under the MSGP for Sector S, airport operations. This portion includes melt water and runoff from vehicle and vehicle maintenance activities. Allowable non-stormwater discharges associated with the maintenance shop include discharges from fire-fighting activities.

DOT&PF consulted with William Ashton at 4 pm on Tuesday, January 25 to ensure that this information was accurate and that DOT&PF was in compliance with applicable laws.

3.11 Waste, Garbage and Floatable Debris

Wastes and debris are covered and/or stored indoors prior to landfill disposal. Garbage is stored in covered dumpsters and emptied every Wednesday. Human waste is stored in a septic tank that is cleaned out annually. The maintenance facility and airport are kept free from debris and sweeping takes place on a regular basis.

Best Management Practice (BMP)	
Waste Management	<ol style="list-style-type: none"> 1. All waste is stored in a cover container in a central location 2. Regular waste pick up occurs 3. Proper disposal of damaged equipment

- | | |
|--|--|
| | <ol style="list-style-type: none">4. Proper disposal unused chemicals and fluids5. Create a regular sweeping schedule to prevent build up of debris6. Train employees on proper waste disposal |
|--|--|
-

3.12 Dust Generation and Vehicle Tracking of Industrial Materials

Airport runway, taxiways, and apron areas are paved.

SECTION 4: SCHEDULES AND PROCEDURES FOR MONITORING

For each type of monitoring, your SWPPP must include a description of:

1. **Sample Location(s).** Describe where samples will be collected, including any determination that two or more outfalls are substantially identical. [Analytical monitoring not applicable for this facility \(MSGP, Part 8.S.3.2\).](#)*
2. **Pollutant Parameters to be Sampled.** Include a list of the pollutant parameters that will be sampled and the frequency of sampling for each parameter. [Sector S parameters of concern are Biological Oxygen Demand \(BOD\), Chemical Oxygen Demand \(COD\), Ammonia, and pH – however, threshold levels are not attained for this facility therefore, analytical monitoring is not applicable \(MSGP, Part 8.S.3.2\).](#)*
3. **Monitoring Schedules.** Include the schedule you will follow for monitoring your stormwater discharge, including where applicable any alternate monitoring periods to be used for facilities in climates with irregular stormwater runoff (MSGP, Part 6.1.6). [Analytical monitoring not applicable for this facility \(MSGP, Part 8.S.3.2\).](#)*
4. **Numeric Limitations.** List here any pollutant parameters subject to numeric limits (effluent limitations guidelines), and which outfalls are subject to such limits. Note that numeric limits are only included for Sectors A, C, D, E, J, K, L, and O. [Analytical monitoring not applicable for this facility \(MSGP, Part 8.S.3.2\).](#)*
5. **Procedures.** Describe procedures you will follow for collecting samples, including responsible staff who will be involved, logistics for taking and handling samples, laboratory to be used, etc. [Analytical monitoring not applicable for this facility \(MSGP, Part 8.S.3.2\).](#)*

*King Salmon Airport does not exceed the benchmark of 100,000 gallon glycol and/or 100 tons of urea during the deicing season which lasts approximately October to April. The predominantly used deicing material is E36 or potassium acetate in quantities of approximately 50,000 gallons per deicing season.

SECTION 5: INSPECTIONS

For the routine facility inspections and the comprehensive site inspections to be performed at your site, include a description of the following:

- The names of the person(s), or the positions of the person(s), responsible for inspection: [Airport Manager](#)
- The schedules to be used for conducting inspections. Include here any tentative schedule that will be used for facilities in climates with irregular stormwater runoff discharges (MSGP, Part 4.2.3): [Routine inspections will take place monthly during the deicing season \(typically mid-October through mid-May\), as denoted in table below. An additional routine inspection will take place when stormwater discharge is occurring, during the months of July – September as site conditions warrant. The annual comprehensive inspection will take the place of a routine inspection during the deicing season, likely in March or April when day length is longer and sufficient time remains to complete annual reporting \(due by end of September of each permit year\).](#)

Month	Deicing Season	Inspection Schedule
January	x	Routine
February	x	Routine
March	x	Routine
April	x	Comprehensive
May	x	Routine
June		
July		One additional
August		routine inspection
September		during quarter
October	x	Routine
November	x	Routine
December	x	Routine

- Specific areas of the facility to be inspected, including schedules for specific outfalls: [Areas that are subject to deicing due to aircraft operations will be inspected during each inspection, as will equipment fueling, deicing material storage areas, and snow storage areas. Additionally, during the summer routine inspection, any potential discharges and drainages will also be inspected.](#)

For the quarterly visual assessments to be performed at your site, include a description of the following:

- The names of the person(s), or the positions of the person(s), responsible for inspection: [Airport Manager](#).
- The schedules to be used for conducting inspections. Include here any tentative schedule that will be used for facilities in climates with irregular stormwater runoff discharges (MSGP, Part 4.2.3): [Due to the long winter season, the four quarterly visual assessments will all take place during the period of April – October, with two in April – June and two in July – October. It is anticipated that a visual assessment during April will capture snowmelt discharge.](#)
- Sampling Procedures: [Collect a grab sample within the first 30 minutes from a discharge resulting from a measurable storm event or as soon as practicable after the first 30 minutes. If the 30 minute period is exceeded, document it in the SWPPP explaining why it was not possible to take a sample within the first 30 minutes. A measurable storm event is one that results in a discharge from the outfall. The storm event is](#)

proceeded by at least 72 hours of dry weather (or 72 hours since the last measurable storm event). In the case of snowmelt, the monitoring must be performed at a time when a measurable discharge occurs. For each monitoring event, except snowmelt monitoring, identify the date and duration (in hours) of the rainfall event, rainfall total (in inches) for that rainfall event, and time (in days) since the previous measurable storm event. For snowmelt monitoring, you must identify the date of the sampling event. When adverse weather conditions prevent the collection of samples, take a substitute sample during the next qualifying storm event. Samples will be shipped to a third-party, certified water quality laboratory for analysis.

For more information on sampling procedures please see Appendix J or visit:
<http://isu1.indstate.edu/terc/stormwater/lesson%20template/M4L8/M4L8StormEvent.htm>

or

http://www.epa.gov/npdes/pubs/msgp_monitoring_guide.pdf

Month	Visual Assessment Schedule
January	-
February	-
March	-
April	Take break-up plus
May	one quarterly
June	visual assessment
July	Take two
August	quarterly
September	visual
October	assessments
November	-
December	-

- Specific areas of the facility to be inspected, including schedules for specific outfalls: Visual assessment samples will be collected at stormwater discharge locations designated as Outfalls A-H in Appendix A.

SECTION 6: DOCUMENTATION TO SUPPORT ELIGIBILITY CONSIDERATIONS UNDER OTHER FEDERAL LAWS

6.1 Documentation Regarding Endangered Species.

In checking the ESA Listed Species Consultation Guide – Anchorage Fish and Wildlife Field Office, it was determined that the King Salmon Airport is not within the range of any listed species as King Salmon is located more than ½ miles inland from the coast of Alaska. Eligibility Criterion A of the MSGP is met (see Appendix J), no further action is required.

6.2 Documentation Regarding Historic Properties

No subsurface disturbances resulting from building or installing control measures are occurring at this facility, therefore discharge-related activities do not have the potential to have an effect on historic properties. Eligibility Criterion A of the MSGP is met, no further action is required.


6.3 Documentation Regarding NEPA Review

No operations related to New Source Performance Standards (NSPS) take place at this facility.

SECTION 7: SWPPP CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: Jay W. Knight Title: Airfield Manager, King Salmon

Signature:  Date: 7-13-10



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

**DELEGATION OF SIGNATURE AUTHORITY,
SWPPP AND OTHER NPDES MSGP RELATED REPORTS AND
DOCUMENTS.**

Airport Name: King Salmon

I, Robert A. Campbell, P.E. hereby designate Jay Knight assigned to King Salmon Airport to be the DOT&PF duly authorized representative for the purpose of overseeing compliance with the NPDES Multi-Sector General Permit, at the King Salmon Airport. By signing this authorization, I confirm that I meet the requirements to make such a designation as set forth in Appendix B, Subsection 11.A of EPA's Multi-Sector General Permit (MSGP), and that the designee above meets the definition of a 'duly authorized representative' as set forth in Appendix B, Subsection 11.B.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: Robert A. Campbell, P.E.

Title: Regional Director

Signature

Date

Description of SWPPP Modification	Name	Date	Signature

SWPPP APPENDICES

Attach the following documentation to the SWPPP:

Appendix A – General Location Map & Site Map(s)

Appendix B – Permit

Appendix C – NOI and Letters

Appendix D – Visual Assessments

Appendix E – Inspections

Appendix F – Corrections

Appendix G – Training

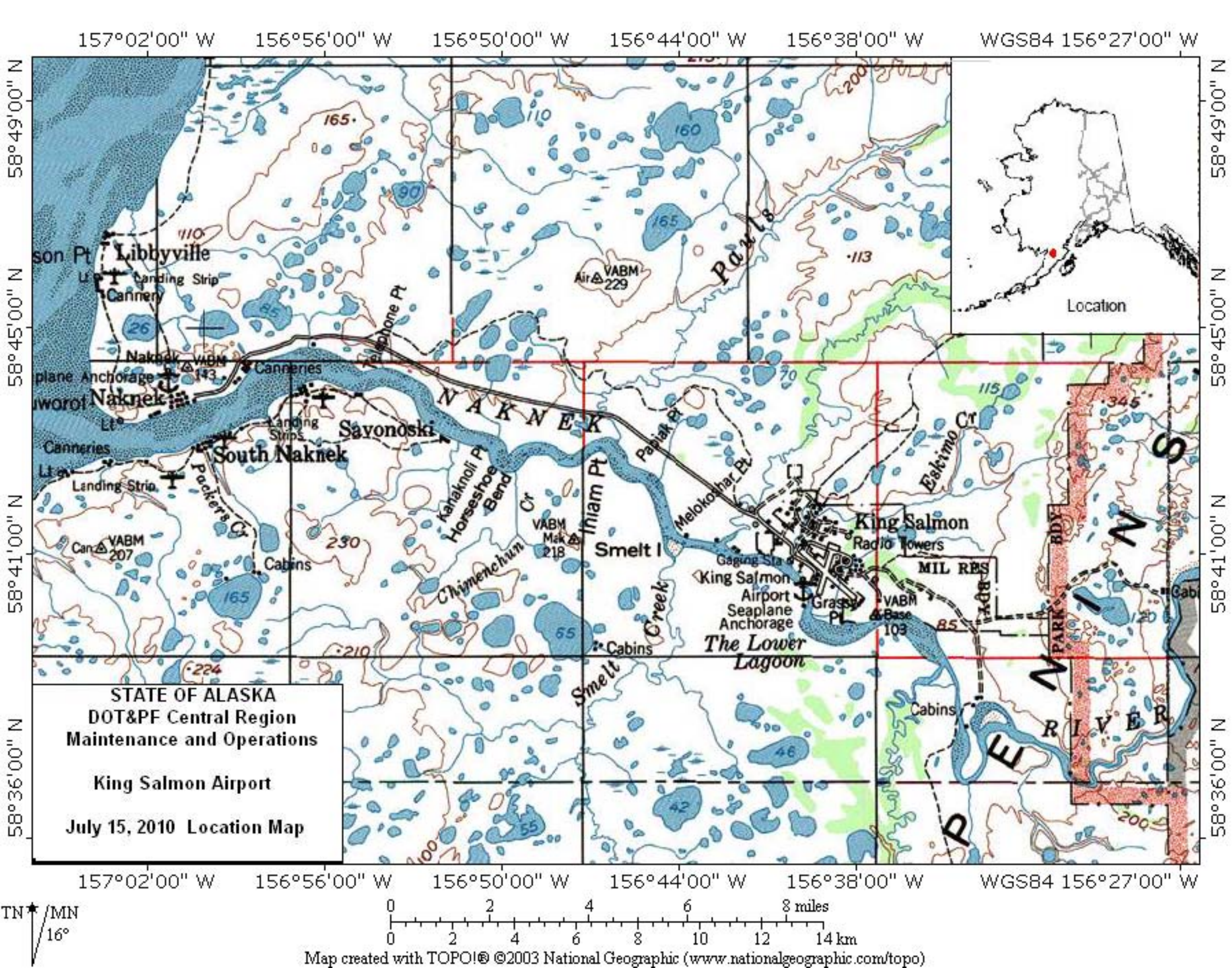
Appendix H – Annual Report

Appendix I – Blank Forms

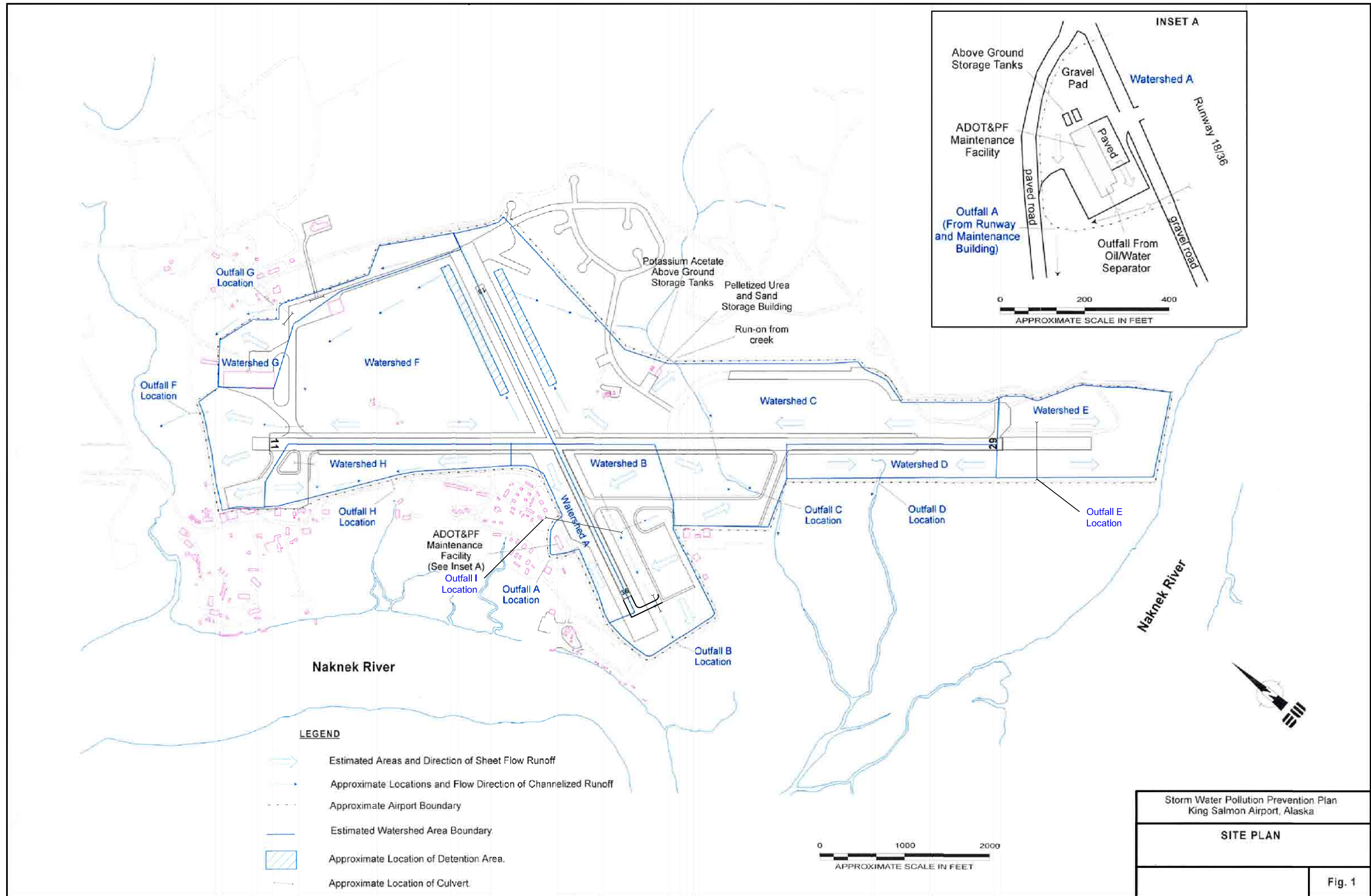
Appendix J – Miscellaneous

Appendix K – SPCC Plan (King Salmon)

Appendix L – Best Management Practices and Typicals



STATE OF ALASKA
 DOT&PF Central Region
 Maintenance and Operations
 King Salmon Airport
 July 15, 2010 Location Map





U.S. Department
of Transportation

Alaskan Region

222 W. 7th Avenue #14
Anchorage, Alaska
99513-7587

**Federal Aviation
Administration**

July 27, 2007

Mr. Morgan Merritt, Project Manager
Aviation Design Section
Central Region Department of Transportation
and Public Facilities, State of Alaska
PO Box 196900
Anchorage, Alaska 99519

Dear Mr. Merritt:

**King Salmon Airport
King Salmon, Alaska
Airport Layout Plan Conditional Approval
Airspace Case 06-AAL-147NRA**

We have completed our review of the King Salmon Airport Layout Plan (ALP), and find it acceptable from a planning standpoint.

The conditional approval indicated by my signature is given subject to the condition that the proposed airport development that requires environmental processing shall not be undertaken without prior written environmental approval by the FAA.

This approval considers only the safety, utility, and efficiency of the airport. We encourage you to work with appropriate agencies to encourage adoption of height and zoning restrictions.

This approval does not represent a commitment to provide financial assistance to implement the proposed plan. FAA assistance in any development or its approval for any development will be determined at the time of request, based on the existing regulations, project justification, and eligibility at the time of the request.

When airport construction, alteration, or deactivation is undertaken, such action requires FAA notification and review in accordance with the provisions of Part 77 and Part 157 of the Federal Aviation Regulations. In addition, all airport construction must be completed in accordance with FAA Advisory circulars current at the time of construction.

Please attach this letter to the enclosed ALP and retain it in your files for future use. Note also that we received only one mylar set with this submittal; please forward one copy to our office for our records.

If you have any questions, please contact me at 271-5446.

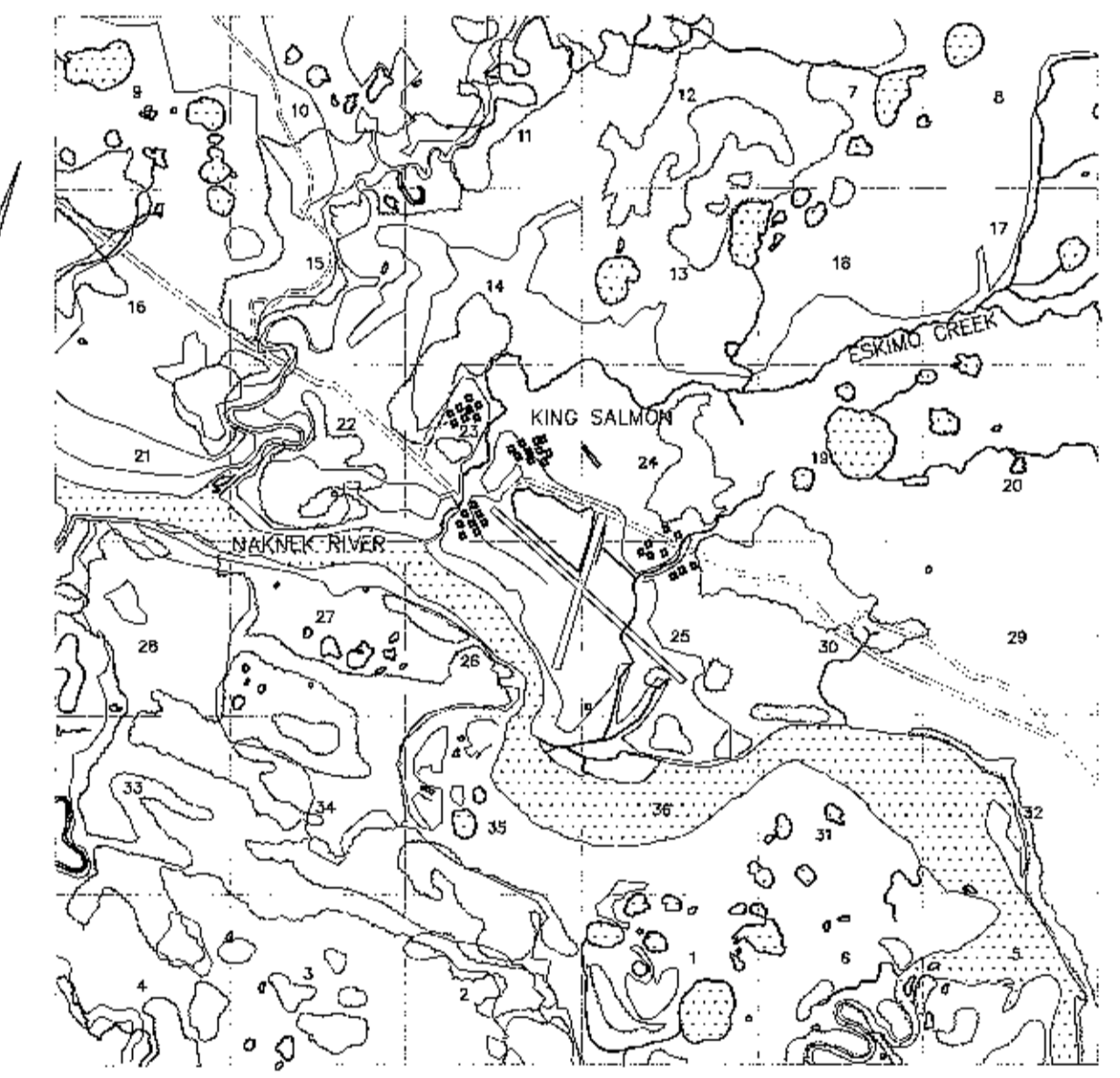
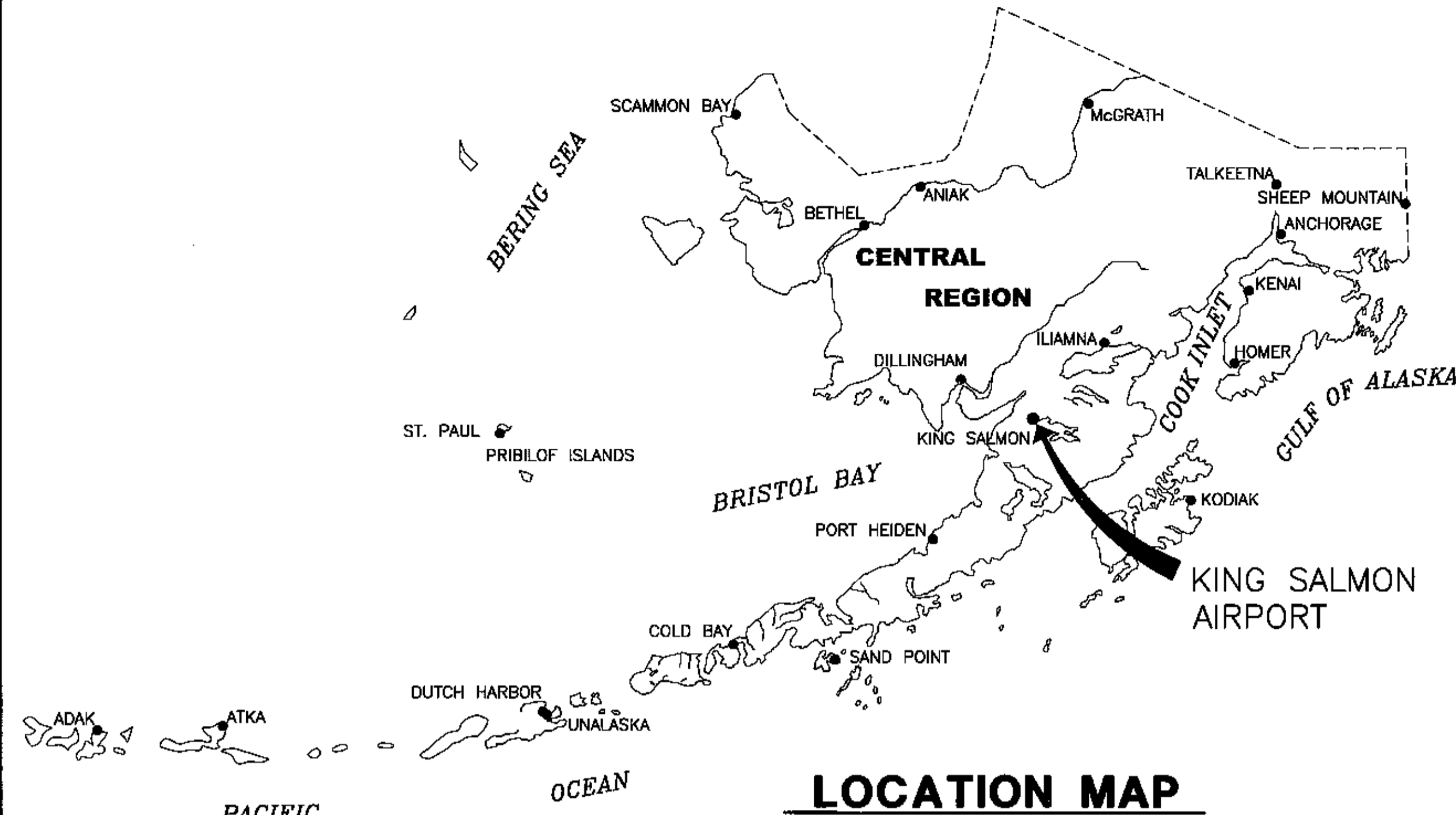
Sincerely,

John Lovett, Airport Planner
Airports Division

Enclosure: King Salmon Airport ALP

cc: AAL-530, ANC FPO/AVN-123

Designed By: jgammac
 Drawn By: jgammac
 Checked By: jgammac
 DWG FILE NO.: 331-89
 Date Plotted: 4/05/2007, 12:09 PM
 Layout Name: COVER 1
 File Name: P:\Projects\090928\ALP\DRW-KSA-ALP.dwg



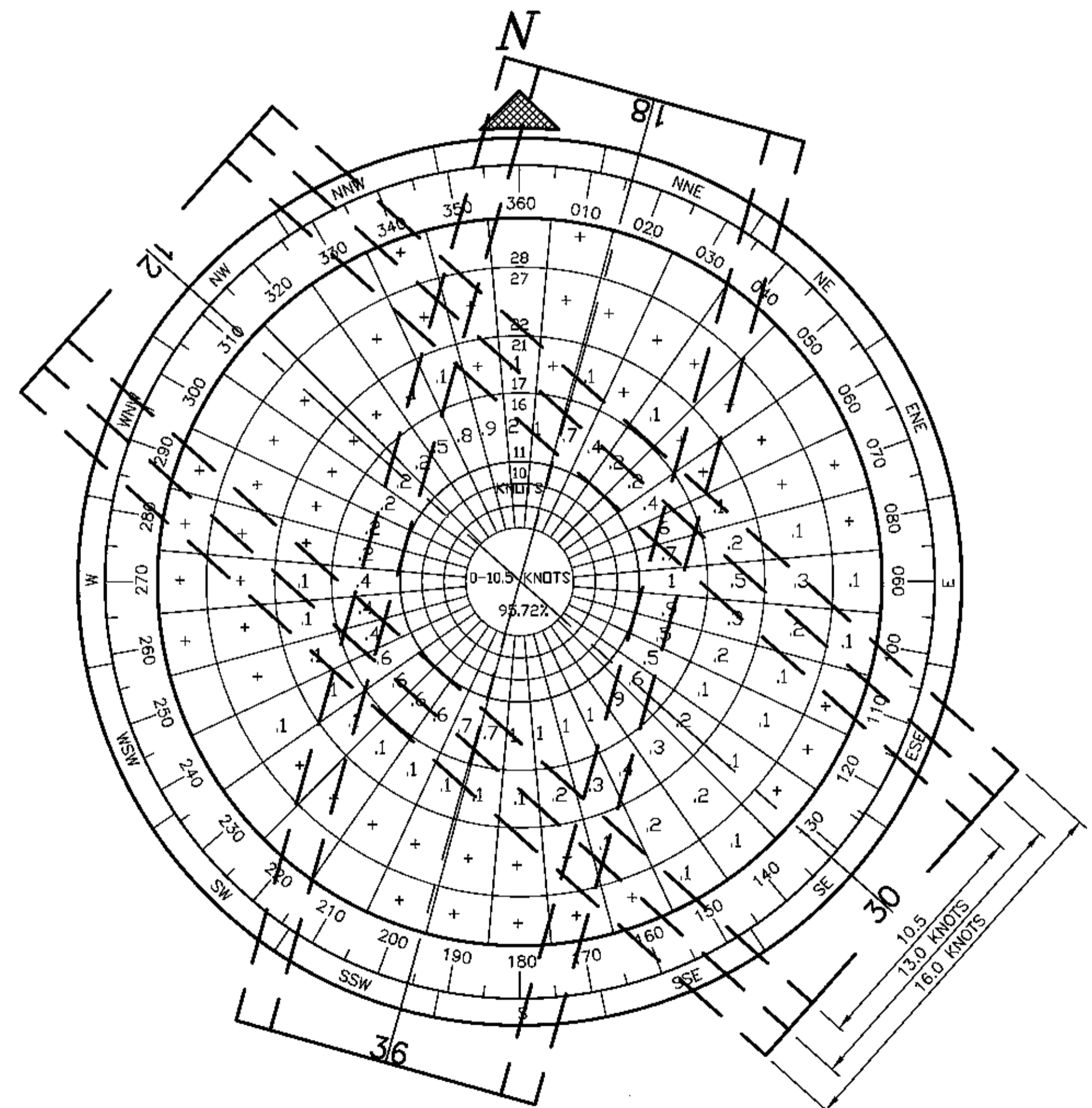
VICINITY MAP
 1:63,360
 T 3 S, R 86 W, SEC. 10
 SEWARD MERIDIAN
 U.S.G.S. NAKNEK (C-2), ALASKA

AIRPORT DATA TABLE			
ITEM	EXISTING	ULTIMATE	
ICAO IDENTIFIER	PAKN	PAKN	
NATIONAL AIRPORT IDENTIFIER	AKN	AKN	
FAA SITE NUMBER	50416.*A	50416.*A	
AIRPORT ELEVATION (MSL NAVD88)	70.9'	72.2'	
AIRPORT REFERENCE CODE	C-III	C-III	
MEAN MAX. TEMPERATURE, HOTTEST MONTH	63 F JULY	63 F JULY	
AIRPORT AND TERMINAL NAVIGATION AIDS	GPS, VOR, DME	GPS, VOR, DME	
TAXIWAY LIGHTING/MARKING	M. I.	M. I.	
OBSTRUCTION SURVEY SOURCE & TYPE	NONE	NONE	
MAGNETIC DECLINATION, YEAR, RATE OF CHANGE	18° 47' E, 2006	0° 12' W/YEAR	

GEOGRAPHIC COORDINATES TABLE				
ITEM	EXISTING LATITUDE	EXISTING LONGITUDE	ULTIMATE LATITUDE	ULTIMATE LONGITUDE
ARP	58°40'36.35"N	156°38'57.35"W	58°40'35.38"N	156°38'55.28"W
THRESHOLD RW 12	58°41'02.18"N	156°39'53.02"W	58°41'02.18"N	156°39'53.02"W
THRESHOLD RW 30	58°40'06.31"N	156°37'53.26"W	58°40'03.68"N	156°37'47.63"W
THRESHOLD RW 18	58°40'59.78"N	156°38'55.62"W	58°40'59.78"N	156°38'55.62"W
THRESHOLD RW 36	58°40'21.80"N	156°39'16.96"W	58°40'21.80"N	156°39'16.96"W

NOTES: 1. DUE TO CHANGES IN MAGNETIC DECLINATION, RUNWAY 11/29 HAS BEEN RE-NAMED RUNWAY 12/30.
 2. NO OBSTRUCTION SURVEY WAS PERFORMED FOR THIS ALP.

TAXIWAY DATA TABLE				
ITEM	WIDTH	LENGTH	TAXIWAY SAFETY AREA (TSA)	TAXIWAY OBJECT FREE AREA (TOFA)
TAXIWAY A	85'	485'	130'	186'
TAXIWAY B	90'	390'	135'	186'
TAXIWAY C	90'	1650'	140'	186'
TAXIWAY D	90'	385'	140'	186'
TAXIWAY E	75'	650'	125'	186'
TAXIWAY K	75'	1060'	75'	186'



WIND DATA

WIND COVERAGE:	SPEED	R/W 12/30	R/W 18/36	TOTAL
	10.5 KNOTS	87.47%	86.72%	95.72%
	13 KNOTS	93.79%	91.86%	98.28%
	16 KNOTS	98.19%	N/A	98.19%

SOURCE: U.S. DEPARTMENT OF COMMERCE, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, NATIONAL CLIMATIC DATA CENTER, JUNE 24, 1996
 PERIOD: 12/1991-8/1996

RUNWAY 12/30 DATA TABLE			
ITEM	EXISTING	NEAR-TERM	ULTIMATE
RUNWAY TYPE	> UTILITY	> UTILITY	> UTILITY
FAR PART 77 APPROACH CATEGORY (V, NPI, P)	P / NPI	P / NPI	P / NPI
APPROACH SURFACES	50:1 / 34:1	50:1 / 34:1	50:1 / 34:1
VISIBILITY MINIMUM	1/2 SM / 1 SM	1/2 SM / 1 SM	1/2 SM / 1 SM
RUNWAY SURFACE	ASPHALT	ASPHALT	ASPHALT
PAVEMENT STRENGTH SW,DW,DTW,DTW	1000lbs	1000lbs	1000lbs
AIRCRAFT APPROACH CATEGORY	C	C	C
AIRPLANE DESIGN GROUP	III	III	III
RUNWAY DIMENSIONS	150' x 8501'	150' x 8901'	150' x 8901'
TRUE BEARING	N48° 08' 31"W	N48° 08' 31"W	N48° 08' 31"W
EFFECTIVE GRADE	0.16%	0.16%	0.16%
TOUCHDOWN ELEVATION (MSL NAVD88)	59.4 / 70.9	59.4 / 72.2	59.4 / 72.2
RUNWAY SAFETY AREA (RSA)	250' x 9701'	500' x 10101'	500' x 10101'
RSA LENGTH BEYOND R/W END	200' / 1000'	600' / 600'	600' / 600'
APPROACH RUNWAY PROTECTION ZONE (RPZ)-RW 12	1000' x 1750' x 2500'	1000' x 1750' x 2500'	1000' x 1750' x 2500'
APPROACH RUNWAY PROTECTION ZONE (RPZ)-RW 30	1000' x 1510' x 1700'	1000' x 1510' x 1700'	1000' x 1510' x 1700'
DEPARTURE RUNWAY PROTECTION ZONE (RPZ)-RW 12	NONE	500' x 1010' x 1700'	500' x 1010' x 1700'
DEPARTURE RUNWAY PROTECTION ZONE (RPZ)-RW 30	NONE	500' x 1010' x 1700'	500' x 1010' x 1700'
RUNWAY OBJECT FREE AREA (OFA)	800' x 10101'	800' x 10101'	800' x 10101'
RUNWAY OBSTACLE FREE ZONE (OFZ)	400' x 8901'	400' x 9301'	400' x 9301'
PRECISION OBSTACLE FREE ZONE (POFZ)	800' x 200'	800' x 200'	800' x 200'
INNER-APPROACH OBSTACLE FREE ZONE	400' x 2400'	400' x 2400'	400' x 2400'
RUNWAY LIGHTING	HIRL	HIRL	HIRL
RUNWAY MARKING TYPE	PRECISION	PRECISION	PRECISION
RUNWAY APPROACH AIDS - RW 12	ILS, PAPI, REIL, ALSF2, LOC	ILS, PAPI, REIL, ALSF2, LOC	ILS, PAPI, REIL, MALS, LOC
RUNWAY APPROACH AIDS - RW 30	PAPI, REIL, LOC/DME	PAPI, REIL, LOC/DME	PAPI, REIL, LOC/DME

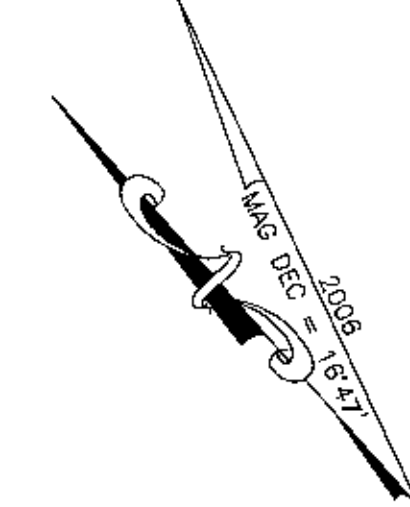
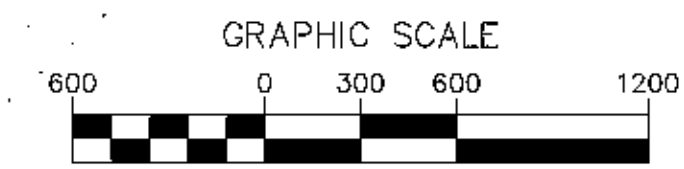
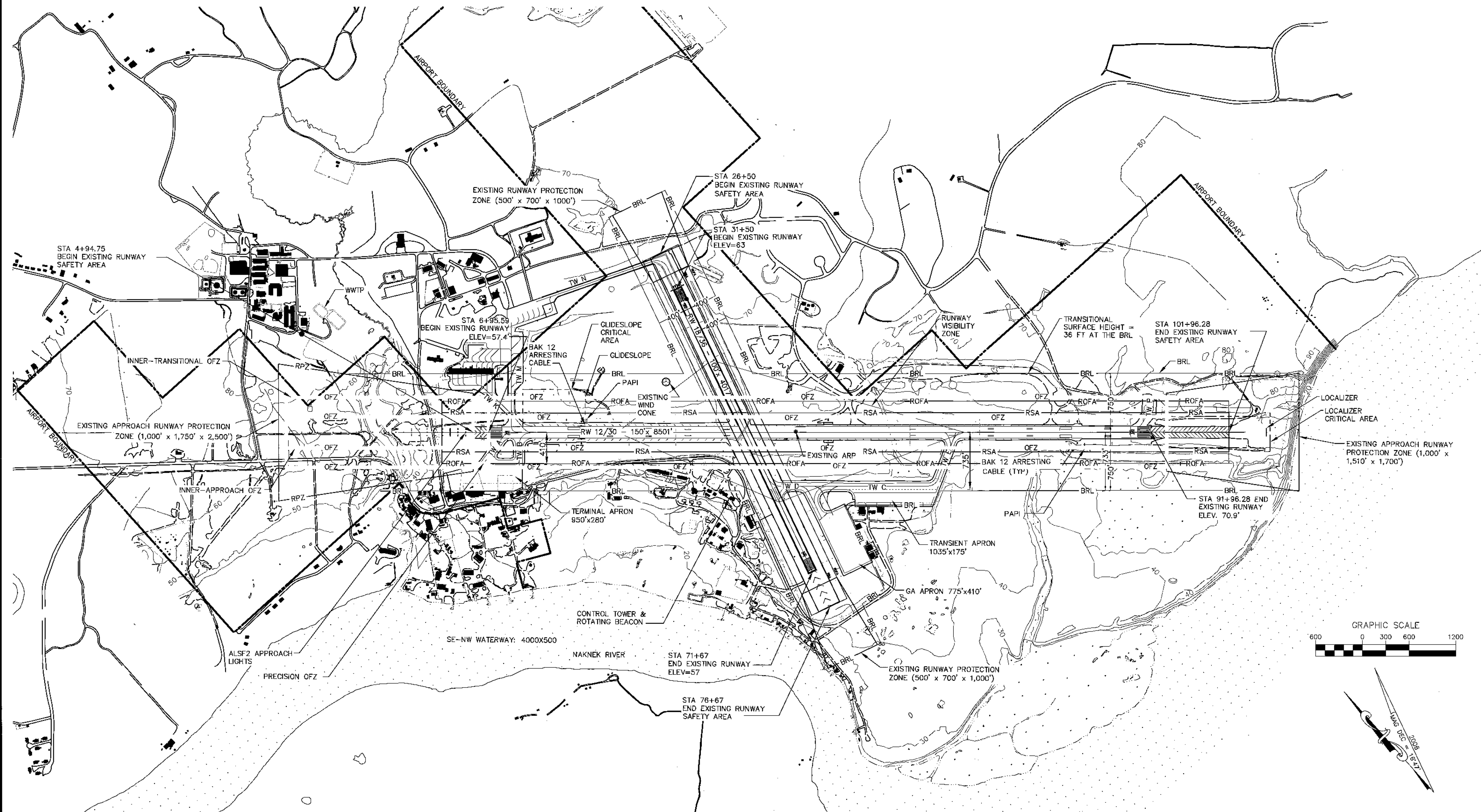
RUNWAY 18/36 DATA TABLE			
ITEM	EXISTING	NEAR-TERM	ULTIMATE
RUNWAY TYPE	> UTILITY	> UTILITY	> UTILITY
FAR PART 77 APPROACH CATEGORY (V, NPI, P)	V / V	V / V	NPI / NPI
APPROACH SURFACES	20:1 / 20:1	20:1 / 20:1	34:1 / 34:1
VISIBILITY MINIMUM	3 SM / 3 SM	3 SM / 3 SM	1 SM / 1 SM
RUNWAY SURFACE	ASPHALT	ASPHALT	ASPHALT
PAVEMENT STRENGTH SW,DW	30, 50	30, 50	30, 50
AIRCRAFT APPROACH CATEGORY	B	B	B
AIRPLANE DESIGN GROUP	II	II	II
RUNWAY DIMENSIONS	100' x 4017'	100' x 4017'	100' x 4017'
TRUE BEARING	S16° 19' 10"W	S16° 19' 10"W	S16° 19' 10"W
EFFECTIVE GRADE	0.14%	0.14%	0.14%
TOUCHDOWN ELEVATION (MSL NAVD88) *	63 / 58	63 / 58	63 / 58
RUNWAY SAFETY AREA (RSA)	300' x 5017'	300' x 5017'	300' x 5017'
RSA LENGTH BEYOND R/W END	500' / 500'	500' / 500'	500' / 500'
APPROACH RUNWAY PROTECTION ZONES (RPZ)	500' x 700' x 1000'	500' x 700' x 1000'	500' x 700' x 1000'
RUNWAY OBJECT FREE AREA (OFA)	500' x 5017'	500' x 5017'	500' x 5017'
RUNWAY OBSTACLE FREE ZONE (OFZ)	400' x 4417'	400' x 4417'	400' x 4417'
RUNWAY LIGHTING	MIRL	MIRL	MIRL
RUNWAY MARKING TYPE	NON-PRECISION	NON-PRECISION	NON-PRECISION
RUNWAY APPROACH AIDS - RW 18	NONE	NONE	PAPI, REIL
RUNWAY APPROACH AIDS - RW 36	NONE	NONE	PAPI, REIL

MODIFICATION TO STANDARDS / NON STANDARD CONDITIONS			
ITEM	STANDARD	EXISTING	ULTIMATE
R/W 12 SAFETY AREA LENGTH BEYOND RW END	600'	200'	600'
R/W 12-30 SAFETY AREA WIDTH	500'	250'	500'
R/W 18-36 SAFETY AREA LENGTH BEYOND RW END	300'	500'	500'
R/W 18-36 SAFETY AREA WIDTH	150'	300'	300'
R/W 18-36 OBJECT FREE AREA LENGTH BEYOND RW END	300'	500'	500'
R/W 18-36 OBJECT FREE AREA WIDTH	500'	800'	800'
R/W 18-36 WIDTH	75'	100'	100'
DISTANCE FROM RUNWAY TO WWTP	10000'	2300'	2300'

DRAWING INDEX	
SHT #	TITLE
1	AIRPORT DATA SHEET
2	AIRPORT LAYOUT PLAN
3	DECLARED DISTANCES
4	RUNWAY 12/30 INNER PORTION OF THE APPROACH SURFACES
5	RUNWAY 18/36 INNER PORTION OF THE APPROACH SURFACES
6	AIRPORT AIRSPACE
7	TERMINAL AREA
8	AIRPORT PROPERTY MAP

BY DATE REVISION APPROVED: <i>[Signature]</i> DATE: 4/8/07 RECOMMENDED: <i>[Signature]</i> DATE: 4/18/2007 HARVEY M. DOUTHETT, P.E. DESIGN SECTION CHIEF	STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES CENTRAL REGION KING SALMON AIRPORT KING SALMON, ALASKA AIRPORT LAYOUT PLAN AIRPORT DATA SHEET
AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL SUBJECT TO ALP APPROVAL LETTER DATED 7/31/2007 FAA AIRSPACE REVIEW NUMBER: 6-AAL-147 AAL <i>[Signature]</i> DATE: 7/27/07 FAA, AIRPORTS DIVISION ALASKAN REGION, AAL-612	DATE: _____ SHEET: 1 OF 9

Date Plotted: 4/05/2007 1:46 PM
 Layout Name: ALP_EXIST_2
 File Name: P:\Projects\090023\ALP_DRW\KSA-ALP.dwg
 Designed By: Romoche
 Drawn By: Romoche
 Checked By:
 DWG FILE No. 231-89

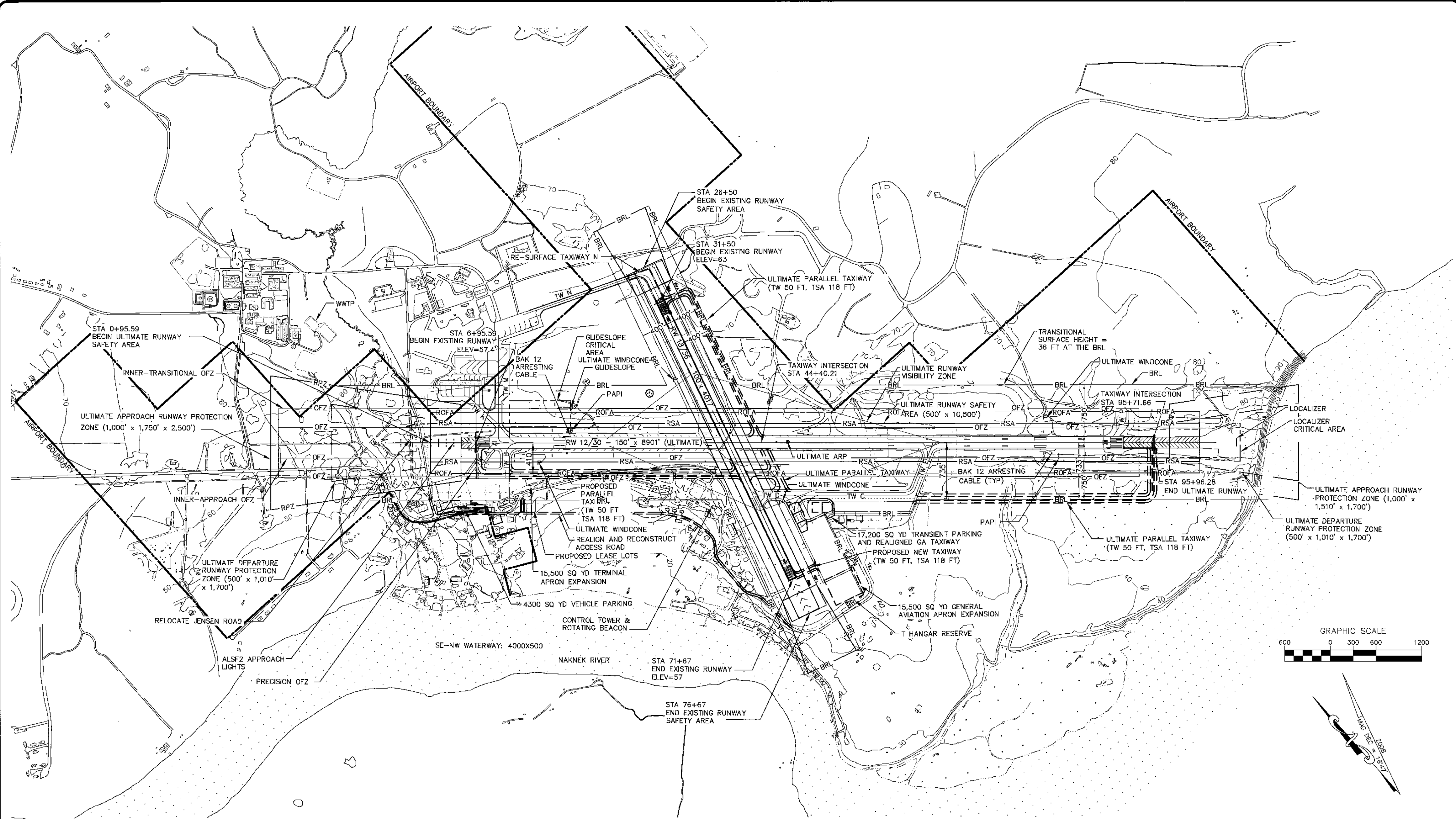


NOTES:

1. DUE TO CHANGES IN MAGNETIC DECLINATION, RUNWAY 11/29 HAS BEEN RE-NAMED RUNWAY 12/30.
2. NO THRESHOLD SITING SURFACE OBJECT PENETRATIONS.
3. NO OFZ OBJECT PENETRATIONS.

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES CENTRAL REGION	
KING SALMON AIRPORT KING SALMON, ALASKA AIRPORT LAYOUT PLAN	DATE:
EXISTING AIRPORT LAYOUT PLAN	SHEET: 2 OF 9

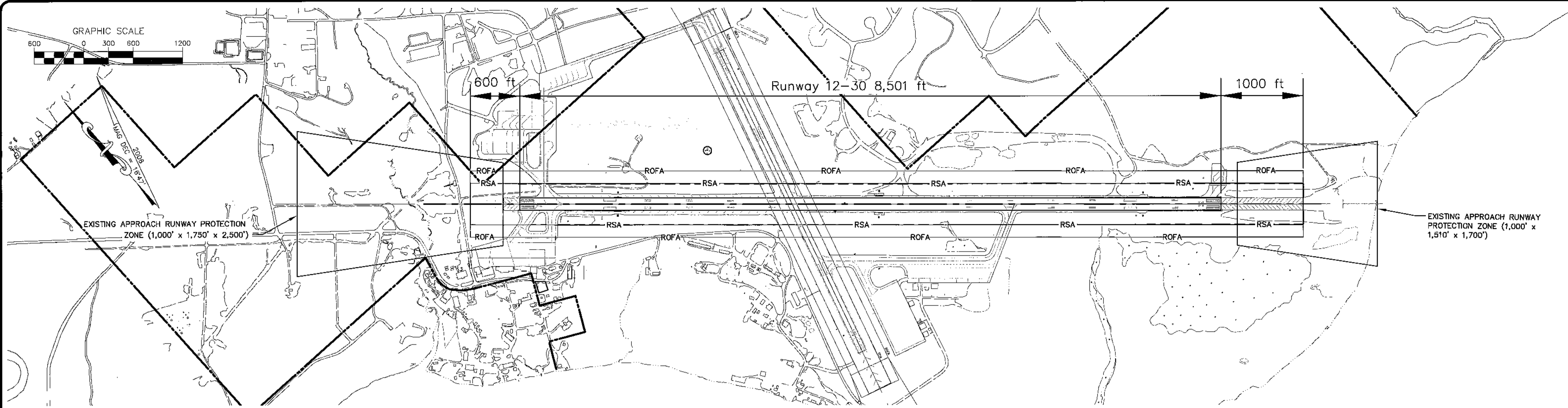
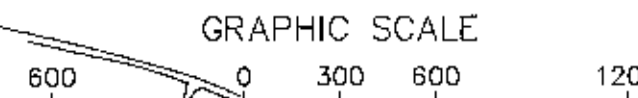
Date Plotted: 4/06/2007, 2:08 PM
 Layout Name: ALP-ULT_3
 File Name: P:\Projects\059029\ALP\DRW-KSA-ALP.dwg
 Designed By: jgornochie
 Drawn By:
 Checked By:



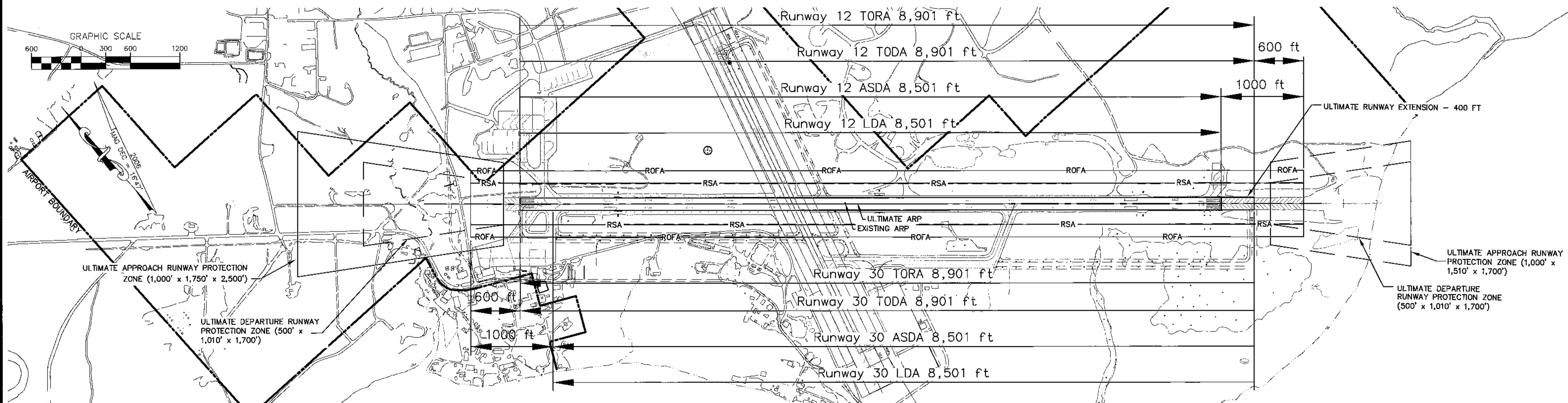
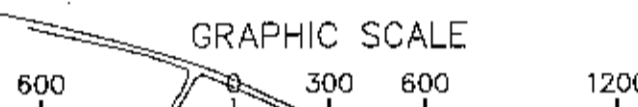
NOTES:

1. DUE TO CHANGES IN MAGNETIC DECLINATION, RUNWAY 11/29 HAS BEEN RE-NAMED RUNWAY 12/30.
2. NO THRESHOLD SITING SURFACE OBJECT PENETRATIONS.
3. NO OFZ OBJECT PENETRATIONS.

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES CENTRAL REGION	
KING SALMON AIRPORT KING SALMON, ALASKA AIRPORT LAYOUT PLAN	DATE: SHEET: 3 OF 9
ULTIMATE AIRPORT LAYOUT PLAN	



EXISTING RUNWAY



ULTIMATE RUNWAY

DECLARED DISTANCES

ITEM	RUNWAY 12/30		RUNWAY 18/36	
	EXISTING	FUTURE	EXISTING	FUTURE
TAKEOFF RUN AVAILABLE	N/A	8,901 / 8,901	N/A	N/A
TAKEOFF DISTANCE AVAILABLE	N/A	8,901 / 8,901	N/A	N/A
ACCELERATE STOP DISTANCE AVAILABLE	N/A	8,501 / 8,501	N/A	N/A
LANDING DISTANCE AVAILABLE	N/A	8,501 / 8,501	N/A	N/A

**STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
CENTRAL REGION**

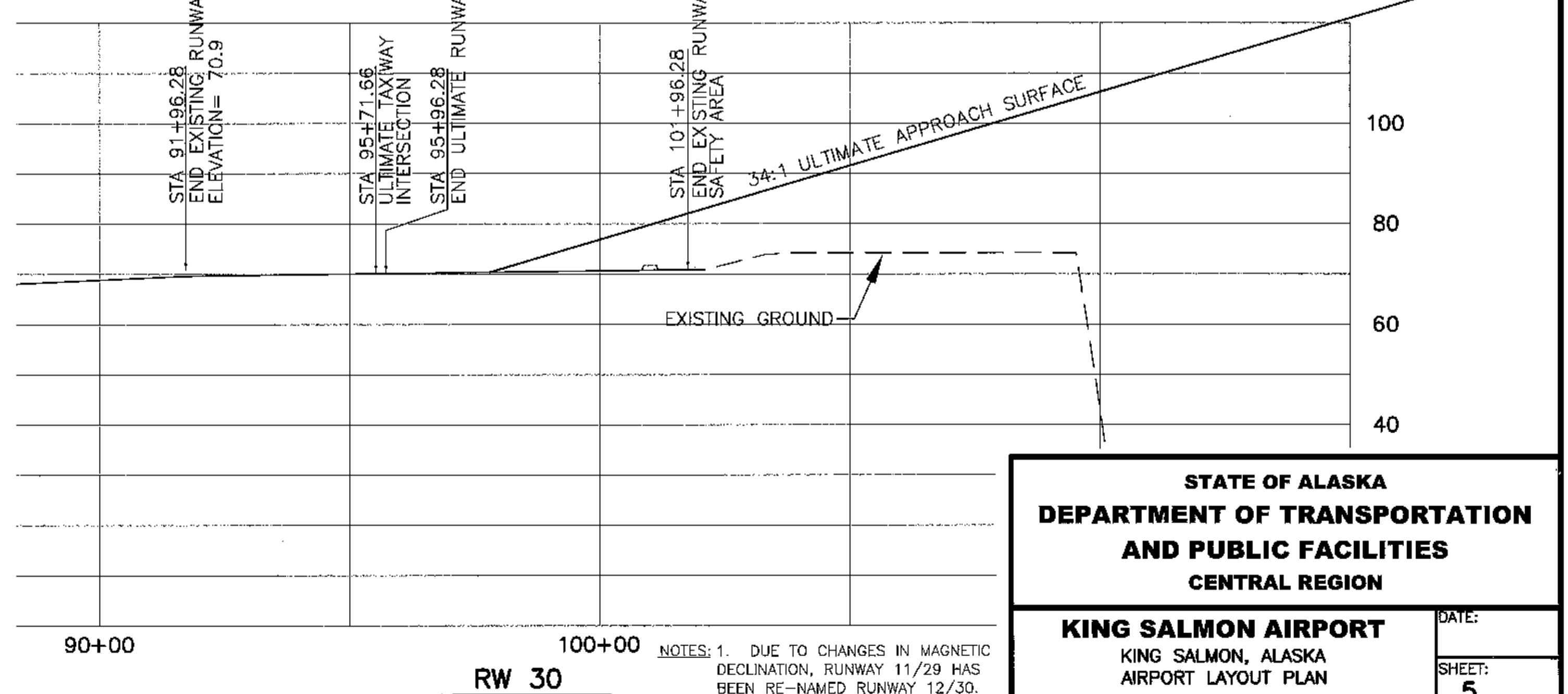
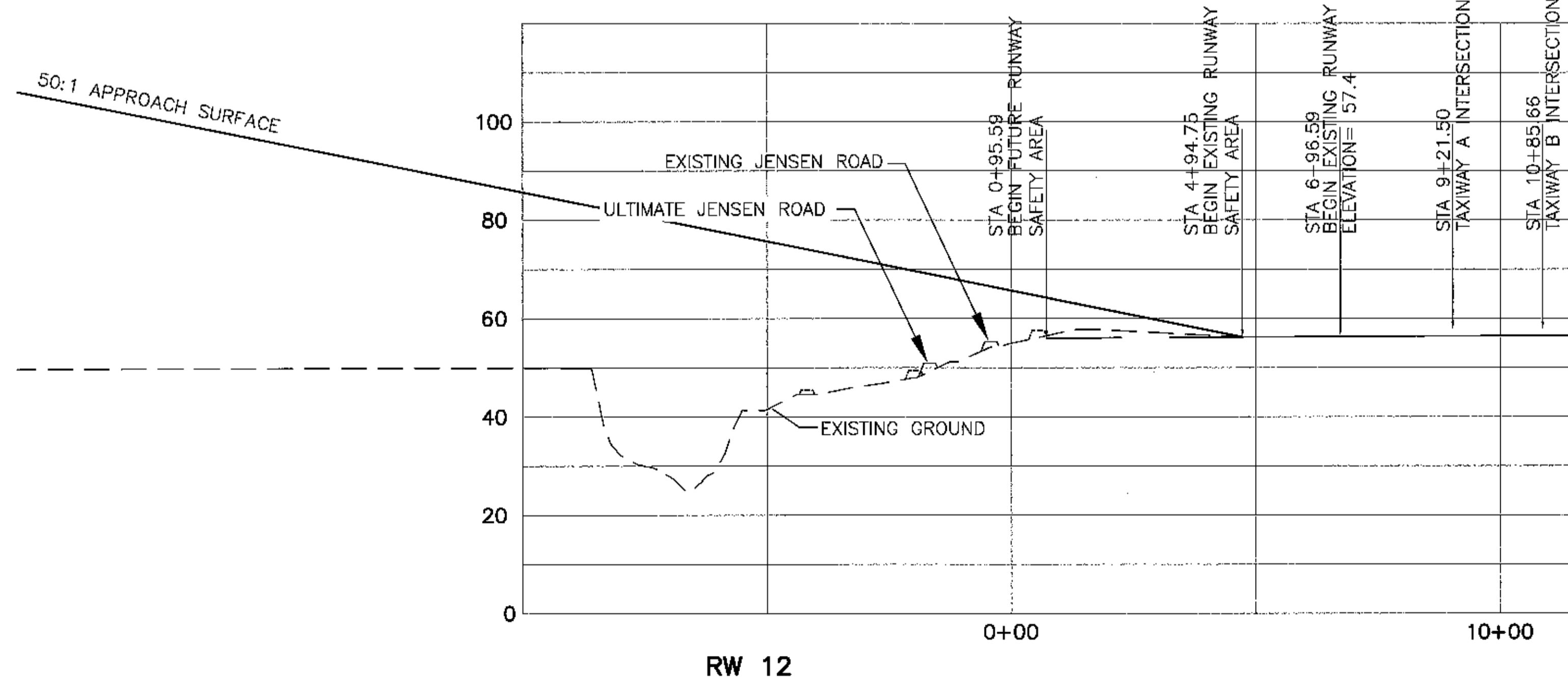
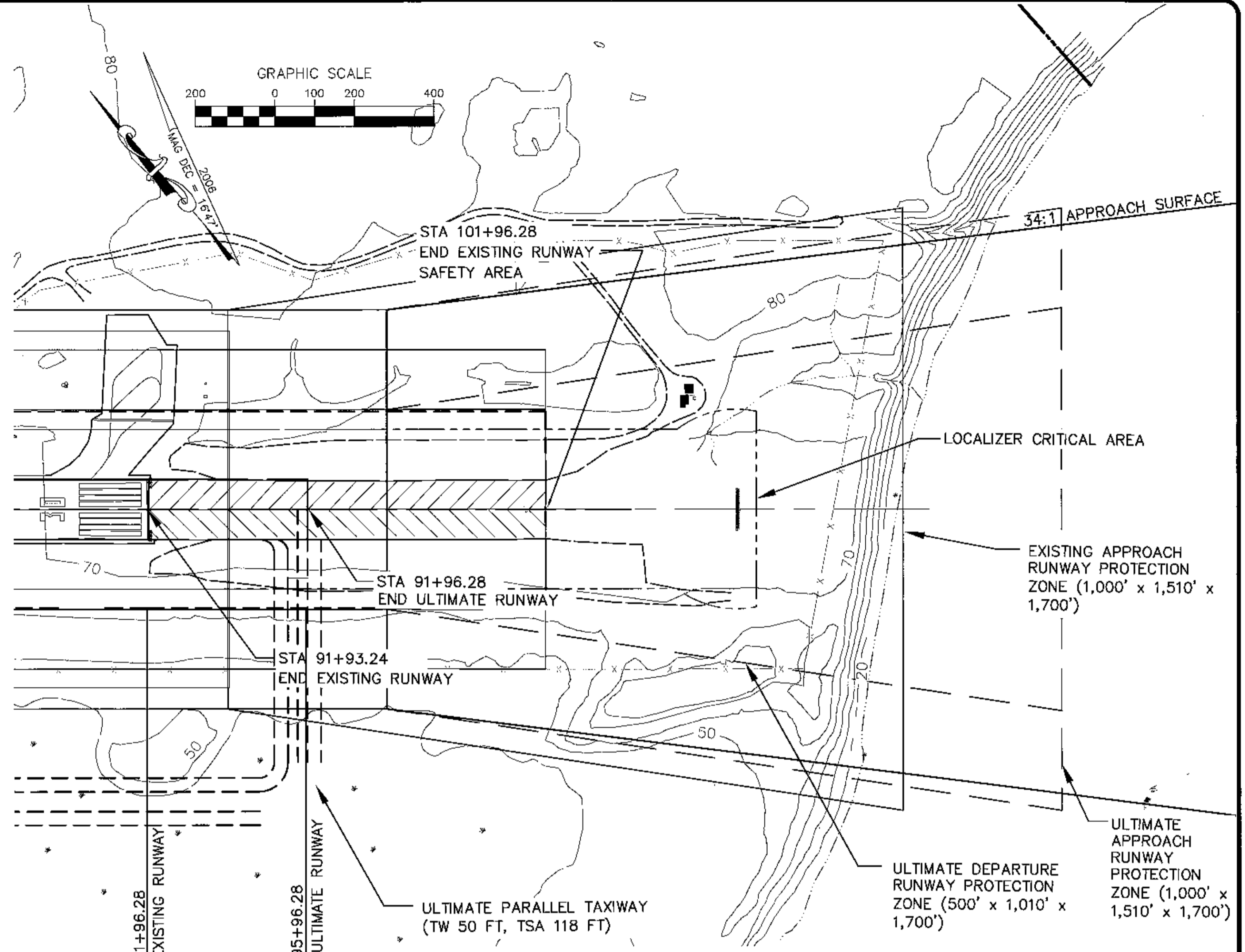
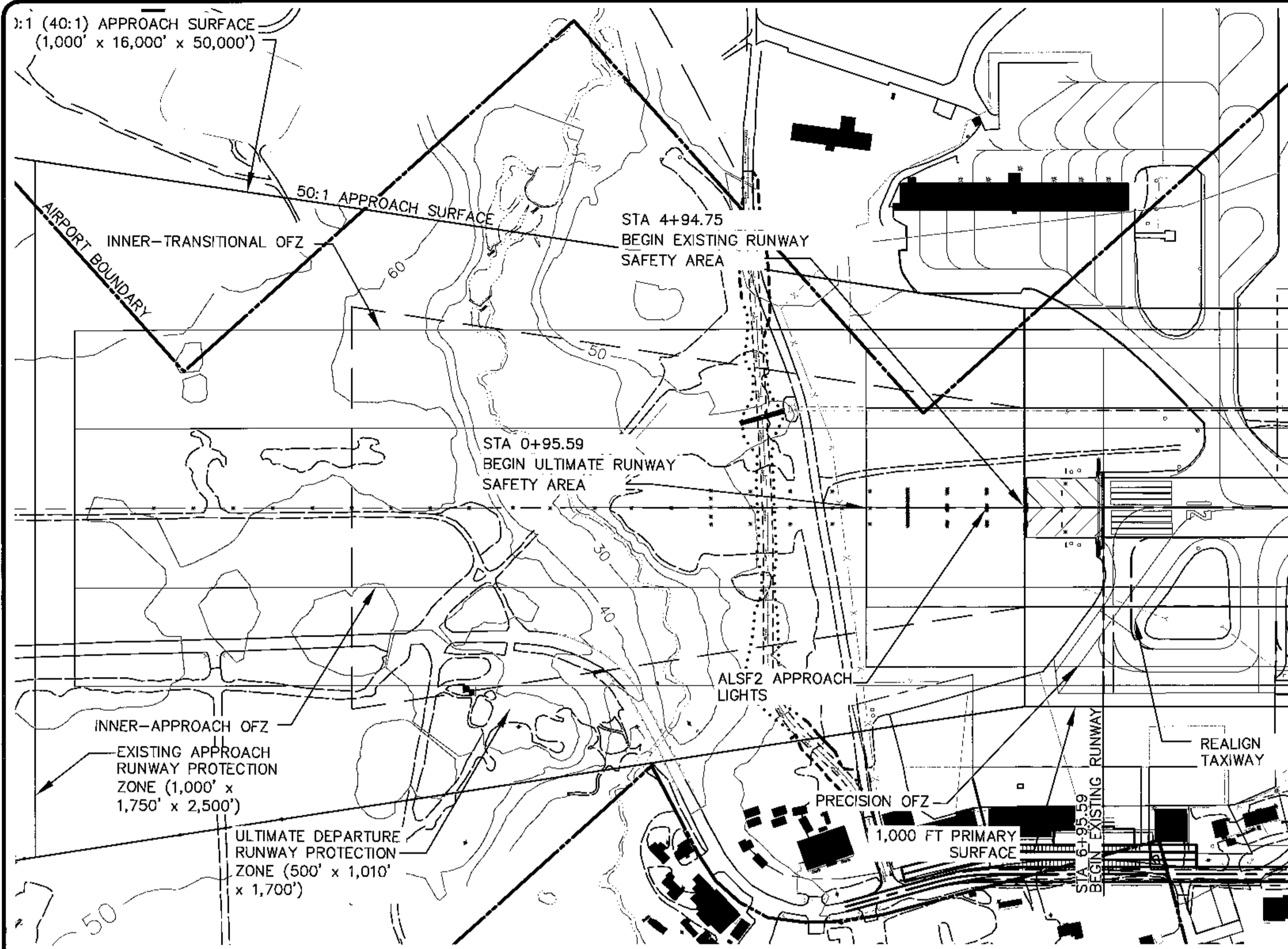
KING SALMON AIRPORT
KING SALMON, ALASKA
AIRPORT LAYOUT PLAN
DECLARED DISTANCES

DATE: _____
SHEET: **4** OF **9**

NOTE: DUE TO CHANGES IN MAGNETIC DECLINATION, RUNWAY 11/29 HAS BEEN RE-NAMED RUNWAY 12/30.

Date Plotted: 4/05/2007 1:49 PM
 Layout Name: DECLARED DISTANCES 4
 File Name: P:\Projects\056029\ALP\DRW-KSA-ALP.dwg
 DWG FILE No. 231-89
 Designed By: [redacted]
 Drawn By: [redacted]
 Checked By: [redacted]

Date Plotted: 1/06/2007, 2:06 PM
 Layout Name: APP_SLR_5
 File Name: F:\Projects\09029\ALP\DRW\KSA-ALP.dwg
 Designed By: jgarnache
 Drawn By: jgarnache
 Checked By: jgarnache

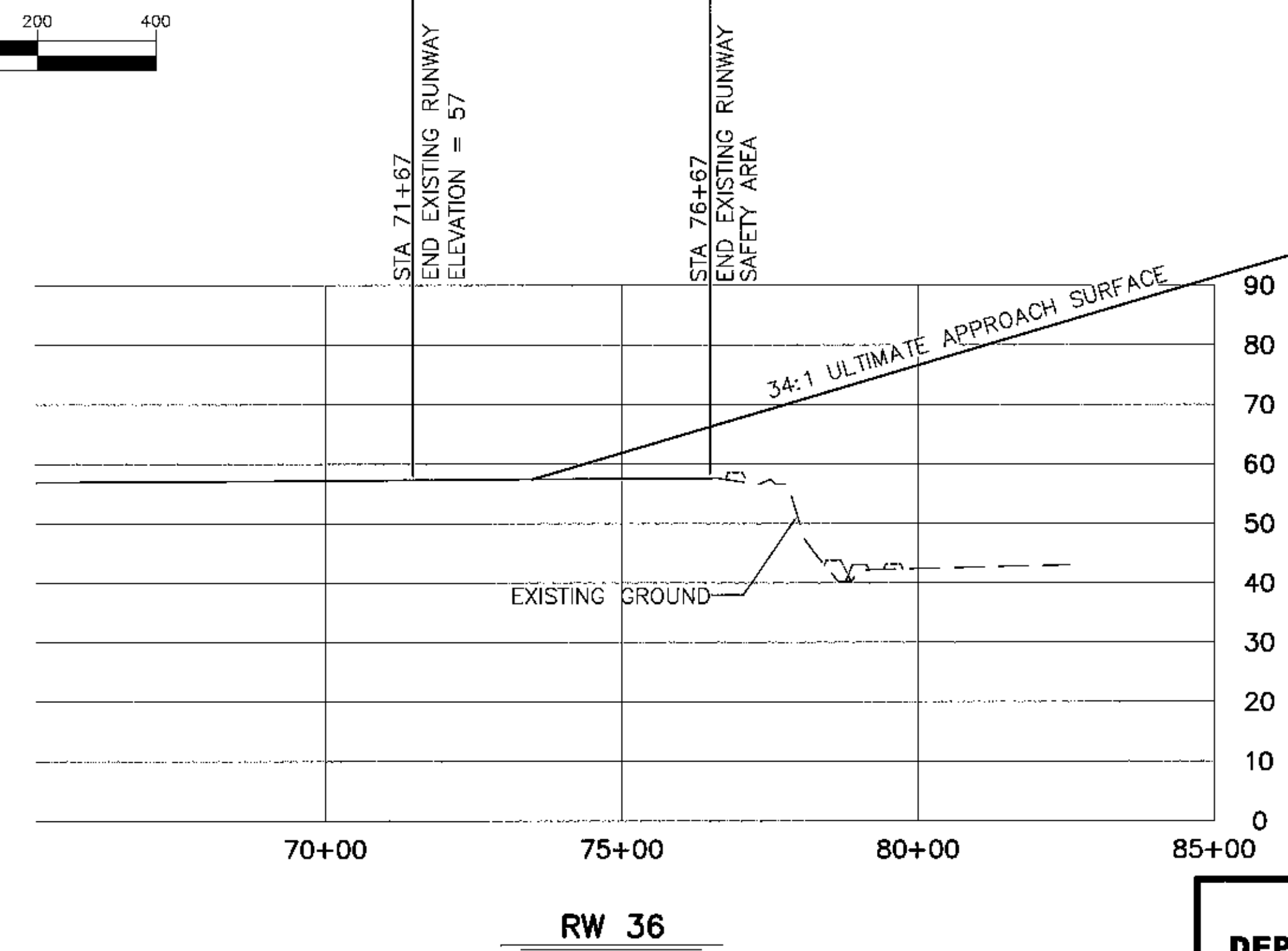
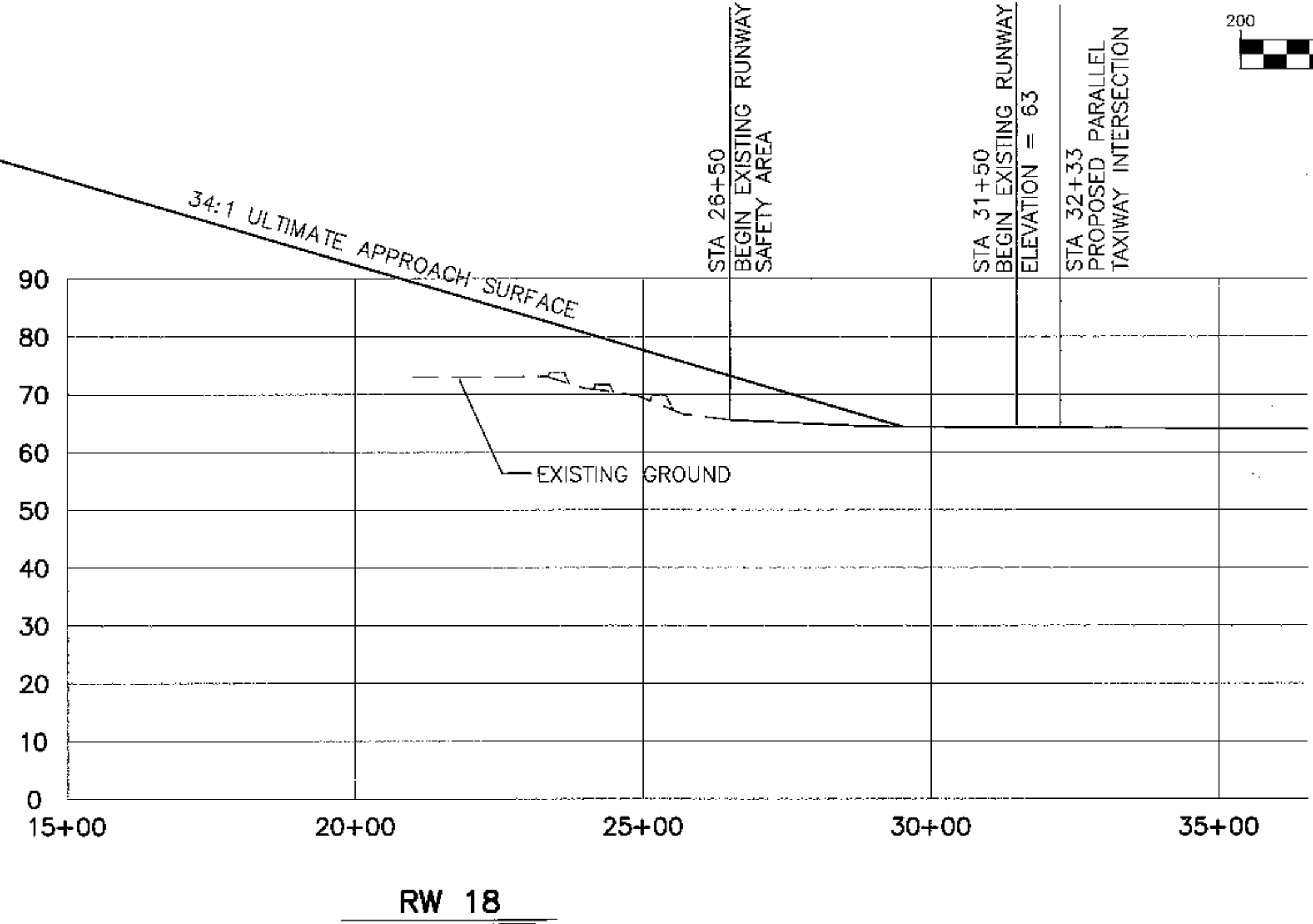
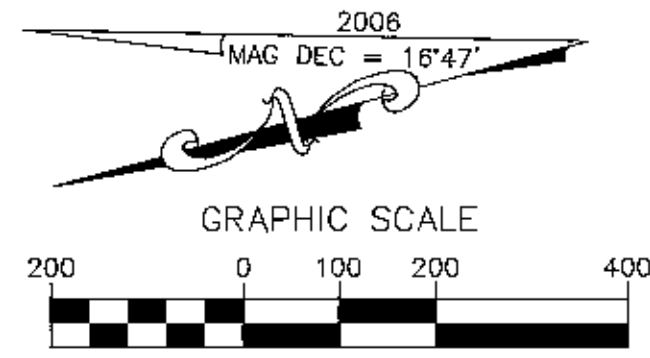
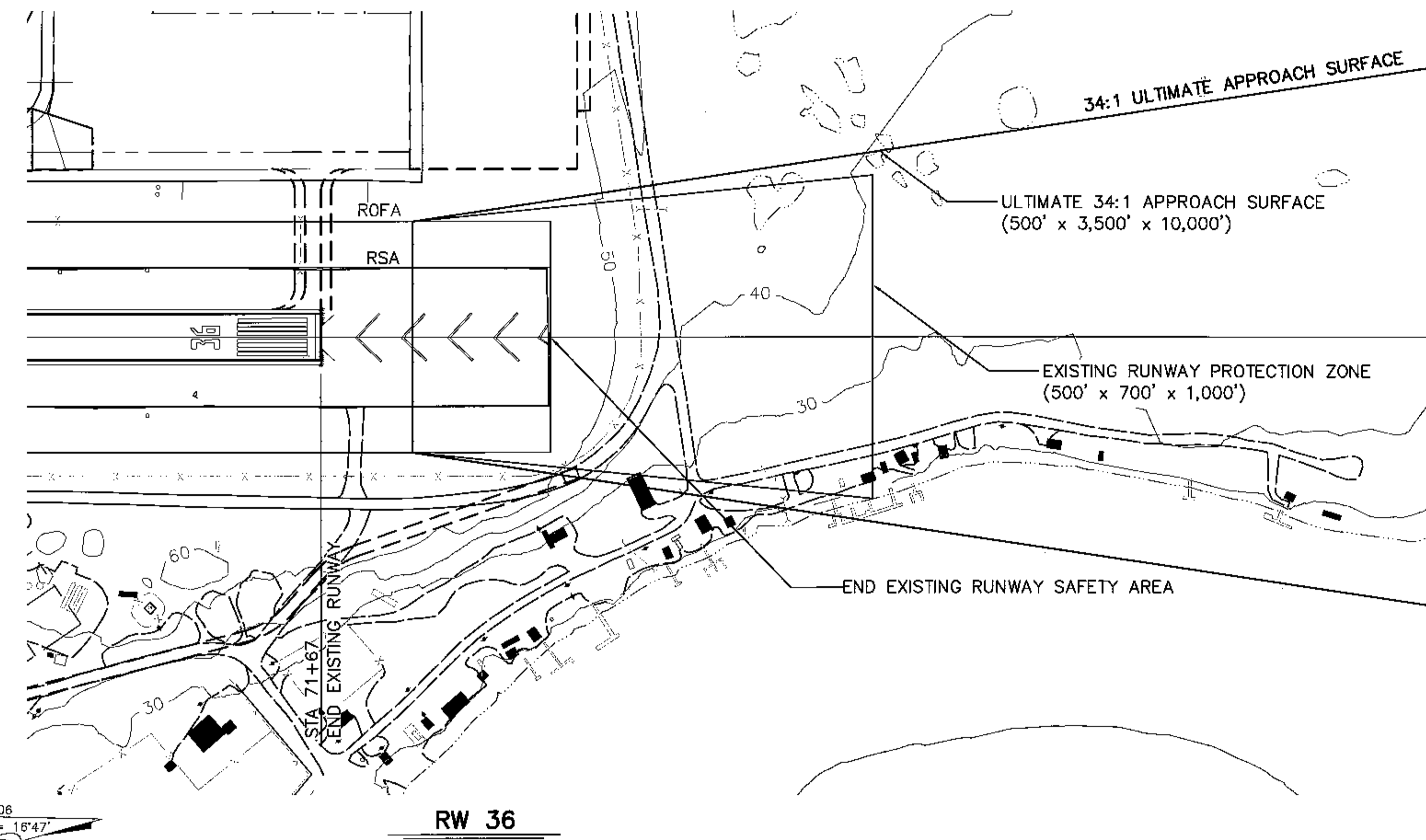
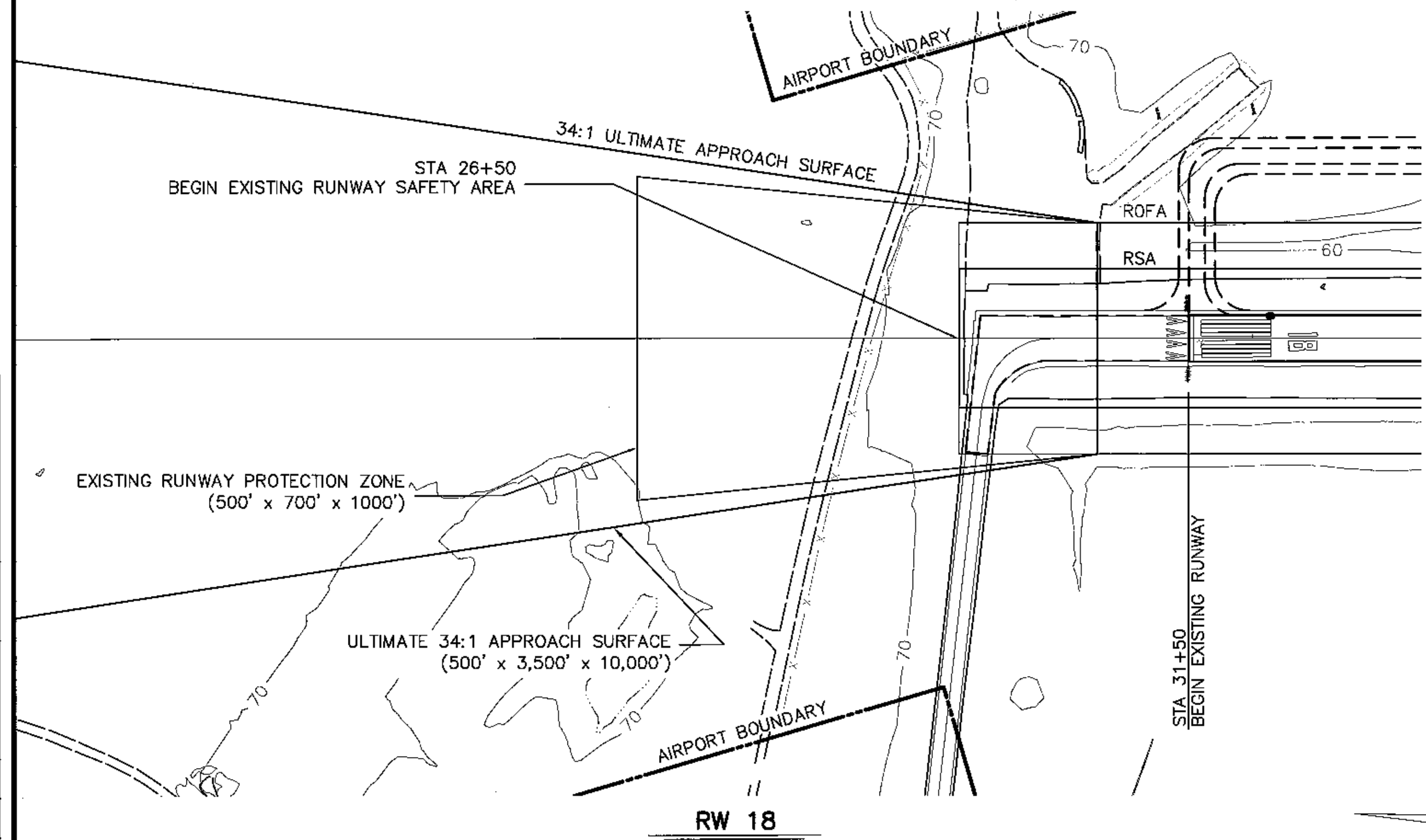


NOTES: 1. DUE TO CHANGES IN MAGNETIC
 DECLINATION, RUNWAY 11/29 HAS
 BEEN RE-NAMED RUNWAY 12/30.
 2. NO OBSTRUCTION SURVEY WAS
 PERFORMED FOR THIS ALP.

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
CENTRAL REGION
KING SALMON AIRPORT
 KING SALMON, ALASKA
 AIRPORT LAYOUT PLAN
 RUNWAY 12/30 INNER PORTION
 OF THE APPROACH SURFACES

DATE:
 SHEET:
5
 OF
9

Date Plotted: 4/05/2007, 1:24 PM
 Layout Name: APP_SJR_6
 File Name: P:\Projects\050029\ALP\DRW\KSA-ALP.dwg
 DWG FILE No. 231-89
 Designed By: jgormochie
 Drawn By:
 Checked By:



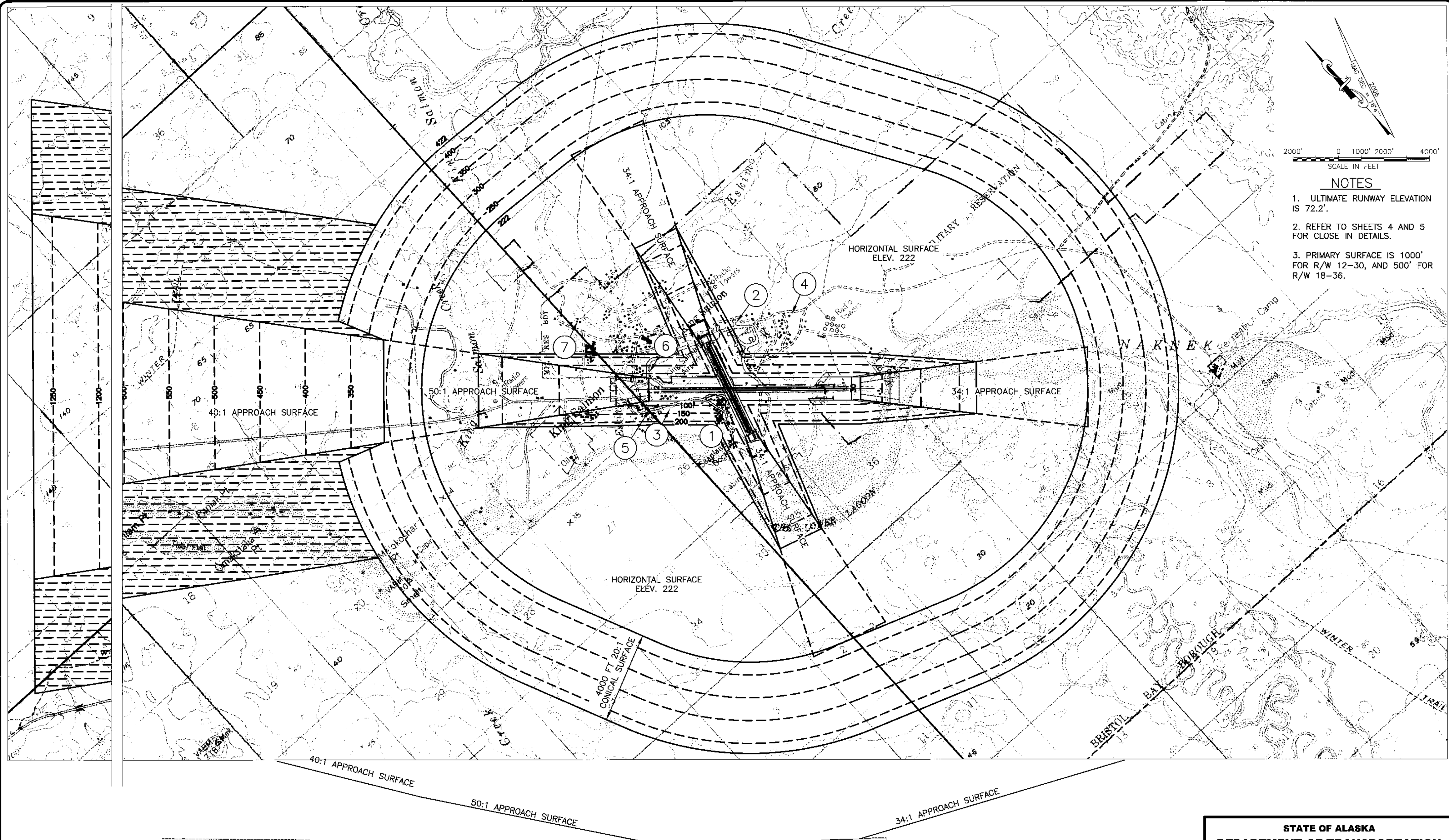
NOTES: 1. DUE TO CHANGES IN MAGNETIC DECLINATION, RUNWAY 11/29 HAS BEEN RE-NAMED RUNWAY 12/30.
 2. NO OBSTRUCTION SURVEY WAS PERFORMED FOR THIS ALP.

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
CENTRAL REGION

KING SALMON AIRPORT
 KING SALMON, ALASKA
 AIRPORT LAYOUT PLAN
 RUNWAY 18/36 INNER PORTION
 OF THE APPROACH SURFACES

DATE:	
SHEET:	6 OF 9

Date Plotted: 4/06/2007 2:45 PM
 Layout Name: AIRPORT AIRSPACE 7
 File Name: P:\Projects\0309020\ALP\DWG\KSA-A.P.dwg
 Designed By: approach
 Drawn By: approach
 Checked By: approach
 DOWI FILE No. 231-89



2000' 0 1000' 2000' 4000'
 SCALE IN FEET

- NOTES**
1. ULTIMATE RUNWAY ELEVATION IS 72.2'.
 2. REFER TO SHEETS 4 AND 5 FOR CLOSE IN DETAILS.
 3. PRIMARY SURFACE IS 1000' FOR R/W 12-30, AND 500' FOR R/W 18-36.

RW 12-30 PROFILE

OBSTRUCTION TABLE									
ID #	DOF NUMBER	DESCRIPTION	STATION/OFFSET	ELEVATION (MSL)	SURFACE PENETRATED	SURFACE ELEVATION	AMOUNT PENETRATION	DISPOSITION	STAGE TO CORRECT
1	02-0343	CTRL TWR	37+97, 926.5' RT	125	TRANSITIONAL	118	7	REMAIN	N/A
2	02-0591	TOWER (No Lights)	43+49, 2904' LT	157	NONE	222	NONE	REMAIN	N/A
3	02-0682	TOWER (No Lights)	14+09, 845.6' LT	100	NONE	121	NONE	REMAIN	N/A
4	02-0379	TOWER (Red Lighting)	67+93, 3257' LT	165	NONE	222	NONE	REMAIN	N/A
5	02-0344	BLDG	5+30, 750' RT	87	NONE	122	NONE	REMAIN	N/A
6	02-0310	BLDG (No Lights)	5+10, 763' LT	94	NONE	109	NONE	REMAIN	N/A
7	02-0038	TOWER (Red Lighting)	-24+46, 3058' LT	265	HORIZONTAL	122	143	REMAIN	N/A

NOTES: 1. DUE TO CHANGES IN MAGNETIC DECLINATION, RUNWAY 11/29 HAS BEEN RE-NAMED RUNWAY 12/30.
 2. OBSTRUCTION INFORMATION PENDING SURVEY TO BE PERFORMED SUMMER 2006.

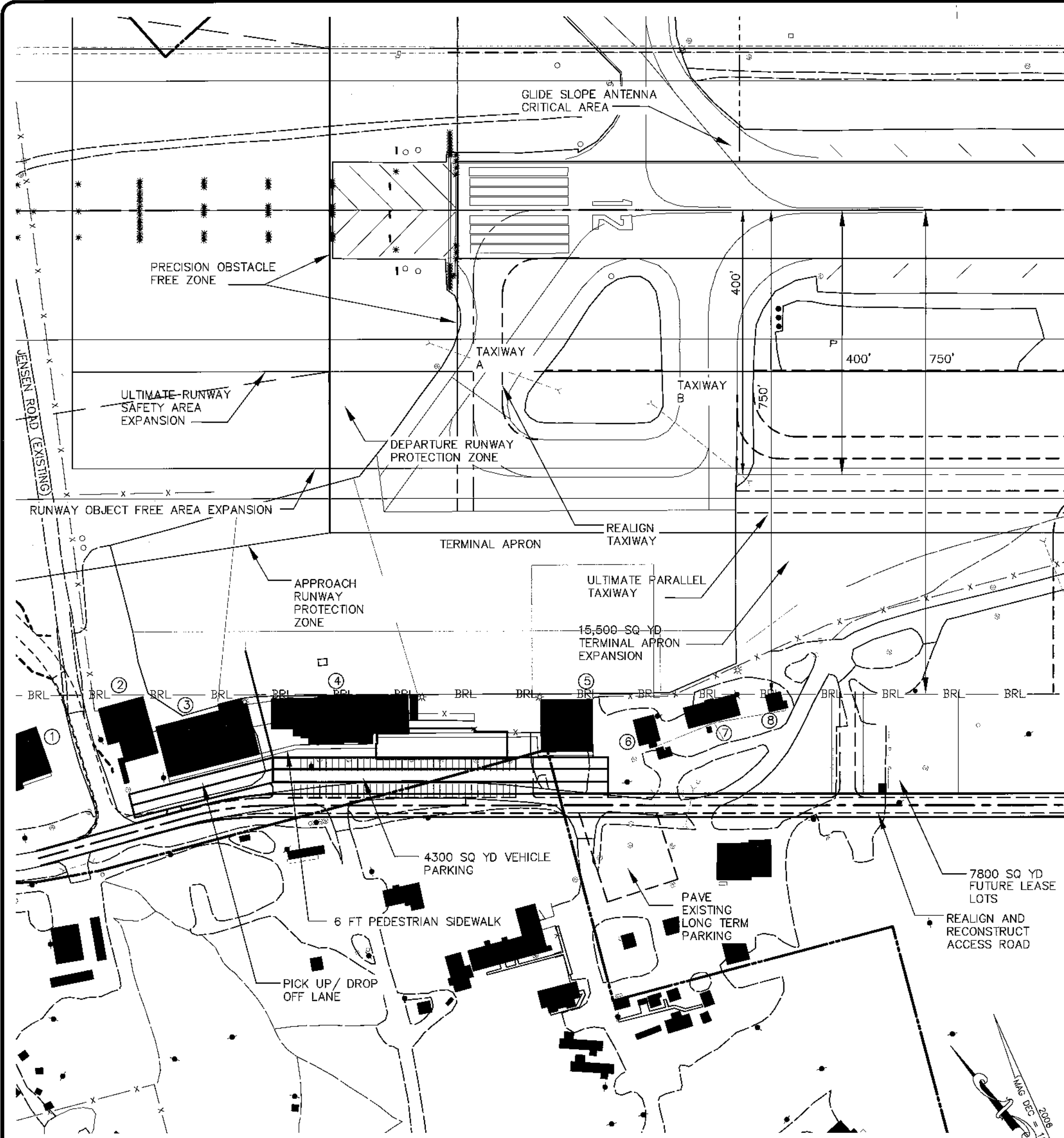
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
CENTRAL REGION

KING SALMON AIRPORT
 KING SALMON, ALASKA
 AIRPORT LAYOUT PLAN

AIRPORT AIRSPACE

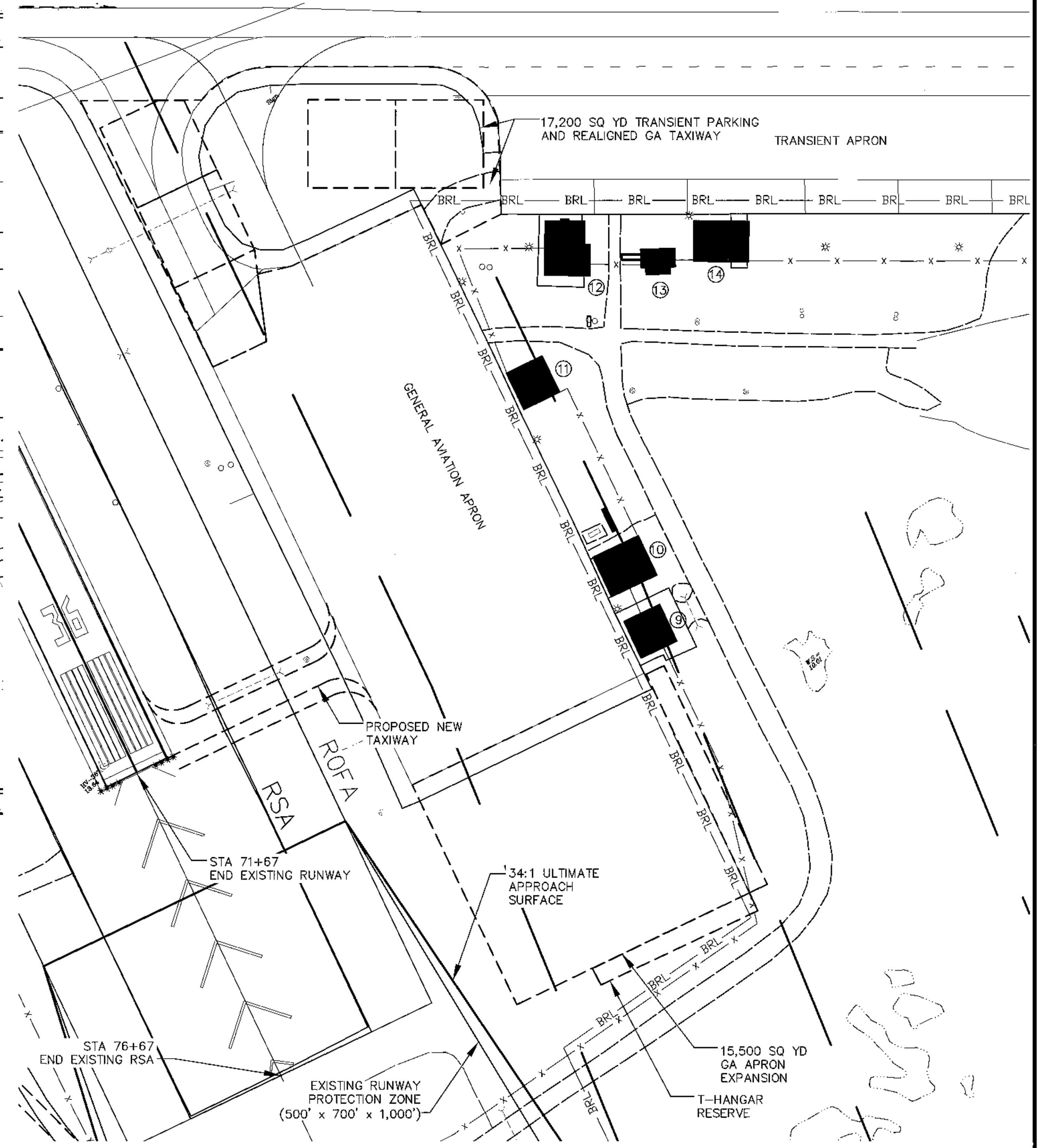
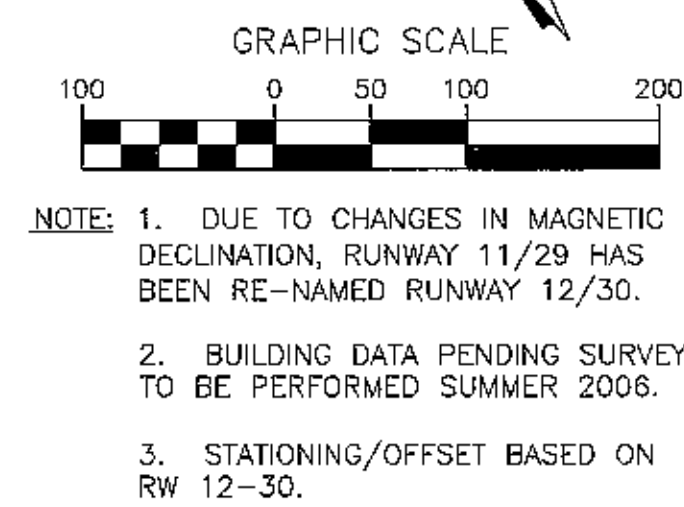
DATE:
 SHEET:
 7 OF 9

Date Plotted: 4/06/2007 1:24 PM
 Layout Name: TERMINAL AREA &
 File Name: F:\Projects\090209\ALP\DRW\KSA-ALP.dwg
 DWG FILE No. 231-89
 Designed By: Bismarck
 Drawn By:
 Checked By:



TERMINAL APRON

BUILDING DATA TABLE				
ID #	DESCRIPTION	STATION/OFFSET	TOP ELEV (MSL)	OBSTRUCT MARKING
1	KING KO SUBDIVISION	0+39/800' RT		
2	NORTHERN AIR CARGO	2+05/753' RT		
3	ALASKA AIRLINES	3+59/756' RT		
4	AIDEA	5+30/750' RT	87'	NONE
5	KING FLYING SERVICE / REEVE	8+85/759' RT		
6	AT&T ALASCOM	10+00/782' RT		
7	FAA	11+26/750' RT		
8	AT&T ALASCOM	11+97/746' RT		



GENERAL AVIATION APRON

BUILDING DATA TABLE				
ID #	DESCRIPTION	STATION/OFFSET	TOP ELEV (MSL)	OBSTRUCT MARKING
9	US FISH & WILDLIFE	56+33/1532' RT		
10	EGLI AIR HAUL	56+00/1431' RT		
11	LYNN SHAWBACK	54.57/1162' RT		
12	STORAGE BUILDING	54+91/958' RT		
13	KING SALMON GROUND SERVICE	56+30/1003' RT		
14	LYNN SHAWBACK	57+26/962' RT		

**STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
CENTRAL REGION**

KING SALMON AIRPORT
KING SALMON, ALASKA
AIRPORT LAYOUT PLAN

TERMINAL AREA

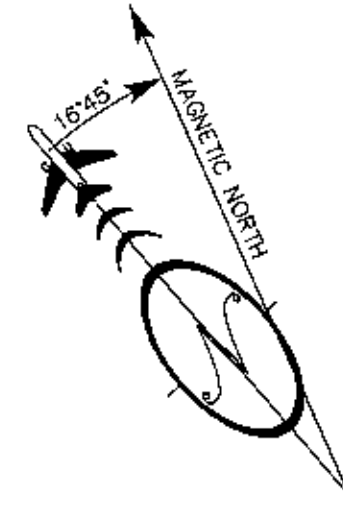
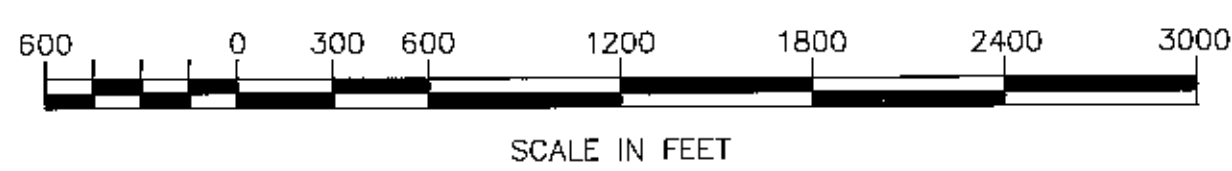
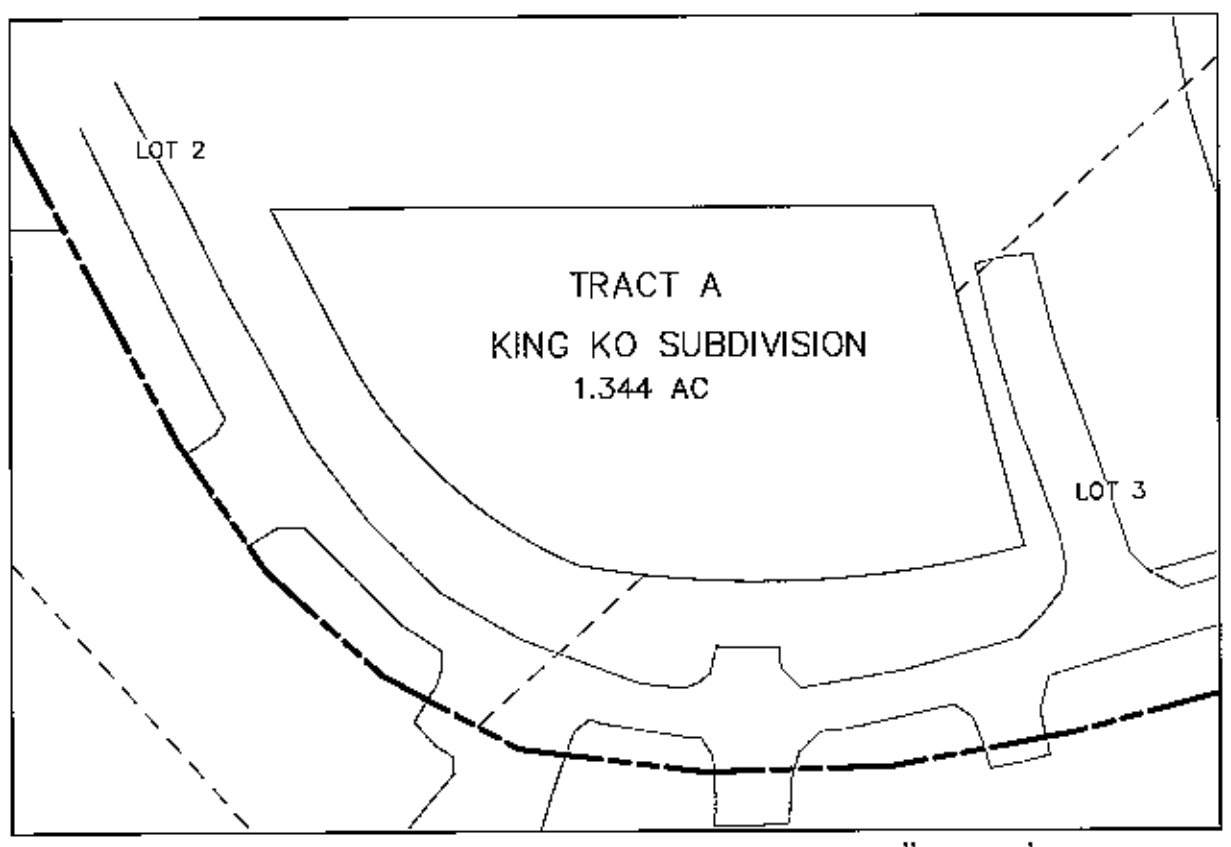
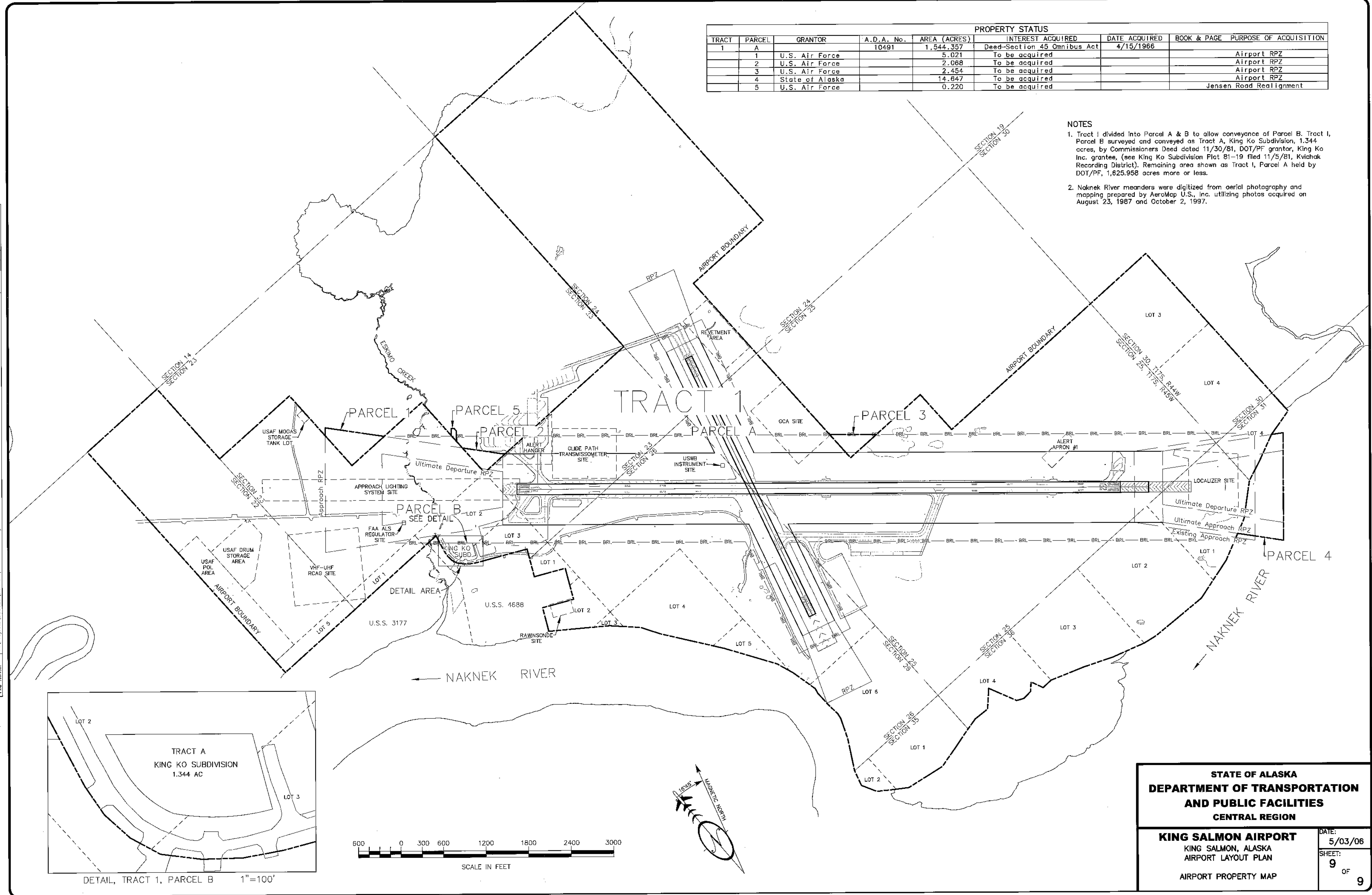
DATE:	
SHEET:	8
OF	9

PROPERTY STATUS								
TRACT	PARCEL	GRANTOR	A.D.A. No.	AREA (ACRES)	INTEREST ACQUIRED	DATE ACQUIRED	BOOK & PAGE	PURPOSE OF ACQUISITION
1	A		10491	1,544.357	Deed-Section 45 Omnibus Act	4/15/1966		
	1	U.S. Air Force		5.021	To be acquired			Airport RPZ
	2	U.S. Air Force		2.068	To be acquired			Airport RPZ
	3	U.S. Air Force		2.454	To be acquired			Airport RPZ
	4	State of Alaska		14.647	To be acquired			Airport RPZ
	5	U.S. Air Force		0.220	To be acquired			Jensen Road Realignment

NOTES

- Tract 1 divided into Parcel A & B to allow conveyance of Parcel B. Tract 1, Parcel B surveyed and conveyed as Tract A, King Ko Subdivision, 1,344 acres, by Commissioners Deed dated 11/30/81, DOT/PF grantor, King Ko Inc. grantees, (see King Ko Subdivision Plat 81-19 filed 11/5/81, Kvichak Recording District). Remaining area shown as Tract 1, Parcel A held by DOT/PF, 1,625.958 acres more or less.
- Naknek River meanders were digitized from aerial photography and mapping prepared by AeroMap U.S., Inc. utilizing photos acquired on August 23, 1987 and October 2, 1997.

Date Plotted: 4/05/2007 1:53 PM
 Layout Name: Layers44
 File Name: P:\Projects\058028\SURVEY\XSA-EXIB-A.dwg
 Designed By: jmagnoche
 Drawn By:
 Checked By:



**STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
CENTRAL REGION**

KING SALMON AIRPORT
KING SALMON, ALASKA
AIRPORT LAYOUT PLAN
AIRPORT PROPERTY MAP

DATE: 5/03/06
SHEET: 9 OF 9

Appendix B –Multi-Sector General Permit

Sector S Specifications from MSGP

A disc with an electronic version of the 2008 MSGP is located in the back of this binder or can be found at:

http://www.epa.gov/npdes/pubs/msgp2008_finalpermit.pdf

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart S – Sector S – Air Transportation.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.S.1 Covered Stormwater Discharges.

The requirements in Subpart S apply to stormwater discharges associated with industrial activity from Air Transportation facilities identified by the SIC Codes specified under Sector S in Table D-1 of Appendix D of the permit.

8.S.2 Limitation on Coverage

8.S.2.1 *Limitations on Coverage.* This permit authorizes stormwater discharges from only those portions of the air transportation facility that are involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling and lubrication), equipment cleaning operations or deicing operations.

Note: “deicing” will generally be used to imply both deicing (removing frost, snow or ice) and anti-icing (preventing accumulation of frost, snow or ice) activities, unless specific mention is made regarding anti-icing and/or deicing activities.

8.S.2.2 *Prohibition of Non-Stormwater Discharges.* (See also Part 1.1.4 and Part 8.S.3) This permit does not authorize the discharge of aircraft, ground vehicle, runway and equipment washwaters; nor the dry weather discharge of deicing chemicals. Such discharges must be covered by separate NPDES permit(s). Note that a discharge resulting from snowmelt is not a dry weather discharge.

8.S.3 Additional Technology-Based Effluent Limits.

8.S.3.1 *Good Housekeeping Measures.* (See also Part 2.1.2.2)

8.S.3.1.1 Aircraft, Ground Vehicle and Equipment Maintenance Areas. Minimize the contamination of stormwater runoff from all areas used for aircraft, ground vehicle and equipment maintenance (including the maintenance conducted on the terminal apron and in dedicated hangers). Consider the following practices (or their equivalents): performing maintenance activities indoors; maintaining an organized inventory of material used in the maintenance areas; draining all parts of fluids prior to disposal; prohibiting the practice of hosing down the apron or hanger floor; using dry cleanup methods; and collecting the stormwater runoff from the maintenance area and providing treatment or recycling.

8.S.3.1.2 Aircraft, Ground Vehicle and Equipment Cleaning Areas. (See also Part 8.S.3.6) Clearly demarcate these areas on the ground using signage or other

appropriate means. Minimize the contamination of stormwater runoff from cleaning areas.

- 8.S.3.1.3 Aircraft, Ground Vehicle and Equipment Storage Areas. Store all aircraft, ground vehicles and equipment awaiting maintenance in designated areas only and minimize the contamination of stormwater runoff from these storage areas. Consider the following control measures, including any BMPs (or their equivalents): storing aircraft and ground vehicles indoors; using drip pans for the collection of fluid leaks; and perimeter drains, dikes or berms surrounding the storage areas.
- 8.S.3.1.4 Material Storage Areas. Maintain the vessels of stored materials (e.g., used oils, hydraulic fluids, spent solvents, and waste aircraft fuel) in good condition, to prevent or minimize contamination of stormwater. Also plainly label the vessels (e.g., “used oil,” “Contaminated Jet A,” etc.). Minimize contamination of precipitation/runoff from these areas. Consider the following control measures (or their equivalents): storing materials indoors; storing waste materials in a centralized location; and installing berms/dikes around storage areas.
- 8.S.3.1.5 Airport Fuel System and Fueling Areas. Minimize the discharge of fuel to the storm sewer/surface waters resulting from fuel servicing activities or other operations conducted in support of the airport fuel system. Consider the following control measures (or their equivalents): implementing spill and overflow practices (e.g., placing absorptive materials beneath aircraft during fueling operations); using only dry cleanup methods; and collecting stormwater runoff.
- 8.S.3.1.6 Source Reduction. Minimize, and where feasible eliminate, the use of urea and glycol-based deicing chemicals, in order to reduce the aggregate amount of deicing chemicals used and/or lessen the environmental impact. Chemical options to replace ethylene glycol, propylene glycol and urea include: potassium acetate; magnesium acetate; calcium acetate; and anhydrous sodium acetate.
- 8.S.3.1.6.1 Runway Deicing Operation: Minimize contamination of stormwater runoff from runways as a result of deicing operations. Evaluate whether over-application of deicing chemicals occurs by analyzing application rates, and adjust as necessary, consistent with considerations of flight safety. Also consider these control measure options (or their equivalents): metered application of chemicals; pre-wetting dry chemical constituents prior to application; installing a runway ice detection system; implementing anti-icing operations as a preventive measure against ice buildup.
- 8.S.3.1.6.2 Aircraft Deicing Operations. Minimize contamination of stormwater runoff from aircraft deicing operations. Determine whether excessive application of deicing chemicals occurs and

adjust as necessary, consistent with considerations of flight safety. This evaluation should be carried out by the personnel most familiar with the particular aircraft and flight operations in question (versus an outside entity such as the airport authority). Consider using alternative deicing/anti-icing agents as well as containment measures for all applied chemicals. Also consider these control measure options (or their equivalents) for reducing deicing fluid use: forced-air deicing systems, computer-controlled fixed-gantry systems, infrared technology, hot water, varying glycol content to air temperature, enclosed-basket deicing trucks, mechanical methods, solar radiation, hangar storage, aircraft covers, and thermal blankets for MD-80s and DC-9s. Also consider using ice-detection systems and airport traffic flow strategies and departure slot allocation systems.

8.S.3.1.7 Management of Runoff. (See also 2.1.2.6) Where deicing operations occur, implement a program to control or manage contaminated runoff to minimize the amount of pollutants being discharged from the site. Consider these control measure options (or their equivalents): a dedicated deicing facility with a runoff collection/ recovery system; using vacuum/collection trucks; storing contaminated stormwater/deicing fluids in tanks and releasing controlled amounts to a publicly owned treatment works; collecting contaminated runoff in a wet pond for biochemical decomposition (be aware of attracting wildlife that may prove hazardous to flight operations); and directing runoff into vegetative swales or other infiltration measures. Also consider recovering deicing materials when these materials are applied during non-precipitation events (e.g., covering storm sewer inlets, using booms, installing absorptive interceptors in the drains, etc.) to prevent these materials from later becoming a source of stormwater contamination. Used deicing fluid should be recycled whenever possible.

8.S.3.2 *Deicing Season.* You must determine the seasonal timeframe (e.g., December-February, October - March, etc.) during which deicing activities typically occur at the facility. Implementation of control measures, including any BMPs, facility inspections and monitoring must be conducted with particular emphasis throughout the defined deicing season. If you meet the deicing chemical usage thresholds of 100,000 gallons glycol and/or 100 tons of urea, the deicing season you identified is the timeframe during which you must obtain the four required benchmark monitoring event results for deicing-related parameters, i.e., BOD, COD, ammonia and pH. See also Part 8.S.6.

8.S.4 Additional SWPPP Requirements.

An airport authority and tenants of the airport are encouraged to work in partnership in the development of a SWPPP. If an airport tenant obtains authorization under this permit and develops a SWPPP for discharges from his own areas of the airport, prior to authorization, that SWPPP must be coordinated and integrated with the SWPPP for the entire airport. Tenants of the airport facility include air passenger or cargo companies, fixed based operators and other parties

who have contracts with the airport authority to conduct business operations on airport property and whose operations result in stormwater discharges associated with industrial activity.

- 8.S.4.1 *Drainage Area Site Map.* (See also Part 5.1.2) Document in the SWPPP the following areas of the facility and indicate whether activities occurring there may be exposed to precipitation/surface runoff: aircraft and runway deicing operations; fueling stations; aircraft, ground vehicle and equipment maintenance/cleaning areas; storage areas for aircraft, ground vehicles and equipment awaiting maintenance.
- 8.S.4.2 *Potential Pollutant Sources.* (See also Part 5.1.3) In your inventory of exposed materials, describe in your SWPPP the potential for the following activities and facility areas to contribute pollutants to stormwater discharges: aircraft, runway, ground vehicle and equipment maintenance and cleaning; aircraft and runway deicing operations (including apron and centralized aircraft deicing stations, runways, taxiways and ramps). If you use deicing chemicals, you must maintain a record of the types (including the Material Safety Data Sheets [MSDS]) used and the monthly quantities, either as measured or, in the absence of metering, as estimated to the best of your knowledge. This includes all deicing chemicals, not just glycols and urea (e.g., potassium acetate), because large quantities of these other chemicals can still have an adverse impact on receiving waters. Tenants or other fixed-based operations that conduct deicing operations must provide the above information to the airport authority for inclusion with any comprehensive airport SWPPPs.
- 8.S.4.3 *Vehicle and Equipment Washwater Requirements.* Attach to or reference in your SWPPP, a copy of the NPDES permit issued for vehicle/equipment washwater or, if an NPDES permit has not been issued, a copy of the pending application. If an industrial user permit is issued under a local pretreatment program, include a copy in your SWPPP. In any case, if you are subject to another permit, describe your control measures for implementing all non-stormwater discharge permit conditions or pretreatment requirements in your SWPPP. If washwater is handled in another manner (e.g., hauled offsite, retained onsite), describe the disposal method and attach all pertinent documentation/information (e.g., frequency, volume, destination, etc.) in your SWPPP.
- 8.S.4.4 *Documentation of Control Measures Used for Management of Runoff:* Document in your SWPPP the control measures used for collecting or containing contaminated melt water from collection areas used for disposal of contaminated snow.

8.S.5 Additional Inspection Requirements.

- 8.S.5.1 *Inspections.* (See also Part 4.1) At a minimum conduct routine facility inspections at least monthly during the deicing season (e.g., October through April for most mid-latitude airports). If your facility needs to deice before or after this period, expand the monthly inspections to include all months during which deicing chemicals may be used. The Director may specifically require you to increase inspection frequencies.
- 8.S.5.2 *Comprehensive Site Inspections.* (See also Part 4.3) Using only qualified personnel, conduct your annual site inspection during periods of actual deicing operations, if possible. If not practicable during active deicing because of weather, conduct the

inspection during the season when deicing operations occur and the materials and equipment for deicing are in place.

8.S.6 Sector-Specific Benchmarks. (See also Part 6 of the permit.)

Monitor per the requirements in Table 8.S-1.

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
For airports where a single permittee, or a combination of permitted facilities use more than 100,000 gallons of glycol-based deicing chemicals and/or 100 tons or more of urea on an average annual basis, monitor the first four parameters in ONLY those outfalls that collect runoff from areas where deicing activities occur (SIC 4512-4581).	Biochemical Oxygen Demand (BOD ₅) ¹	30 mg/L
	Chemical Oxygen Demand (COD) ¹	120 mg/L
	Ammonia ¹	2.14 mg/L
	pH ¹	6.0 - 9.0 s.u.

¹ These are deicing-related parameters. Collect the four benchmark samples, and any required follow-up benchmark samples, during the timeframe defined in Part 8.S.3.2 when deicing activities are occurring.

Appendix C –NOI

Acknowledgement of Coverage under MSGP

Notice of Intent

STATE OF ALASKA

DIVISION OF WATER WASTEWATER DISCHARGE AUTHORIZATION

SEAN PARNELL, GOVERNOR
555 Cordova Street
Anchorage, AK 99501
Phone: (907)269-6283
Fax: (907)334-2415
William.ashton@alaska.gov

February 16, 2011

Alaska DOT & PP
Attn: Jennifer Hillman
P.O. Box 196900
Anchorage, AK 99519

Facility:
King Salmon Airport
MP 1 Alaska Peninsula Highway
P.O. Box 65
King Salmon, AK 99613

SUBJECT: Acknowledgement of Coverage /Assigned Permit Number

HIGH IMPORTANCE Your Permit Tracking Number is AKR05DB08

This letter acknowledges that you have submitted a complete Notice of Intent form to be covered under the Alaska Pollutant Discharge Elimination System (APDES) Multi-Sector General Permit for Stormwater Discharges associated with industrial activity (MSGP) on February 18, 2011. Coverage under this permit begins at the conclusion of your sixty day waiting period, on May 18, 2011. This is not a determination of the validity of the information you provided which your eligibility for coverage under the MSGP is based on. An important aspect of certification requires that you correctly determine whether you are eligible for coverage under this permit. Your signature on the Notice of Intent certifies that you have read, understand, and are implementing all of the applicable requirements.

The Multi-Sector General Permit requires you to have developed and begun implementing a Storm Water Pollution Prevention Plan (SWPPP) and outlines important inspection and record keeping requirements. You must also comply with any additional location-specific requirements applicable to your area. A copy of the MSGP must be kept with your SWPPP. An electronic copy of this permit and additional guidance materials can be viewed and downloaded at <http://www.dec.state.ak.us/water/wppspc/stormwater/stormwater.htm>.

If you have general questions regarding the storm water program or your responsibilities under the MSGP, please call (907) 269-6283.

Thank you and sincerely,



Ronni Wilcock for William Ashton

MEMORANDUM

State of Alaska

Department of Transportation & Public Facilities
Central Region - Division of Maintenance & Operations

To: William Ashton
Storm Water and Wetlands Manager
ADEC

Date: January 21, 2011

Project Name: King Salmon State Airport

From: Jennifer Hillman
Environmental Impact Analyst
ADOT&PF

Project No: Maintenance and Operations

Subject: NOI Form

Attached is the Notice of Intent (NOI) form for coverage under the Alaska Pollutant Discharge Elimination System (APDES) Multi-Sector General Permit (MSGP) for stormwater discharges associated with industrial activity at the King Salmon Airport, King Salmon, Alaska (see attached area map).

An interagency journal entry is being processed for this permit.

If you have questions regarding this permit application, please contact me at 907-269-0714 and Jennifer.Hillman@alaska.gov.

Attachments:

1. NOI Form
2. Area Map

cc: Robert A. Campbell, P.E., Regional Director, ADOT&PF



Notice of Intent (NOI) For Storm Water Discharges Associated With Industrial Activity Under the APDES Multi-Sector General Permit

Submission of this completed Notice of Intent (NOI) constitutes your declaration that the sources identified in Appendix A of this form require authorization to discharge pollutants to waters of the United States from the facility or are controlled by Section 212 water quality standards under the APDES Multi-Sector General Permit (MSGP) for industrial storm water. Submission of this NOI constitutes your intent to comply with the facility identified in Section III of this form under the applicable conditions of Part 1 of the MSGP. Please read and make sure you comply with all regulatory requirements, including the requirement to promptly report water quality problems to the Alaska Department of Environmental Conservation (DEC) at the end of this form to complete your NOI.

Section I: Operator Information

Organization: **Alaska Department of Transportation and Public Facilities (DOT&PF)**

Contact Person: **M&O Environmental Analyst (Jennifer Hillman)**

Mailing Address:

Street (PO Box) **P.O. Box 196900**

City **Anchorage** State **Alaska** Zip **99519**

Phone **907-269-0714** Fax/number

Email **jennifer.hillman@alaska.gov**

Section II: Billing Contact Information

Organization: **Alaska Department of Transportation and Public Facilities (DOT&PF)**

Contact Person: **Administrative Officer (Barbara Griffin)**

Mailing Address:

Street (PO Box)

Check here if bills are Operator Information

City: State: Zip:

Phone **907-269-0758** Fax/number

Email **barbara.jordan@alaska.gov**

Section III: Facility Information

Facility Name: **King Salmon Airport**

Have storm water discharges from your site been covered previously under an NPDES or APDES Permit? Yes No

^a If Yes, provide the Tracking Number if you have coverage under EPA's WQGP 2000 or the APDES permit number if you had coverage under an EPA individual permit.

^b If no, was your facility in operation and discharging storm water prior to October 30, 2005? Yes No

^c If no or "b", did your facility commence discharging after October 30, 2005 and before January 5, 2007? Yes No

Location Address: **MP 1 Alaska Peninsula Highway**

Street: **P.O. Box 65**

City: **King Salmon** State **Alaska** Zip **99613**

Borough or similar government subdivision: **Bristol Bay Borough**

Latitude: **58 ° 40 ' 35" N** Longitude: **156 ° 38 ' 55" W**

Determined by: GPS USGS topographic map Other

If you used a USGS topographic map, what was the scale?

Estimated area of industrial activity at your site exposed to storm water: **0.0** (acres)

Is this a federal facility? Yes No

Section IV. Discharge Information

Does your facility discharge into a Municipal Separate Storm Sewer System (MS4)? Yes No

If yes, name of MS4 receptor:

Receiving Water and Wetlands Information (if additional space is needed for this question, fill out Attachment 2.)

4. What is the name(s) of the receiving water(s) and storm drain water body(s) into which you discharge?	5. Are any of your discharges directly into any segment of an "impaired" water?	6. If you discharge into a stream(s) that is/was on the following list, indicate:		
		7. Have you previously been assessed for this discharge?	8. Are the guidelines during the assessment period in your discharge?	9. Are the CDDs being captured for this discharge during the assessment?
Eskimo Creek	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Unnamed Creek	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Naknek River	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

Water Quality Standards (for new discharges only)

Are any of your discharges into any portion of a receiving water designated by the state under its antidegradation policy as a Tier 2 or Tier 3 water (water quality levels necessary to support protection of fish, shellfish, and wildlife and recreation and/or the state)? No Yes

Has the receiving water been designated by the state under its antidegradation policy as Tier 2 water (Outstanding Natural Resource Water)? Yes No

Federal Effluent Limitation Guidelines and Sector Specific Requirements

a. Are you receiving permit coverage for any storm water discharges subject to effluent limitation guidelines? Yes No

b. If yes, which effluent limitation guidelines apply to your storm water discharge?

40 CFR Part/Subpart	Eligible Discharges	Affected MS4P Sector	Check if applicable
Part 411, Subpart C	Runoff from material storage piles at cement manufacturing facilities.	B	<input type="checkbox"/>
Part 412, Subpart A	Runoff from operations for glass manufacturing facilities that comes into contact with any raw materials, finished products, by-products, or waste products (see MARI).	C	<input type="checkbox"/>
Part 424	Coal pile runoff at steam electric generating stations.	D	<input type="checkbox"/>
Part 426, Subpart 1	Discharges resulting from spray down or intentional wetting of egg at wet flock storage areas.	A	<input type="checkbox"/>
Part 431, Subpart B, C, or D	Wine distilling discharges at crushed stone mines, construction and gravel mines, or industrial sand mines.	I	<input type="checkbox"/>
Part 442, Subpart A	Runoff from asphalt emission facilities.	E	<input type="checkbox"/>
Part 443, Subpart A & B	Runoff from hazardous waste and non-hazardous waste facilities.	Fa	<input type="checkbox"/>

c. If you are a sector 3 (air transportation) facility, do you transport any more than 100,000 gallons of glycol based deicing/anti-icing chemicals and/or 100 tons or more of urea based average annual basis? Yes No

Identify the 4-digit Standard Industrial Classification (SIC) code or 2-letter Activity Code that best represents the products produced or services rendered for which your facility is primarily engaged, as defined in MDEP. Primary SIC Code: **4581** Primary Activity Code: _____

Identify the applicable sector(s) and subsector(s) of industrial activity, including on-located industrial activity, for which you are requesting permit coverage:

a. Sector: S	Subsector: S1	b. Sector: _____	Subsector: _____	c. Sector: _____	Subsector: _____
d. Sector: _____	Subsector: _____	e. Sector: _____	Subsector: _____	f. Sector: _____	Subsector: _____

Is your site presently inactive or unoperated? Yes No
 a. If yes, is your site expected to be inactive and unoperated for the entire permit term? Yes No
 b. If no to a, then indicate the length of time that you expect your facility to be inactive and unoperated: _____

Section V. Storm water Pollution Prevention Plan (SWPPP) Contact information

SWPPP Contact Name: **DOT&PF M&O Environmental Impact Analyst (Jennifer Hillman)**
 Phone: **907-269-0714** Email: **jennifer.hillman@alaska.gov**
 URL of SWPPP (if applicable): **N/A**


Section VI. Endangered Species Protection

Using the instructions in Appendix F of the MDEP, circle which criterion (per Part 1.1.4.5) are you eligible for coverage under this permit?
 A B C D E F

If you select criterion E from Part 1.1.4.5:
 What federally listed species or federally designated critical habitat are on your "action area"?
 (List the pollutants expected to be present in your discharge)
 If you are an existing discharge, do you have effluent monitoring data from EPA's MDEP 2000 or another program? Yes No
 1. If no, why not? No monitoring required for the permit inactive/unaffected site Other: _____
 2. Do you have any other data characterizing pollutants in your permit water (stream)?
 3. If any from downstream monitoring data, did you exceed any of the applicable requirements? Yes No
 4. Did you exceed any applicable effluent loading guidelines or cause or contribute to an exceedance of a state water quality standard?
 Yes No
 5. If you answered "yes" to either question 3 or 4 above, for what pollutant(s)?
 Attach documentation supporting attainment of eligibility. Documentation should address species and habitat listed above and the potential effect of pollutants in your discharge on the listed species and habitat.

Section VII. Historic Preservation

Using the instructions in Appendix F of the MDEP, circle which criterion (per Part 1.1.4.6) are you eligible for coverage under this permit?
 A B C D

Section VIII. Certification Information	
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and recorded the information submitted. Based on the inquiry of this person or persons who manage the system, or that person directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am providing this as significant evidence for submitting false information, including the availability of time and expenditures for issuing permits.	
Printed Name: Robert A. Campbell, P.E.	Title: Regional Director
Signature: 	Date: 1-21-21 Email: robert.campbell@alaska.gov
NOI Preparer (Complete if NOI was prepared by someone other than the verifier)	
Prepared by: DOT&PF M&O Environmental Impact Analyst, Jennifer Hillman	
Organization: DOT&PF	
Phone: 907-269-0714	Email: jennifer.hillman@alaska.gov

Appendix D – Visual Assessments

Visual Assessment Forms

SPCC Monthly Inspection Checklist

QUARTERLY VISUAL ASSESSMENT

Visual assessments needed quarterly for each outfall location, with one sample/year taken from snowmelt runoff. Collect sample using clean, clear container within 30 minutes of beginning of discharge event (if not possible, describe situation below). Examine sample in well lit area and record results below.

Name of Facility		Discharge/Outfall Location	
NPDES Tracking No.		Date & Time	
Name of Inspector(s)		Outfall Name	
Weather Conditions			
Additional Notes			
Nature of Discharge	Runoff (Need 3 annually)	Snow Melt (Need 1 annually)	

Observation	Description (Circle)			Comments and/or Source of Contamination
Color	Clear	Cloudy	Dark	
Odor	Absent	Sewage	Rotten Eggs	
Clarity	Clear	Cloudy	Dark	
Floating Solids	Absent	Present		
Settled Solids	Absent	Present		
Suspended Solids	Absent	Present		
Foam	Absent	Present		
Oil Sheen	Absent	Present	Smell	
Stains at Outfall	Absent	Present	Other	
Dry Weather Flow	Absent	Present		
Dead Vegetation	Absent	Present		
Sample taken in clean, clear container?			Yes	No
Sample inspected in well lit area?			Yes	No

If applicable, describe why it was not possible to take samples within the first 30 minutes of precipitation event:

Inspector Name/Title: _____

Signature: _____

Monthly Inspection Checklist

This inspection record must be completed *each month* except the month in which an annual inspection is performed. Provide further description and comments, if necessary, on a separate sheet of paper and attach to this sheet. *Any item that receives "yes" as an answer must be described and addressed immediately.

	Y*	N	Description & Comments
Storage tanks			
<i>Tank surfaces show signs of leakage</i>			
<i>Tanks are damaged, rusted or deteriorated</i>			
<i>Bolts, rivets, or seams are damaged</i>			
<i>Tank supports are deteriorated or buckled</i>			
<i>Tank foundations have eroded or settled</i>			
<i>Level gauges or alarms are inoperative</i>			
<i>Vents are obstructed</i>			
<i>Secondary containment is damaged or stained</i>			
<i>Water/product in interstice of double-walled tank</i>			
<i>Dike drainage valve is open or is not locked</i>			
Piping			
<i>Valve seals, gaskets, or other appurtenances are leaking</i>			
<i>Pipelines or supports are damaged or deteriorated</i>			
<i>Joints, valves and other appurtenances are leaking</i>			
<i>Buried piping is exposed</i>			
Oil/water separator			
<i>Oil/water separator > 2 inches of accumulated oil</i>			
<i>Oil/water separator effluent has a sheen</i>			
Security			
<i>Fencing, gates, or lighting is non-functional</i>			
<i>Pumps and valves are locked if not in use</i>			
Response Equipment			
<i>Response equipment inventory is complete</i>			

Date: _____

Signature: _____

Appendix E – Inspections

Inspection Forms

Appendix F – Corrections

Corrections Log

Appendix G – Training

Annual Employee Training Log

SPCC Training Log

TRAINING RECORD

Training Date		
Training Description		
Trainer		
	Employee(s) trained	Employee signature

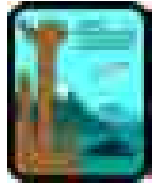
Training Date		
Training Description		
Trainer		
	Employee(s) trained	Employee signature

Training Date		
Training Description		
Trainer		
	Employee(s) trained	Employee signature

Appendix H –Annual Report

MSGP Annual Reporting Form

SPCC Annual Facility Inspection Checklist



Alaska Department of Environmental Conservation

MSGP Annual Reporting Form

Section I. General Information

Facility Name:			
APDES Permit Tracking Number:			
<u>Facility Physical Address</u>			
Street:			
City:	State: Alaska	Zip:	
Lead Inspector's Name:		Title:	
Additional Inspectors Names:			
Contact Person:		Title:	
Phone:		Email:	
Inspection Date:			

Section II. General Inspection Findings

1. As part of this comprehensive site inspection, did you inspect all potential pollutant sources, including areas where industrial activity may be exposed to storm water? Yes No

If NO, describe why not:

Note: Complete Section III of this form for each industrial activity area inspected and included in your SWPPP or as newly defined, in Section II parts 2 and 3 below, where pollutants may be exposed to storm water.

2. Did this inspection identify any storm water or non-storm water outfalls not previously identified in your SWPPP? Yes No

If YES, for each location, describe the sources of those storm water and non-storm water discharges and any associated control measures in place:

3. Did this inspection identify any sources of storm water or non-storm water discharges not previously identified in your SWPPP? Yes No

If YES, describe these sources of storm water or non-storm water pollutants expected to be present in these discharges, and any control measures in place:

4. Did you review storm water monitoring data as part of this inspection to identify potential pollutant hotspots? Yes No NA, no monitoring performed

If YES, summarize the findings of that review and describe any additional inspection activities resulting from this review:

5. Describe any evidence of pollutants entering the drainage system or discharging to surface waters, and the condition of and around outfalls, including flow dissipation measure to prevent scouring:

6. Have you taken or do you plan to take and corrective actions, as specified in Part 3 of the permit, since your last annual report submission (or since you received authorization to discharge under this permit if this is your first annual report), including any corrective actions identified as a result of this annual comprehensive site inspection?

Yes No

If YES, how many conditions requiring review for corrective active as specified in Parts 3.1 and 3.2 of the MSGP were addressed by these corrective actions?

Note: Complete the attached Corrective Action Form (Section IV) for each condition indentified, including any conditions identified as a result of this comprehensive storm water inspection.

Section III. Industrial Activity Area Specific Findings

Complete one block for each industrial activity area where pollutants may be exposed to storm water. Copy this page for additional industrial activity areas.

In reviewing each area, you should consider:

- Industrial materials, residue, or trash that may have or could come into contact with storm water;
- Leaks or spills from industrial equipment, drums, tanks, and other containers;
- Offsite tracking of industrial or waste materials from areas of no exposure to exposed areas; and
- Tracking or blowing of raw, final, or waste material from areas of no exposure to exposed areas.

Industrial Activity Area:

1. Brief Description:

2. Are any control measures in need of maintenance or repair? Yes No

3. Have any control measures failed and require replacement? Yes No

4. Are any additional/revised control measures necessary in this area? Yes No

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form.)

Industrial Activity Area:

1. Brief Description:

2. Are any control measures in need of maintenance or repair? Yes No

3. Have any control measures failed and require replacement? Yes No

4. Are any additional/revised control measures necessary in this area? Yes No

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form.)

Industrial Activity Area:

1. Brief Description:

2. Are any control measures in need of maintenance or repair? Yes No

3. Have any control measures failed and require replacement? Yes No

4. Are any additional/revised control measures necessary in this area? Yes No

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form.)

Note: Copy this page and attach additional pages as necessary.

Industrial Activity Area:

1. Brief Description:

2. Are any control measures in need of maintenance or repair? Yes No

3. Have any control measures failed and require replacement? Yes No

4. Are any additional/revised control measures necessary in this area? Yes No

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form.)

Industrial Activity Area:

1. Brief Description:

2. Are any control measures in need of maintenance or repair? Yes No

3. Have any control measures failed and require replacement? Yes No

4. Are any additional/revised control measures necessary in this area? Yes No

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form.)

Industrial Activity Area:

1. Brief Description:

2. Are any control measures in need of maintenance or repair? Yes No

3. Have any control measures failed and require replacement? Yes No

4. Are any additional/revised control measures necessary in this area? Yes No

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form.)

Section IV. Corrective Actions

Complete this page for each specific condition requiring a corrective action or a review determining that no corrective action is needed. Copy this page for additional corrective actions or reviews.
Include both corrective actions that have been initiated or completed since the last annual report, and future corrective actions needed to address problems identified in the comprehensive storm water inspection. Include an update on any outstanding corrective actions that had not been completed at the time of your previous annual report.

1. Corrective Action # _____ of _____ for this reporting period.

2. Is this corrective action:

- An update on a corrective action from a previous annual report; or
- A new corrective action?

3. Identify the condition(s) triggering the need for this review:

- Unauthorized release of discharge
- Numeric effluent limitation exceedance
- Control measures inadequate to meet applicable water quality standards
- Control measures inadequate to meet non-numeric effluent limitations
- Control measures not properly operated or maintained
- Change in facility operations necessitated change in control measures
- Average benchmark value exceedance
- Other (describe):

4. Briefly describe the nature of the problem identified:

5. Date problem identified:

6. How problem was identified:

- Comprehensive site inspection
- Quarterly visual assessment
- Routine facility inspection
- Benchmark monitoring
- Notification by EPA or ADEC
- Other (describe):

7. Description of corrective action(s) taken or to be taken to eliminate or further investigate the problem (e.g., describe modifications or repairs to control measures, analyses to be conducted, etc.) or if no modification are needed, basis for that determination:

8. Did/will this corrective action require modification of you SWPPP? Yes No

9. Date corrective action initiated:

10. Date corrective action completed: Or expected to be completed:

11. If corrective action not yet completed, provide the status of the corrective action as the time of the comprehensive site inspections and describe any remaining steps (including timeframes associated with each step) necessary to complete the corrective action:

Section V. Annual Report Certification

Compliance Certification

Do you certify that your annual inspection has met the requirements of Part 4.2 of the permit, and that, based upon the results of this inspection, to the best of your knowledge, you are in compliance with the permit? Yes No

If No, summarize why you are not in compliance with the permit:

Annual Report Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name of Authorized Representative: _____ Title: _____

Signature: _____ Date Signed: _____ Email: _____

Annual Facility Inspection Checklist

This inspection record must be completed *each year*. If any response requires further elaboration, provide comments in Description & Comments space provided. Further description and comments, if necessary, must be provided on a separate sheet of paper and attached to this sheet. *Any item that receives “yes” as an answer must be described and addressed immediately.

	Y*	N	Description & Comments
Storage tanks			
<i>Tank #1</i>			
<i>Tank surfaces show signs of leakage</i>			
<i>Tank is damaged, rusted or deteriorated</i>			
<i>Bolts, rivets or seams are damaged</i>			
<i>Tank supports are deteriorated or buckled</i>			
<i>Tank foundations have eroded or settled</i>			
<i>Level gauges or alarms are inoperative</i>			
<i>Vents are obstructed</i>			
<i>Tank #2</i>			
<i>Tank surfaces show signs of leakage</i>			
<i>Tank is damaged, rusted, or deteriorated</i>			
<i>Bolts, rivets, or seams are damaged</i>			
<i>Tank supports are deteriorated or buckled</i>			
<i>Tank foundations have eroded or settled</i>			
<i>Level gauges or alarms are inoperative</i>			
<i>Vents are obstructed</i>			
Piping			
<i>Valve seals or gaskets are leaking</i>			
<i>Pipelines or supports are damaged or deteriorated</i>			
<i>Joints, valves and other appurtenances are leaking</i>			
<i>Buried piping is exposed</i>			
<i>Out-of-service pipes are not capped</i>			
<i>Warning signs are missing or damaged</i>			
Oil/water separator			
<i>Oil/water separator > 2 inches of accumulated oil</i>			
<i>Oil/water separator effluent has a sheen</i>			
Security			
<i>Fencing, gates, or lighting is non-functional</i>			
<i>Pumps and valves are not locked (and not in use)</i>			
Response equipment			
<i>Response equipment inventory is incomplete</i>			

Annual reminders:

- Hold SPCC Briefing for all oil-handling personnel (and update briefing log in the Plan);
- Check contact information for key employees and response/cleanup contractors and update them in the Plan as needed;

Additional Remarks:

Date: _____

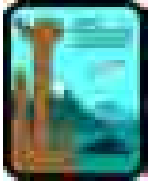
Signature: _____

Appendix I – Blank Forms

MSGP Industrial Discharge Monitoring Report (MDMR)

Airport Deicer Tracking Form

SPCC Discharge Notification Form



Alaska Department of Environmental Conservation

MSGP Industrial Discharge Monitoring Report (MDMR)

Reason(s) for Submission (Check all that apply):		
Submitting monitoring data (fill in all Sections).		
Reporting no discharge for all outfalls for this monitoring period (fill in Sections I, II, III, IV, and VI).		
Reporting that your site status has changed to inactive and unstaffed (fill in Sections I, II, VI and include date of status change in comments field in Section V).		
Reporting that your site status has changed to active (fill in all sections and include date of status change in comments field in Section V).		
Reporting that no further pollutant reductions are achievable for all outfalls and for all pollutants via Part 6.2.1.2 of the MSGP (fill in Sections I, II, and VI).		
Section I. Permit Information		
Permit Tracking Number:		
Section II. Facility Information		
Facility Name:		
<u>Facility Physical Address</u>		
Street:		
City:	State: Alaska	Zip:
Contact Name:	Email:	
MDMR Preparer (Complete if MDMR was prepared by someone other than the person signing the certification in Section VI):		
Prepared By:	Organization:	
Email:	Phone:	
Section III. Discharge Information		
Identify Monitoring Period:	Check here if proposing alternative monitoring periods due to irregular storm water runoff. Identify alternative monitoring schedule and indicate for which alternative period you are reporting monitoring data.	
Quarter 1 (April 1 – June 30)	Quarter 1: From	To
Quarter 2 (July 1 – September 30)	Quarter 2: From	To
Quarter 3 (October 1 – December 31)	Quarter 3: From	To
Quarter 4 (January 1 – March 31)	Quarter 4: From	To
Are you required to monitor for cadmium, copper, chromium, lead, nickel, silver, or zinc?		Yes No (Skip to Section IV)
What is the hardness level of the receiving water?	mg/L	
Section IV. Outfall Information		
How many outfalls are identified in your SWPPP?		List names of outfalls required to be monitored in the table below.
Do any of your outfalls discharge substantially identical effluents?		Yes No
If YES, for each monitored outfall, indicate outfall names that are substantially identical in the table below.		
a. Monitored Outfall Name*	b. Substantially Identical Outfalls [List name(s) of outfall(s) that are substantially identical to outfall in a.]	c. No Discharge?

*Reference attachment if additional space is needed to complete the table.

Section V. Monitoring Information

Permit Tracking Number: _____

Nature of Discharge: Rainfall (complete a, b, and c below) Snowmelt

a. Duration of the rainfall event (hours): b. Rainfall amount (inches): c. Time since previous measurable storm event (days):

Outfall Name	Monitoring Type (QBM, ELG, S, I, O)*	Parameter	Quality or Concentration	Units	Results Description	Collection Date	Exceedance due to natural background pollutant levels	No further pollutant reductions achievable?

* (QBM) – Quarterly benchmark monitoring; (ELG) – Annual effluent limitation guidelines monitoring; (S) – State specific monitoring; (I) – Impaired waters monitoring; (O) – Other monitoring as required by ADEC

Comment and/or Explanation of Any Violations (Reference all attachments here)

Section VI. Certification

	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.		
Printed Name and Title of Principal Executive Officer or Authorized Agent		Signature of Principal Executive Officer or Authorized Agent	Date

Email of Principal Executive Officer or Authorized Agent: _____

Instructions for Completing the MSGP Industrial Discharge Monitoring Report (MDMR)

Who Must Submit A Discharge Monitoring Report to ADEC?

An operator or owner of a facility covered under the Multi-Sector General Permit (MSGP or permit) that are required to monitor pursuant to Parts 6.2, 6.3, and 8 of the permit must submit the MSGP Discharge Monitoring Report (MDMR) consistent with the reporting requirements specified in Part 7.1 of the permit.

Completing the Form

Type or print, in the appropriate areas only. "NA" can be entered in areas that are not applicable. If you have any questions about how or when to use this form, contact the ADEC Storm Water Program at (907) 269-6285 or online at <http://www.dec.state.ak.us/water/wppspc/stormwater/stormwater.htm>.

Reasons for Submission

Indicate your reason(s) for submitting this MDMR by checking all boxes that apply. The reasons for submission are defined as follows:

- *Submitting monitoring data:* For each storm event sampled, submit one MDMR form with data for all outfalls sampled. Select this reason even if you only have monitoring data for some of your outfalls (i.e., some outfalls did not discharge). If you select this reason, you are required to complete all Sections of the form.
- *Reporting no discharge for all outfalls for this monitoring period:* Indicates that there were no discharges from all outfalls during this monitoring period. If you select this reason, you are only required to complete Sections I, II, III, IV, and VI.
- *Reporting that your site status has changed to inactive and unstaffed:* Indicates that your facility is currently inactive and unstaffed (See Part 6.2.1.3 of the permit for more information). If you select this reason, you are only required to complete Sections I, II, and VI and include date of status change in the comment field in Section V.
- *Reporting that your site status has changed from inactive to active:* Indicates that your facility is currently active (See Part 6.2.1.3 of the permit for more information). If you select this reason, you are required to complete all Sections of the form and include date of status change in the comment field in Section V.
- *Reporting that no further reductions are achievable for all outfalls and for all pollutants via Part 6.2.1.2 of the permit:* Indicates that your facility has determined that no further pollutant reductions are technologically and economically practicable in light of best industry practice to meet the technology-based effluent limitations or are necessary to meet the water-quality-based effluent limitations in Parts 2 of the permit (See Part 6.2.1.2 of the permit for more information). If you select this reason, you are required to complete Sections I, II and VI. However, if you can make this finding for some outfalls and pollutants, but not for others, you cannot select this reason; you will instead be able to identify which outfalls and which pollutants you can make this finding for in Section V.

Section I. Permit Tracking Number

Enter the APDES or NPDES tracking number assigned by ADEC's or EPA's Storm water Program to the facility. If you do not know the tracking number, you can find the tracking number assigned to your facility on ADEC's Water Permit Search www.dec.state.ak.us/water/WaterPermitSearch/Search.aspx or EPA's Notice of Intent (NOI) Search website (www.epa.gov/npdes/noisearch) if you submitted your NOI on EPA's website.

Section II. Facility Information

- Enter the facility's official or legal name. Unless the name of your facility has changed, please use the same name provided on your NOI. You can use ADEC's Water Permit Search, www.dec.state.ak.us/water/WaterPermitSearch/Search.aspx or EPA's NOI Search website (www.epa.gov/npdes/noisearch) to view your NOI if you submitted your NOI on the EPA website.
- Enter the street address, including city, state, and zip code of the actual physical location of the facility. Do **not** use a P.O. Box.
- Identify the name, telephone number, and email address of the person who will serve as a contact for ADEC on issues related to monitoring at your facility. This person should be able to answer questions related to storm water discharges and monitoring or have immediate access to individuals with that knowledge. This person does not have to be the facility operator but should have intimate knowledge of monitoring activities at the facility.
- If the form was prepared by someone other than the person who is signing the certification statement in Section VI (for example, if the MDMR was prepared by a member of the facility's storm water pollution prevention team or a consultant for the certifier's signature), include the name, organization, telephone number, and email address of the MDMR preparer.

Section III. Discharge Information

- Indicate the appropriate monitoring period (Quarter 1, 2, 3, or 4) covered by the MDMR. "Alternative" monitoring periods can apply to facilities located in arid and semi-arid climates or in areas subject to snow or prolonged freezing. To use alternative monitoring periods, you must provide a revised monitoring schedule here in the first monitoring report submitted and indicate for which alternative monitoring period you are reporting monitoring data. If using alternative monitoring periods, identify the first day of the monitoring period through the last day of the monitoring period for each of the four periods. The dates should be displayed as month (Mo) / day (Day). See Parts 6.1.6 and 6.1.7 of the permit for more information.
- If you are submitting benchmark monitoring data, identify if your facility is required to collect benchmark samples for one or more hardness-dependent metals (i.e., cadmium, copper, lead, nickel, silver, and zinc). If you select "yes" to this question you must also complete the table in Section III, and if you select "no" to this question, you may skip to Section IV.
- If you selected "yes" for the previous question, then you are required to submit to ADEC with your first benchmark report a hardness level established consistent with the procedures in Appendix J of the permit, which is representative of your receiving water. If your outfalls discharge to more than one receiving water, as reported in your NOI form, you should report hardness for the receiving water with the lowest hardness values. Hardness values must be reported in milligrams per liter (mg/L).

Section IV. Outfall Information

- Enter the total number of outfalls identified in your SWPPP. Outfalls are locations where storm water exits the facility, including pipes, ditches, swales, and other structures used to remove storm water from the facility.
- Indicate if your facility has two or more outfalls that you believe discharge substantially identical effluents (i.e., storm water), based on the similarities of the general industrial activities and control measures, exposed materials that may significantly contribute pollutants to storm water, and runoff coefficients of their drainage areas. See Parts 5.1.5.2 and 6.1.1 of the permit for more information on substantially identical outfalls.
- If you selected "yes" for the previous question, then you must list the outfall name(s) in Column b that you expect to be substantially identical to the corresponding outfall in Column a.
 - Monitored Outfall Name:* List name(s) of outfall(s) you are required to monitor.
 - Substantially Identical Outfalls:* List name(s) of outfall(s) substantially identical to "Monitored Outfall" in Column a. (if applicable).
 - No Discharge:* Check box if you are reporting "No Discharge" for the monitored outfall for the reporting period identified in Section III.

Example:

a. Monitored Outfall Name	b. Substantially Identical Outfall	c. No Discharge
Outfall A	Outfall B; Outfall C	<input type="checkbox"/>
Outfall D		<input checked="" type="checkbox"/>

Reference attachments if additional space is needed to complete the table in Section IV.

Section V. Monitoring Information

- Enter the APDES or NPDES tracking number assigned to the facility reported in Section I.
- For the reported monitoring event, indicate whether the discharge was from a rainfall or snowmelt event. If you select "rainfall", then indicate:
 - the duration (in hours) of the rainfall event;
 - rainfall total (in inches) for that rainfall event; and
 - time (in days) since the previous measurable storm event.
- If the discharge occurs during a period of both rainfall and snowmelt, check both the rainfall and snowmelt boxes and report the appropriate rainfall information in items a-c. To report multiple monitoring events in the same reporting period, copy Page 2 of this Form and enter each monitoring event separately with data for all outfalls sampled.
- For each pollutant monitored at an outfall, you must complete one row in the Table as follows:
 - *Outfall Name:* Provide the outfall name for which you monitored (e.g., Outfall 1, Outfall 2, Outfall 3).
 - *Monitoring Type:* Provide the type of monitoring using the specified codes below:
 - QBM – Quarterly benchmark monitoring;
 - ELG – Annual effluent limitations guidelines monitoring;
 - S – State specific monitoring;
 - I – Impaired waters monitoring; or
 - O – Other monitoring as required by ADEC.

Instructions for Completing the MSGP Industrial Discharge Monitoring Report (MDMR)

- *Parameter(s)*: Enter each "Parameter" (or "pollutant") monitored. For QBM and ELG monitoring, use the same parameter name as in Part 8 of the permit.
- *Quality or Concentration*: Enter sample measurement value for each parameter analyzed and required to be reported. Enter "ND" (i.e., not detected) for any sample results below the method detection limit or "BQL" (i.e., below quantitation limit) for sample results above the detection limit but below the quantitation limit.
- *Units*: Enter the units for sample measurement values (e.g., "mg/L" for milligrams per liter) for each parameter analyzed and required to be reported. For monitoring results reported as ND or BQL, this space will be left blank and the units will be reported under *Results Description*.
- *Results Description*: This section must be completed for any monitoring results reported as ND or BQL in the "Quality or Concentration" column. For ND, report the laboratory detection level and units in this column. For BQL, report the laboratory quantitation limit and units in this column.
- *Collection Date*: Identify the sampling date for each parameter monitoring result reported on this form.
- *Exceedance due to natural background pollutant levels*: Check box if following the first 4 quarters of benchmark monitoring (or sooner if the exceedance is triggered by less than 4 quarters of data) you have determined that the exceedance of the benchmark is attributable solely to the presence of that pollutant in the natural background for that outfall and any substantially identical outfalls. See Part 6.2.4.2 of the permit for more information. Attach supporting rationale for your determination to the submitted MDMR and reference attachment in comments portion of Section V.
- *No further pollutant reductions achievable*: Check box if after collection of 4 quarterly samples (or sooner if the exceedance is triggered by less than 4 quarters of data), the average of the 4 monitoring values for any parameter exceeds the benchmark and you have made the determination that no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practice to meet the technology-based effluent limitations or are necessary to meet the water-quality-based effluent limitations in Parts 2 of the permit (See Part 6.2.1. of the permit for more information) for that outfall and any substantially identical outfalls. Attach supporting rationale for your determination to the submitted MDMR and reference attachment in comments portion of Section V.
- Where violations of the permit requirements are reported, include a brief explanation to describe the cause and corrective actions taken and reference each violation by date. Also, this section should include any additional comments such as are required when changing site status from inactive and unstaffed to active or vice versa. Attach additional pages if you need more space.

Attach additional copies of Section V as necessary to address all outfalls and parameters.

Section VI. Certification

Enter *Printed Name and Title of Principal Executive Officer or Authorized Agent* with *Signature of Principal Executive Officer or Authorized Agent*, and the *Date* this form was signed and the email address of the "*Principal Executive Officer or Authorized Agent*." If you submit multiple pages of Section V monitoring data, each page must be appropriately signed and certified as described below.

The MDMRs must be signed as follows:

- (1) For a corporation, a responsible corporate officer shall sign the MDMR, a responsible corporate officer means:
 - (A) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation; or
 - (B) the manager of one or more manufacturing, production, or operating facilities, if
 - (i) the manager is authorized to make management decisions that govern the operation of the regulated facility, including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental statutes and regulations;
 - (ii) the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and

(iii) authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

(2) For a partnership or sole proprietorship, the general partner or the proprietor, respectively; or

(3) for a municipality, state, or other public agency, either a principal executive officer or ranking elected official shall sign the application; in this subsection, a principal executive officer of an agency means

(A) the chief executive officer of the agency; or

(B) a senior executive officer having responsibility for the overall operations of a principal geographic unit or division of the agency.

Include the name, title, and email address of the person signing the form and the date of signing. An unsigned or undated MDMR will not be considered valid.

Where to File the MDMR Form

Monitoring data collected pursuant to Parts 6.2, 6.3, and 8 of the permit must be reported on the paper MDMR form and sent to the following address:

If you file by mail, please submit the original form with a signature in ink. ADEC will not accept a photocopied signature. Remember to retain a copy for your records.

MSMRs sent by mail:

Alaska Dept. of Environmental Conservation
Wastewater Discharge Authorization Program
555 Cordova Street
Anchorage, AK 99501
Phone: (907) 269-6285

MONTHLY AIRPORT RUNWAY DEICER TRACKING FORM

The stormwater discharge permit requires tracking the amount of deicing materials used on a monthly basis. These records must be maintained with the SWPPP. Record type and amount of deicer (pure product) used during each application. Also record the general location of the application. Sand application can also be noted.

Date	Deicer Used	Quantity Applied	Location of Application	Temp/Weather Conditions	Initials	Comments

APPENDIX I Discharge Notification Form

Part A: Discharge Information		
General information when reporting a spill to outside authorities:		
Name:	King Salmon Airport	
Address:	P.O Box 65 King Salmon, AK, 99613	
Telephone:	907-246-3325	
Owner/Operator:	Alaska DOT&PF 4111 Aviation Ave Anchorage, Alaska 99519	
Primary Contact:	Jay Knight, Airport Manager Work: 907-246-3325 Cell (24 hrs): 907-439-1129	
Type of oil:	Discharge Date and Time:	
Quantity released:	Discovery Date and Time:	
Quantity released to a waterbody:	Discharge Duration:	
Location/Source:		
Actions taken to stop, remove, and mitigate impacts of the discharge:		
Affected media:		
G air	G storm water sewer/POTW	
G water	G dike/berm/oil-water separator	
G soil	G other: _____	
Notification person:	Telephone contact: Business: 24-hr:	
Nature of discharges, environmental/health effects, and damages:		
Injuries, fatalities or evacuation required?		
Part B: Notification Checklist		
	Date and time	Name of person receiving call
Discharge in any amount		
Jay Knight, Airport Manager and Response Coordinator 907-246-3325/ 907-439-1129		
Discharge in amount exceeding 10 gallons and <i>not affecting a waterbody or groundwater</i>		
Bristol Bay Fire Department 911 or 907-246-4465		

Alaska Department of Environmental Conservation 907-465-5250 or 800-478-9300 (24 hour number)		
Discharge in any amount and affecting (or threatening to affect) a waterbody		
Bristol Bay Fire Department 911 or 907-246-4465		
Alaska Department of Environmental Conservation 907-465-5250 or 800-478-9300 (24 hour number)		
National Response Center (800) 424-8802		

Appendix J – Miscellaneous

Airport Tennant Letter – 2011

Airport Tennant Letter – 11/9/2010

SWPPP Staff Title and Responsibility Table

Alternate Authority Authorization Letter

Endangered Species Documentation

STATE OF ALASKA

DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

MAINTENANCE & OPERATIONS – CENTRAL REGION

SEAN PARNELL, GOVERNOR

4111 AVIATION AVENUE
P.O. BOX 196900
ANCHORAGE, ALASKA 99519
TEXT: (907) 269-0473
PHONE: (907) 248-1573
FAX: (907) 269-0760

**In Reply Refer To:
King Salmon Airport SWPPP**

February 7, 2011

Dear Airport Tenant,

As you may already be aware from the letter dated October 27, 2009 which you should have received from the DOT&PF Aviation Leasing Division, the U.S. Environmental Protection Agency (EPA) regulations on stormwater runoff from specific industrial operation have been revised and permitting authority is being transferred to the Alaska Department of Environmental Conservation (ADEC). The Multi-Sector General Permit (MSGP) specifies stormwater management requirements for industrial operations, including Air Transportation (Sector S). As required by these regulations, the Department of Transportation and Public Facilities (DOT&PF) has applied for the general stormwater permit for operation of the airport and common areas. The primary requirement is to write a Stormwater Pollution Prevention Plan (SWPPP).

The SWPPP we have developed for the King Salmon Airport only covers DOT&PF activities, not your activity. Therefore, it is your responsibility to research and determine if a stormwater permit is required for your operations and if so, to comply with the EPA/ADEC rules and the Clean Water Act. Failure to comply could result in a significant penalty.

To assist you in determining your responsibilities, we have attached an EPA fact sheet on stormwater. You will also need to review the regulations at <http://cfpub.epa.gov/npdes/stormwater/msgp.cfm>. Each regulated tenant must develop a SWPPP, apply for permit coverage through the Alaska Department of Environmental Conservation (ADEC), and implement the SWPPP. The MSGP permit requires various inspections and training requirements. More information can be found at <http://www.dec.state.ak.us/water/wnpssc/stormwater/MultiSector.htm>. And for airport specific requirements please review the Sector S Industrial Stormwater Factsheet http://www.epa.gov/npdes/pubs/sector_s_airtransmaint.pdf.

If you decide that you are regulated and intend to file for the permit, please check with your airport manager as it is recommended we coordinate our SWPPPs. We are working to have our SWPPP electronically available on the DOT&PF website at <http://dot.alaska.gov/stwdav/SWPPP.shtml>, the SWPPP should be available no later than March 1, 2011. Also, if you perform deicing, the airport manager will be contacting you regarding monthly reporting requirements.

If you prepare a SWPPP, please send an electronic copy of the final plan to our office (either via email or CD). Please call with any questions you may have (907)269-0714 or email me at jennifer.hillman@alaska.gov.

Sincerely yours,

Environmental Impact Analyst, Maintenance and Operations

cc:

Jay Knight, King Salmon Airport Manager
Jim Thorsness, King Salmon Airport Leasing Specialist

STATE OF ALASKA

DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

ANCHORAGE OFFICE OF AVIATION LEASING

SEAN PARNELL, GOVERNOR

4111 AVIATION AVENUE
P.O. BOX 196900
ANCHORAGE, AK 99519-6900
(907) 269-0450 FAX: (907) 243-5092

October 27, 2009

Dear Airport Tenant:

As you may already be aware, the U.S. Environmental Protection Agency (EPA) regulations on stormwater runoff from specific industrial operations have been revised. The EPA Multi-Sector General Permit (MSGP) specifies stormwater management requirements for industrial operations, including Air Transportation (Sector S). As required by these EPA regulations, the Department of Transportation and Public Facilities (DOT&PF) has applied for the EPA general stormwater permit for operation of the airport and common areas. The primary requirement is to write a storm water pollution prevention plan (SWPPP).

The SWPPP we have developed only covers DOT&PF activities, not your activity. Therefore, it is your responsibility to research and determine if a stormwater permit is required for your operations and if so, to comply with the EPA rules and the Clean Water Act. Failure to comply could result in a significant penalty.

To assist you in determining your responsibilities, we have attached an EPA fact sheet. You will also need to review the regulations at <http://cfpub.epa.gov/npdes/stormwater/msgp.cfm>. Each regulated tenant must develop a SWPPP, apply for permit coverage, and implement the SWPPP. The MSGP permit requires various inspections and training requirements. For your information, Alaska is located within Region 10 for EPA.

If you decide that you are regulated and intend to file for the permit, please check with your airport manager as it is recommended that we coordinate our SWPPPs. Also, if you perform deicing, the airport manager will be contacting you regarding a monthly reporting requirement.

If you prepare a SWPPP, please send a copy of the final plan to our office. Thank you.

Sincerely yours,



Tina Schimschat
Chief, Central Region Aviation Leasing

cc: Airport Manager
Matt Decaro, Environmental Analyst (269-0714)
Attachment: EPA Industrial Stormwater Fact Sheet (9 pages)

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that this is crucial for ensuring transparency and accountability in the organization's operations.

2. The second part of the document outlines the various methods and tools used to collect and analyze data. It highlights the need for consistent and reliable data collection processes to support effective decision-making.

3. The third part of the document focuses on the role of technology in data management and analysis. It discusses how modern software solutions can streamline data collection, storage, and reporting, thereby improving efficiency and accuracy.

4. The fourth part of the document addresses the challenges associated with data management, such as data quality, security, and privacy. It provides strategies to mitigate these risks and ensure that data is used responsibly and ethically.

5. The fifth part of the document concludes by summarizing the key findings and recommendations. It stresses the importance of ongoing monitoring and evaluation to ensure that data management practices remain effective and aligned with the organization's goals.

6. The sixth part of the document provides a detailed overview of the data collection process, including the identification of data sources, the design of data collection instruments, and the implementation of data collection procedures.

7. The seventh part of the document discusses the various methods used for data analysis, such as descriptive statistics, inferential statistics, and regression analysis. It explains how these methods can be used to interpret the data and draw meaningful conclusions.

8. The eighth part of the document focuses on the presentation and communication of data. It discusses the importance of using clear and concise visualizations, such as charts and graphs, to effectively convey the results of the data analysis to stakeholders.

INDUSTRIAL STORMWATER

FACT SHEET SERIES

Sector S: Vehicle Maintenance Areas, Equipment Cleaning Areas, or Deicing Areas Located at Air Transportation Facilities



U.S. EPA Office of Water
EPA-833-F-06-034
December 2006

What is the NPDES stormwater permitting program for industrial activity?

Activities, such as material handling and storage, equipment maintenance and cleaning, industrial processing or other operations that occur at industrial facilities are often exposed to stormwater. The runoff from these areas may discharge pollutants directly into nearby waterbodies or indirectly via storm sewer systems, thereby degrading water quality.

In 1990, the U.S. Environmental Protection Agency (EPA) developed permitting regulations under the National Pollutant Discharge Elimination System (NPDES) to control stormwater discharges associated with eleven categories of industrial activity. As a result, NPDES permitting authorities, which may be either EPA or a state environmental agency, issue stormwater permits to control runoff from these industrial facilities.

What types of industrial facilities are required to obtain permit coverage?

This fact sheet specifically discusses stormwater discharges from airports, airport terminals, airline carriers, and establishments as defined by Standard Industrial Classification (SIC) Major Group 45. Facilities and products in this group fall under the following categories, all of which require coverage under an industrial stormwater permit:

- ◆ Servicing, repairing, or maintaining aircraft and ground vehicles
- ◆ Equipment cleaning and maintenance (including vehicle and equipment rehabilitation mechanical repairs, painting, fueling, lubrication)
- ◆ Deicing/anti-icing operations which conduct the above described activities

The operator and the tenants of the airport that conduct industrial activities as described above and which have stormwater discharges are required to apply for coverage under an NPDES stormwater permit for the discharges from their areas of operation. The airport management and tenants of the airport are encouraged to apply as co-permittees under a permit, and to work in partnership in the development and implementation of a stormwater pollution prevention plan.

Non-stormwater discharges, including discharges from aircraft, ground vehicle and equipment washwaters, dry weather discharges from airport deicing/anti-icing operations, and dry weather discharges resulting from runway maintenance are not required to obtain coverage under an industrial stormwater permit. Dry weather discharges are generated from processes other than those described in the definition of stormwater. The definition of stormwater includes stormwater runoff, snow melt runoff, and surface runoff and drainage.

What does an industrial stormwater permit require?

Common requirements for coverage under an industrial stormwater permit include development of a written stormwater pollution prevention plan (SWPPP), implementation of control measures, and submittal of a request for permit coverage, usually referred to as the Notice of Intent or NOI. The

Sector 5: Vehicle Maintenance Areas, Equipment Cleaning Areas, or Deicing Areas Located at Air Transportation Facilities

SWPPP is a written assessment of potential sources of pollutants in stormwater runoff and control measures that will be implemented at your facility to minimize the discharge of these pollutants in runoff from the site. These control measures include site-specific best management practices (BMPs), maintenance plans, inspections, employee training, and reporting. The procedures detailed in the SWPPP must be implemented by the facility and updated as necessary, with a copy of the SWPPP kept on-site. The industrial stormwater permit also requires collection of visual, analytical, and/or compliance monitoring data to determine the effectiveness of implemented BMPs. For more information on EPA's industrial stormwater permit and links to State stormwater permits, go to www.epa.gov/npdes/stormwater and click on "Industrial Activity."

What pollutants are associated with my facilities activities?

Pollutants conveyed in stormwater discharges from air transportation facilities will vary. Generally, the concern with the use of ethylene and propylene glycols is that they exert high oxygen demands when released into receiving waters. Additionally, the concentration of nitrogen and possibly ammonia are the concern with the respect to deicing/anti-icing operations where urea is used. There are a number of factors that influence to what extent industrial activities and significant materials can affect water quality.

- ◆ Geographic location
- ◆ Topography
- ◆ Hydrogeology
- ◆ Extent of impervious surfaces (e.g., concrete or asphalt)
- ◆ Type of ground cover (e.g., vegetation, crushed stone, or dirt)
- ◆ Outdoor activities (e.g., material storage, loading/unloading, vehicle maintenance)
- ◆ Size of the operation
- ◆ Type, duration, and intensity of precipitation events

The activities, pollutant sources, and pollutants detailed in Table 1 are commonly found at air transportation facilities.

Table 1. Common Activities, Pollutants Sources, and Associated Pollutants at Air Transportation Facilities

Activity	Pollutant Source	Pollutant
Aircraft deicing/anti-icing	Runoff of spent deicing chemicals (e.g. ethylene glycol or propylene glycol) from aircraft exteriors	Biochemical oxygen demand (BOD)
Runway deicing/anti-icing	Runoff of spent deicing chemicals (e.g. ethylene or propylene glycol, urea, potassium or sodium acetate, potassium or sodium formate) from deicing areas	BOD, nitrogen, ammonia
Aircraft servicing	Spills or leaks during servicing	Engine oil, hydraulic fluid, fuel, lavatory waste
Aircraft fueling	Spills and leaks during fuel transfer, spills due to "topping off" tanks, runoff from fueling areas, washdown of fueling areas, leaking storage tanks	Jet fuel, fuel additives, oil, lubricants, heavy metals
Aircraft, ground vehicle, and equipment maintenance and washing	Spills and leaks during maintenance	Engine oils, hydraulic fluids, transmission oil, radiator fluids, and chemical solvents
	Disposal of waste parts	Batteries, oil, fuel filters, oily rags
	Spent washwater	TSS, metals, fuel, hydraulic fluid, oil, lavatory waste
Runway maintenance	Materials removed from runway surface	Tire rubber, oil and grease, paint chips, jet fuel
	Chemicals used to clean the runway surface	Chemical solvents

What BMPs can be used to minimize contact between stormwater and potential pollutants at my facility?

A variety of BMP options may be applicable to eliminate or minimize the presence of pollutants in stormwater discharges from air transportation facilities. You will likely need to implement a combination or suite of BMPs to address stormwater runoff at your facility. Your first consideration should be for pollution prevention BMPs, which are designed to prevent or minimize pollutants from entering stormwater runoff and/or reduce the volume of stormwater requiring management. Prevention BMPs can include regular cleanup, collection and containment of debris in storage areas, and other housekeeping practices, spill control, and employee training. It may also be necessary to implement treatment BMPs, which are engineered structures intended to treat stormwater runoff and/or mitigate the effects of increased stormwater runoff peak rate, volume, and velocity. Treatment BMPs are generally more expensive to install and maintain and include oil-water separators, wet ponds, and proprietary filter devices.

BMPs must be selected and implemented to address the following:

Good Housekeeping Practices

Good housekeeping is a practical, cost-effective way to maintain a clean and orderly facility to prevent potential pollution sources from coming into contact with stormwater. It includes establishing protocols to reduce the possibility of mishandling materials or equipment and training employees in good housekeeping techniques. Common areas where good housekeeping practices should be followed include trash containers and adjacent areas, material storage areas, vehicle and equipment maintenance areas, and loading docks. Good housekeeping practices must include a schedule for regular pickup and disposal of garbage and waste materials and routine inspections of drums, tanks, and containers for leaks and structural conditions. Practices also include containing and covering garbage, waste materials, and debris. Involving employees in routine monitoring of housekeeping practices has proven to be an effective means of ensuring the continued implementation of these measures.

Minimizing Exposure

Where feasible, minimizing exposure of potential pollutant sources to precipitation is an important control option. Minimizing exposure prevents pollutants, including debris, from coming into contact with precipitation and can reduce the need for BMPs to treat contaminated stormwater runoff. It can also prevent debris from being picked up by stormwater and carried into drains and surface waters. Examples of BMPs for exposure minimization include covering materials or activities with temporary structures (e.g., tarps) when wet weather is expected or moving materials or activities to existing or new permanent structures (e.g., buildings, silos, sheds). Even the simple practice of keeping a dumpster lid closed can be a very effective pollution prevention measure.

Erosion and Sediment Control

BMPs must be selected and implemented to limit erosion on areas of your site that, due to topography, activities, soils, cover, materials, or other factors are likely to experience erosion. Erosion control BMPs such as seeding, mulching, and sodding prevent soil from becoming dislodged and should be considered first. Sediment control BMPs such as silt fences, sediment ponds, and stabilized entrances, trap sediment after it has eroded. Sediment control BMPs should be used to back-up erosion control BMPs.

Management of Runoff

Your SWPPP must contain a narrative evaluation of the appropriateness of stormwater management practices that divert, infiltrate, reuse, or otherwise manage stormwater runoff so as to reduce the discharge of pollutants. Appropriate measures are highly site-specific, but may include, among others, vegetative swales, collection and reuse of stormwater, inlet controls, snow management, infiltration devices, and wet retention measures.

Sector 5: Vehicle Maintenance Areas, Equipment Cleaning Areas, or Deicing Areas Located at Air Transportation Facilities

A combination of preventive and treatment BMPs will yield the most effective stormwater management for minimizing the offsite discharge of pollutants via stormwater runoff. Though not specifically outlined in this fact sheet, BMPs must also address preventive maintenance records or logbooks, regular facility inspections, spill prevention and response, and employee training.

All BMPs require regular maintenance to function as intended. Some management measures have simple maintenance requirements, others are quite involved. You must regularly inspect all BMPs to ensure they are operating properly, including during runoff events. As soon as a problem is found, action to resolve it should be initiated immediately.

Implement BMPs, such as those listed below in Table 2 for the control of pollutants at air transportation facilities, to minimize and prevent the discharge of pollutants in stormwater. Identifying weaknesses in current facility practices will aid the permittee in determining appropriate BMPs that will achieve a reduction in pollutant loadings. BMPs listed in Table 2 are broadly applicable to air transportation facilities; however, this is not a complete list and you are recommended to consult with regulatory agencies or a stormwater engineer/consultant to identify appropriate BMPs for your facility.

Table 2. BMPs for Potential Pollutant Sources at Air Transportation Facilities

Pollutant Source	BMPs
Deicing/anti-icing aircraft	<ul style="list-style-type: none"> <input type="checkbox"/> Establish a centralized aircraft deicing station with containment of surface and subsurface drainage. <input type="checkbox"/> To reduce deicing fluid applied: <ul style="list-style-type: none"> - Forced-air deicing systems - Computer-controlled fixed-gantry systems - Infrared technology - Hot water - Varying glycol content to air temperature - Enclosed-basket deicing trucks - Mechanical methods - Solar radiation - Hangar storage - Aircraft covers - Thermal blankets fro MD-80s and DC-9s <input type="checkbox"/> Apply deicing fluid and anti-icer to planes on deicing pads if available. <input type="checkbox"/> Apply anti-icer to aircraft that will be parked overnight to make it easier to remove accumulated snow and ice in the morning. <input type="checkbox"/> Apply anti-icer to aircraft immediately after deicing to provide extended hold-over time prior to take-off. <input type="checkbox"/> Ensure that stormwater inlets are blocked when deicing/anti-icing during dry weather. <input type="checkbox"/> Use mechanical vacuum systems or other devices to collect aircraft deicing runoff from the apron surface for proper disposal. <input type="checkbox"/> Dispose collected aircraft deicing runoff to sanitary sewage facility (if allowed by sewer authority), on-site treatment, or recycle (resell or reuse). <input type="checkbox"/> Use portable tanks, retention and detention ponds for temporary storage of collected deicing runoff. <input type="checkbox"/> Collect contaminated runoff in a wet pond for biochemical decomposition (be aware of attracting wildlife that may prove hazardous to flight operations). <input type="checkbox"/> Recover and recycle/dispose of unused deicing fluids in deicing trucks. <input type="checkbox"/> Recover deicing materials when applied during non-precipitation events (e.g., covering storm sewer inlets, using booms, installing absorptive interceptors in the drains, etc.) to prevent materials from later contaminating stormwater.

INDUSTRIAL STORMWATER FACT SHEET SERIES

Sector 5: Vehicle Maintenance Areas, Equipment Cleaning Areas, or Deicing Areas Located at Air Transportation Facilities

Table 2. BMPs for Potential Pollutant Sources at Air Transportation Facilities (continued)

Pollutant Source	BMPs
Deicing/anti-icing runways and pads	<ul style="list-style-type: none"> <input type="checkbox"/> Evaluate and optimize present chemical application rates <input type="checkbox"/> Use sand where possible to enhance friction. <input type="checkbox"/> Plow and broom runways prior to application of deicing chemicals. <input type="checkbox"/> Heat solid deicers and sand prior to application. <input type="checkbox"/> Install and calibrate devices to meter the amount of pavement deicer being applied. <input type="checkbox"/> Emphasize anti-icing operations which minimize the need to deice. <input type="checkbox"/> Install runway ice detection systems ("pavement sensors") to monitor pavement temperatures. <input type="checkbox"/> Pre-wet with liquid deicers to improve adhesion of solid deicers to the iced surface. <input type="checkbox"/> Use deicers which have less of an environmental impact (e.g. sodium formate and potassium acetate as opposed to urea and glycol). <input type="checkbox"/> Ensure proper handling and disposal of unused deicing chemicals in vehicles. <input type="checkbox"/> Use ice detection systems. <input type="checkbox"/> Use airport traffic flow strategies and departure slot allocation systems.
Aircraft, ground vehicle, and equipment maintenance areas (including aircraft service areas)	<p>Good Housekeeping</p> <ul style="list-style-type: none"> <input type="checkbox"/> Eliminate floor drains that are connected to the storm or sanitary sewer; if necessary, install a sump that is pumped regularly. Collected wastes should be properly treated or disposed of by a licensed waste disposal company. <input type="checkbox"/> Prevent and contain spills and drips. <input type="checkbox"/> Do all cleaning at a centralized station so the solvents stay in one area. <input type="checkbox"/> Remove any parts that are dipped in liquid slowly to avoid spills. <input type="checkbox"/> Use drip pans, drain boards, and drying racks to direct drips back into a fluid holding tank for reuse. <input type="checkbox"/> Drain all parts of fluids prior to disposal. Oil filters can be crushed and recycled. <input type="checkbox"/> Transfer used fluids to the proper container promptly; do not leave full drip pans or other open containers around the shop. Empty and clean drip pans and containers. <input type="checkbox"/> Clean up leaks, drips, and other spills without using large amounts of water. Use absorbents for dry cleanup whenever possible. <input type="checkbox"/> Prohibit the practice of hosing down an area where the practice would result in the discharge of pollutants to a stormwater system. <input type="checkbox"/> Prohibit pouring liquid waste into floor drains, sinks, outdoor storm drain inlets, or other storm drains or sewer connections. <input type="checkbox"/> Maintain an organized inventory of materials. <input type="checkbox"/> Eliminate or reduce the number and amount of hazardous materials and waste by substituting nonhazardous or less hazardous materials. <input type="checkbox"/> Label and track the recycling of waste material (e.g., used oil, spent solvents, batteries). <input type="checkbox"/> Store batteries and other significant materials inside. <input type="checkbox"/> Dispose of greasy rags, oil filters, air filters, batteries, spent coolant, and degreasers in compliance with RCRA regulations.

INDUSTRIAL STORMWATER FACT SHEET SERIES

Sector 5: Vehicle Maintenance Areas, Equipment Cleaning Areas, or Deicing Areas Located at Air Transportation Facilities

Table 2. BMPs for Potential Pollutant Sources at Air Transportation Facilities (continued)

Pollutant Source	BMPs
Aircraft, ground vehicle, and equipment maintenance areas (including aircraft service areas) (continued)	<p>Minimizing Exposure</p> <ul style="list-style-type: none"> <input type="checkbox"/> Perform all cleaning operations indoors or under covering when possible. Conduct the cleaning operations in an area with a concrete floor with no floor drainage other than to sanitary sewers or treatment facilities. <input type="checkbox"/> If operations are uncovered, perform them on a concrete pad that is impervious and contained. <input type="checkbox"/> Park vehicles and equipment indoors or under a roof whenever possible and maintain proper control of oil leaks/spills. <input type="checkbox"/> Check vehicles closely for leaks and use pans to collect fluid when leaks occur. <p>Management of Runoff</p> <ul style="list-style-type: none"> <input type="checkbox"/> Use berms, curbs, grassed swales, or other diversion measures to ensure that stormwater runoff from other parts of the facility does not flow over the maintenance area. <input type="checkbox"/> Collect the stormwater runoff from the cleaning area and provide treatment or recycling. <input type="checkbox"/> Discharge vehicle wash or rinse water to the sanitary sewer (if allowed by sewer authority), wastewater treatment, a land application site, or recycle on-site. DO NOT discharge washwater to a storm drain or to surface water. <p>Inspections and Training</p> <ul style="list-style-type: none"> <input type="checkbox"/> Inspect the maintenance area regularly to ensure BMPs are implemented. <input type="checkbox"/> Train employees on waste control and disposal procedures. <input type="checkbox"/> Inspect the maintenance area regularly for proper implementation of control measures. <input type="checkbox"/> Train employees on proper waste control and disposal procedures.
Aircraft, ground vehicle, and equipment cleaning areas	<ul style="list-style-type: none"> <input type="checkbox"/> Perform all cleaning operations indoors. <input type="checkbox"/> Confine activities to designated areas outside drainage pathways and away from surface waters. <input type="checkbox"/> If washing outdoors, cover the cleaning operation and ensure that all washwaters drain to the intended collection system. <input type="checkbox"/> Use phosphate-free biodegradable detergents. <input type="checkbox"/> Contain and recycle washwaters. <input type="checkbox"/> Collect stormwater runoff from the cleaning area and provide treatment or recycling. <input type="checkbox"/> Inspect cleaning area regularly to ensure BMPs are implemented and maintained. <input type="checkbox"/> Train employees on proper washing procedures.
Aircraft, ground vehicle, and equipment storage areas	<ul style="list-style-type: none"> <input type="checkbox"/> Store aircraft, ground vehicles and equipment indoors. <input type="checkbox"/> Cover the storage area with a roof. <input type="checkbox"/> Store aircraft, ground vehicles, and equipment awaiting maintenance in designated areas only. <input type="checkbox"/> Park leaking deicing trucks in contained areas. <input type="checkbox"/> Install perimeter drains, berms, and dikes around storage areas to limit run-on. <input type="checkbox"/> Use absorbents for dry cleanup for spills and leaks. <input type="checkbox"/> Use drip pans under all vehicles and equipment for the collection of fluid leaks. <input type="checkbox"/> Clean pavement surface to remove oil and grease without using large amounts of water.

INDUSTRIAL STORMWATER FACT SHEET SERIES

Sector 5: Vehicle Maintenance Areas, Equipment Cleaning Areas, or Deicing Areas Located at Air Transportation Facilities

Table 2. BMPs for Potential Pollutant Sources at Air Transportation Facilities (continued)

Pollutant Source	BMPs
Aircraft, ground vehicle, and equipment storage areas (continued)	<ul style="list-style-type: none"> <input type="checkbox"/> Regularly sweep area to minimize debris on the ground. <input type="checkbox"/> Provide dust control if necessary. When controlling dust, sweep and/or apply water or materials that will not impact surface or ground water. <input type="checkbox"/> Inspect the storage yard for filling drip pans regularly to ensure BMPs are implemented. <input type="checkbox"/> Train employees on procedures for storage and inspection items.
Material storage areas	<ul style="list-style-type: none"> <input type="checkbox"/> Store materials indoors. <input type="checkbox"/> Maintain good integrity of all storage containers (e.g., used oils, hydraulic fluids, spent solvents, waste aircraft fuel). <input type="checkbox"/> Create a centralized storage area for waste materials. <input type="checkbox"/> Cover and/or enclose chemical storage areas (including temporary cover such as a tarp that prevents contact with precipitation). <input type="checkbox"/> Provide secondary containment around chemical storage areas. <input type="checkbox"/> If containment structures have drains, ensure that the drains have valves, and that valves are maintained in the closed position. Institute protocols for checking/testing stormwater in containment areas prior to discharge. <input type="checkbox"/> Locate storage areas away from high traffic areas and surface waters. <input type="checkbox"/> Inspect storage tanks and piping systems (pipes, pumps, flanges, couplings, hoses, and valves) for failures or leaks and perform preventive maintenance. <input type="checkbox"/> Plainly label all containers. <input type="checkbox"/> Maintain an inventory of fluids to identify leakage. <input type="checkbox"/> Provide fluid level indicators. <input type="checkbox"/> Properly dispose of chemicals that are no longer in use. <input type="checkbox"/> Store and handle reactive, ignitable, or flammable liquids in compliance with applicable local fire codes, local zoning codes, and the National Electric Code. <input type="checkbox"/> Provide drip pads/pans where chemicals are transferred from one container to another to allow for recycling of spills and leaks. <input type="checkbox"/> Develop and implement spill plans or spill prevention, containment, and countermeasure (SPCC) plans, if required for your facility. <input type="checkbox"/> Train employees in spill prevention and control and proper materials management.
Airport fuel system and fueling areas	<ul style="list-style-type: none"> <input type="checkbox"/> Conduct fueling operations (including the transfer of fuel to tank trucks) on an impervious or contained pad and under a roof or canopy where possible. Covering should extend beyond spill containment pad to prevent rain from entering. <input type="checkbox"/> When fueling in uncovered area, use concrete pad (asphalt is not chemically resistant to the fuels being handled). <input type="checkbox"/> Develop and implement a system to report any spill exceeding 5 feet in any direction or which has entered the storm drainage system. <input type="checkbox"/> Use drip pans and absorptive materials beneath aircraft during fueling operations where leaks or spills of fuel can occur and where making and breaking hose connections. <input type="checkbox"/> Use fueling hoses with check valves to prevent hose drainage after filling. <input type="checkbox"/> Insure that storm water valves, plugs and similar appurtenances are closed during fuel transfer operations.

INDUSTRIAL STORMWATER FACT SHEET SERIES

Sector 5: Vehicle Maintenance Areas, Equipment Cleaning Areas, or Deicing Areas Located at Air Transportation Facilities

Table 2. BMPs for Potential Pollutant Sources at Air Transportation Facilities (continued)

Pollutant Source	BMPs
Airport fuel system and fueling areas (continued)	<ul style="list-style-type: none"> <input type="checkbox"/> Provide spill kits on all fuel trucks, at fueling stations, in each hangar and at strategic locations. Each kit should have at a minimum, loose absorbent, pails, broom and shovel. Store used materials in individual sealed container and labeled to ensure proper handling and disposal as a hazardous material. <input type="checkbox"/> Keep spill cleanup materials readily available. <input type="checkbox"/> Clean up spills and leaks immediately. <input type="checkbox"/> Use dry cleanup methods for fuel areas rather than hosing down the fuel area. Sweep up absorbents as soon as spilled substances have been absorbed. <input type="checkbox"/> Use spill and overflow protection devices. <input type="checkbox"/> Minimize run-on of stormwater into the fueling area by grading the area such that stormwater only runs off. <input type="checkbox"/> Collect stormwater runoff and provide treatment or recycling. <input type="checkbox"/> Provide curbing or posts around fuel pumps to prevent collisions from vehicles. <input type="checkbox"/> Regularly inspect and perform preventive maintenance on fuel storage tanks to detect potential leaks before they occur. <input type="checkbox"/> Inspect the fueling area for leaks and spills. <input type="checkbox"/> Do not allow "topping off" of the fuel in the receiving equipment. <input type="checkbox"/> Train personnel on vehicle fueling BMPs.
Storing liquid fuels	<ul style="list-style-type: none"> <input type="checkbox"/> If area is uncovered, connect sump outlet to sanitary sewer (if allowed by the sewer authority) or an oil/water separator, catch basin filter, etc. If connecting to a sanitary sewer check with the system operator to ensure that the discharge is acceptable. If implementing separator or filter technologies ensure that regular inspections and maintenance procedures are in place. <input type="checkbox"/> Develop and implement spill plans. <input type="checkbox"/> Train employees in spill prevention and control. <p>Above ground tanks</p> <ul style="list-style-type: none"> <input type="checkbox"/> Provide secondary containment, such as dikes, with a height sufficient to contain a spill (the greater of 10 percent of the total enclosed tank volume or 110 percent of the volume contained in the largest tank). <input type="checkbox"/> If containment structures have drains, ensure that the drains have valves, and that valves are maintained in the closed position. Institute protocols for checking/testing stormwater in containment areas prior to discharge. <input type="checkbox"/> Use double-walled tanks with overflow protection. <input type="checkbox"/> Keep liquid transfer nozzles/hoses in secondary containment area. <p>Portable containers/drums</p> <ul style="list-style-type: none"> <input type="checkbox"/> Store drums indoors when possible. <input type="checkbox"/> Store drums, including empty or used drums, in secondary containment with a roof or cover (including temporary cover such as a tarp that prevents contact with precipitation). <input type="checkbox"/> Provide secondary containment, such as dikes or portable containers, with a height sufficient to contain a spill (the greater of 10 percent of the total enclosed tank volume or 110 percent of the volume contained in the largest tank). <input type="checkbox"/> Clearly label drum with its contents.
Deicing chemical loading areas	<ul style="list-style-type: none"> <input type="checkbox"/> Store bulk aircraft deicing fluids in contained areas. <input type="checkbox"/> Load deicing trucks in contained areas.

What if activities and materials at my facility are not exposed to precipitation?

The industrial stormwater program requires permit coverage for a number of specified types of industrial activities. However, when a facility is able to prevent the exposure of ALL relevant activities and materials to precipitation, it may be eligible to claim no exposure and qualify for a waiver from permit coverage.

If you are regulated under the industrial permitting program, you must either obtain permit coverage or submit a no exposure certification form, if available. Check with your permitting authority for additional information as not every permitting authority program provides no exposure exemptions.

Where do I get more information?

For additional information on the industrial stormwater program see www.epa.gov/npdes/stormwater/msgp.

A list of names and telephone numbers for each EPA Region or state NPDES permitting authority can be found at www.epa.gov/npdes/stormwatercontacts.

References

Information contained in this Fact Sheet was compiled from EPA's past and current Multi-Sector General Permits and from the following sources:

- ◆ City of Phoenix, Street Transportation Department. 2004. Best Management Practices for Section 5 - Vehicle Maintenance Equipment Cleaning, or Deicing at Air Transportation Facilities. <http://phoenix.gov/STREETS/vehmnt2.pdf>
- ◆ Orange County, California, Watershed & Coastal Resources Division. "Airplane Maintenance and Repair." www.ocwatersheds.com/StormWater/documents_bmp_existing_development.asp
- ◆ Pierce County Washington Public Works and Utilities. 2002. "Stormwater Pollution Prevention Manual: A Guide to Best Management Practices for Industries, Businesses, and Homeowners." www.co.pierce.wa.us/pc/services/home/environ/water/wq/bmpmanual.htm
- ◆ Switzenbaum, et. al., 1999. Workshop: Best Management Practices for Airport Deicing Stormwater: Publication 173. www.umass.edu/tei/wrrc/WRRC2004/pdf/Switz173.pdf
- ◆ U.S. EPA. 1992. Stormwater Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices. EPA 832-R-92-006 www.epa.gov/npdes/stormwater
- ◆ U.S. EPA, Office of Science and Technology. 1999. Preliminary Data Summary of Urban Stormwater Best Management Practices. EPA-821-R-99-012 www.epa.gov/OST/stormwater/
- ◆ U.S. EPA, Office of Water. 2002. Source Water Protections Practices Bulletin: Managing Aircraft and Airfield Deicing Operations to Prevent Contamination of Drinking Water. EPA-816-F-02-018. www.epa.gov/safewater/sourcewater/pubs/fs_swpp_deicingair.pdf
- ◆ U.S. EPA, Office of Wastewater Management. *NPDES Stormwater Multi-Sector General Permit for Industrial Activities (MSGP)*. www.epa.gov/npdes/stormwater/msgp

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

STATE OF ALASKA

DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

CENTRAL REGION - DIVISION OF MAINTENANCE & OPERATIONS

SEAN PARNELL, GOVERNOR

*P.O. BOX 65
KING SALMON, ALASKA 99613
PHONE (907) 246-3325
FAX (907) 246-3023*

February 8, 2011

To: ALCON

From: Jay W. Knight, King Salmon Airport Manager

Re: Acting Airport Manager

To Whom It May Concern,

During my absences from my position as Airport Manager, Kyler Hylton, Glenn Anderson, Amos Anderson or John Donkersloot may serve as acting Airport Manager in my stead. During these times all the above personnel will be responsible for daily inspections, regular, incidental and emergency operations for King Salmon and the other ten airports including, but not limited to North & South Naknek, Levelock, Ugashik, Pilot Point, Perryville, Port Heiden, Chignik Bay, Lagoon and Lake, that are under our charge and they have full authority to make any and all decisions required to do so.

Sincerely,

Jay W. Knight
Airport Manager

Appendix J – Staff Title and Responsibilities

Title	Staff Name
DISTRICT SUPERINTENDENT	Troy Larue
AIRPORT MANAGER	Jay Knight
AIRPORT MANAGER ALTERNATE	Kyler Hylton, Glenn Anderson, Amos Anderson or John Donkersloot
CENTRAL REGION M&O ENVIRONMENTAL SPECIALIST	Jennifer Hillman

Appendix E – Inspections

Inspection Forms

ROUTINE FACILITY INSPECTION REPORT

Facility inspections needed quarterly (monthly during deicing season) – annual comprehensive inspection counts for one. Inspections need to include all Industrial areas/activities exposed to stormwater: fuel tanks and dispensing areas, equipment parking areas, material storage/stockpile sites, waste material and trash disposal locations, off-site tracking areas (entrances/exits), aircraft deicing areas, snow dumps, and any implemented control measures.

Name of Facility		NPDES Tracking No.	
Inspector's Name(s)		Date & Time	
Weather Conditions			
Runoff Occurring	Yes	No	Describe:

Any previously unidentified discharges of pollutants since last inspection?	Yes	No	If Yes, describe:
Any previously unidentified pollutants in existing discharges?	Yes	No	If Yes, describe:
Evidence of, or potential for, pollutants entering the drainage system?	Yes	No	If Yes, describe:
Evidence of pollutants discharging to receiving waters at outfalls?	Yes	No	If Yes, describe:

Area/Activity Inspected (Brief description)	Control Measures Operating Effectively (Yes or No, and description)	Corrective Action Needed/Notes (Identify needed maintenance and repairs, or control measures needing replacement)

Notes	
-------	--

Inspector Name/Title: _____ Signature: _____

Appendix F – Corrections

Corrections Log

CORRECTIVE ACTION LOG

Date	Description of Corrective Action (Include repair/maintenance of control measures)	Name	Signature

Appendix G – Training

Annual Employee Training Log

SPCC Training Log

TRAINING RECORD

Training Date		
Training Description		
Trainer		
	Employee(s) trained	Employee signature

Training Date		
Training Description		
Trainer		
	Employee(s) trained	Employee signature

Training Date		
Training Description		
Trainer		
	Employee(s) trained	Employee signature

APPENDIX D

Record of Annual Discharge Prevention Briefings and Training

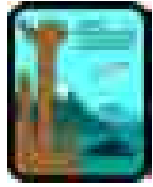
Briefings will be scheduled and conducted by the Airport Manager for operating personnel at regular intervals to ensure adequate understanding of this SPCC Plan. The briefings will also highlight and describe known discharge events or failures, malfunctioning components, and recently implemented precautionary measures and best practices. Personnel will also be instructed in operation and maintenance of equipment to prevent the discharge of oil, and in applicable pollution laws, rules, and regulations. Airport Manager and other personnel will have an opportunity during the briefings to share recommendations concerning health, safety, and environmental issues encountered during facility operations.

Date	Subjects Covered	Employees in Attendance	Instructor(s)

Appendix H –Annual Report

MSGP Annual Reporting Form

SPCC Annual Facility Inspection Checklist



Alaska Department of Environmental Conservation

MSGP Annual Reporting Form

Section I. General Information

Facility Name:			
APDES Permit Tracking Number:			
<u>Facility Physical Address</u>			
Street:			
City:	State:	Alaska	Zip:
Lead Inspector's Name:		Title:	
Additional Inspectors Names:			
Contact Person:		Title:	
Phone:		Email:	
Inspection Date:			

Section II. General Inspection Findings

1. As part of this comprehensive site inspection, did you inspect all potential pollutant sources, including areas where industrial activity may be exposed to storm water? Yes No

If NO, describe why not:

Note: Complete Section III of this form for each industrial activity area inspected and included in your SWPPP or as newly defined, in Section II parts 2 and 3 below, where pollutants may be exposed to storm water.

2. Did this inspection identify any storm water or non-storm water outfalls not previously identified in your SWPPP? Yes No

If YES, for each location, describe the sources of those storm water and non-storm water discharges and any associated control measures in place:

3. Did this inspection identify any sources of storm water or non-storm water discharges not previously identified in your SWPPP? Yes No

If YES, describe these sources of storm water or non-storm water pollutants expected to be present in these discharges, and any control measures in place:

4. Did you review storm water monitoring data as part of this inspection to identify potential pollutant hotspots? Yes No NA, no monitoring performed

If YES, summarize the findings of that review and describe any additional inspection activities resulting from this review:

5. Describe any evidence of pollutants entering the drainage system or discharging to surface waters, and the condition of and around outfalls, including flow dissipation measure to prevent scouring:

6. Have you taken or do you plan to take and corrective actions, as specified in Part 3 of the permit, since your last annual report submission (or since you received authorization to discharge under this permit if this is your first annual report), including any corrective actions identified as a result of this annual comprehensive site inspection?

Yes No

If YES, how many conditions requiring review for corrective active as specified in Parts 3.1 and 3.2 of the MSGP were addressed by these corrective actions?

Note: Complete the attached Corrective Action Form (Section IV) for each condition indentified, including any conditions identified as a result of this comprehensive storm water inspection.

Section III. Industrial Activity Area Specific Findings

Complete one block for each industrial activity area where pollutants may be exposed to storm water. Copy this page for additional industrial activity areas.

In reviewing each area, you should consider:

- Industrial materials, residue, or trash that may have or could come into contact with storm water;
- Leaks or spills from industrial equipment, drums, tanks, and other containers;
- Offsite tracking of industrial or waste materials from areas of no exposure to exposed areas; and
- Tracking or blowing of raw, final, or waste material from areas of no exposure to exposed areas.

Industrial Activity Area:

1. Brief Description:

2. Are any control measures in need of maintenance or repair? Yes No

3. Have any control measures failed and require replacement? Yes No

4. Are any additional/revised control measures necessary in this area? Yes No

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form.)

Industrial Activity Area:

1. Brief Description:

2. Are any control measures in need of maintenance or repair? Yes No

3. Have any control measures failed and require replacement? Yes No

4. Are any additional/revised control measures necessary in this area? Yes No

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form.)

Industrial Activity Area:

1. Brief Description:

2. Are any control measures in need of maintenance or repair? Yes No

3. Have any control measures failed and require replacement? Yes No

4. Are any additional/revised control measures necessary in this area? Yes No

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form.)

Note: Copy this page and attach additional pages as necessary.

Industrial Activity Area:

1. Brief Description:

2. Are any control measures in need of maintenance or repair? Yes No

3. Have any control measures failed and require replacement? Yes No

4. Are any additional/revised control measures necessary in this area? Yes No

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form.)

Industrial Activity Area:

1. Brief Description:

2. Are any control measures in need of maintenance or repair? Yes No

3. Have any control measures failed and require replacement? Yes No

4. Are any additional/revised control measures necessary in this area? Yes No

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form.)

Industrial Activity Area:

1. Brief Description:

2. Are any control measures in need of maintenance or repair? Yes No

3. Have any control measures failed and require replacement? Yes No

4. Are any additional/revised control measures necessary in this area? Yes No

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form.)

Section V. Annual Report Certification

Compliance Certification

Do you certify that your annual inspection has met the requirements of Part 4.2 of the permit, and that, based upon the results of this inspection, to the best of your knowledge, you are in compliance with the permit? Yes No

If No, summarize why you are not in compliance with the permit:

Annual Report Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name of Authorized Representative: _____ Title: _____

Signature: _____ Date Signed: _____ Email: _____

Annual Facility Inspection Checklist

This inspection record must be completed *each year*. If any response requires further elaboration, provide comments in Description & Comments space provided. Further description and comments, if necessary, must be provided on a separate sheet of paper and attached to this sheet. *Any item that receives “yes” as an answer must be described and addressed immediately.

	Y*	N	Description & Comments
Storage tanks			
<i>Tank #1</i>			
<i>Tank surfaces show signs of leakage</i>			
<i>Tank is damaged, rusted or deteriorated</i>			
<i>Bolts, rivets or seams are damaged</i>			
<i>Tank supports are deteriorated or buckled</i>			
<i>Tank foundations have eroded or settled</i>			
<i>Level gauges or alarms are inoperative</i>			
<i>Vents are obstructed</i>			
<i>Tank #2</i>			
<i>Tank surfaces show signs of leakage</i>			
<i>Tank is damaged, rusted, or deteriorated</i>			
<i>Bolts, rivets, or seams are damaged</i>			
<i>Tank supports are deteriorated or buckled</i>			
<i>Tank foundations have eroded or settled</i>			
<i>Level gauges or alarms are inoperative</i>			
<i>Vents are obstructed</i>			
Piping			
<i>Valve seals or gaskets are leaking</i>			
<i>Pipelines or supports are damaged or deteriorated</i>			
<i>Joints, valves and other appurtenances are leaking</i>			
<i>Buried piping is exposed</i>			
<i>Out-of-service pipes are not capped</i>			
<i>Warning signs are missing or damaged</i>			
Oil/water separator			
<i>Oil/water separator > 2 inches of accumulated oil</i>			
<i>Oil/water separator effluent has a sheen</i>			
Security			
<i>Fencing, gates, or lighting is non-functional</i>			
<i>Pumps and valves are not locked (and not in use)</i>			
Response equipment			
<i>Response equipment inventory is incomplete</i>			

Annual reminders:

- Hold SPCC Briefing for all oil-handling personnel (and update briefing log in the Plan);
- Check contact information for key employees and response/cleanup contractors and update them in the Plan as needed;

Additional Remarks:

Date: _____

Signature: _____

Appendix I – Blank Forms

MSGP Industrial Discharge Monitoring Report (MDMR)

Airport Deicer Tracking Form

SPCC Discharge Notification Form



Alaska Department of Environmental Conservation

MSGP Industrial Discharge Monitoring Report (MDMR)

Reason(s) for Submission (Check all that apply):		
Submitting monitoring data (fill in all Sections).		
Reporting no discharge for all outfalls for this monitoring period (fill in Sections I, II, III, IV, and VI).		
Reporting that your site status has changed to inactive and unstaffed (fill in Sections I, II, VI and include date of status change in comments field in Section V).		
Reporting that your site status has changed to active (fill in all sections and include date of status change in comments field in Section V).		
Reporting that no further pollutant reductions are achievable for all outfalls and for all pollutants via Part 6.2.1.2 of the MSGP (fill in Sections I, II, and VI).		
Section I. Permit Information		
Permit Tracking Number:		
Section II. Facility Information		
Facility Name:		
<u>Facility Physical Address</u>		
Street:		
City:	State: Alaska	Zip:
Contact Name:	Email:	
MDMR Preparer (Complete if MDMR was prepared by someone other than the person signing the certification in Section VI):		
Prepared By:	Organization:	
Email:	Phone:	
Section III. Discharge Information		
Identify Monitoring Period:	Check here if proposing alternative monitoring periods due to irregular storm water runoff. Identify alternative monitoring schedule and indicate for which alternative period you are reporting monitoring data.	
Quarter 1 (April 1 – June 30)	Quarter 1: From	To
Quarter 2 (July 1 – September 30)	Quarter 2: From	To
Quarter 3 (October 1 – December 31)	Quarter 3: From	To
Quarter 4 (January 1 – March 31)	Quarter 4: From	To
Are you required to monitor for cadmium, copper, chromium, lead, nickel, silver, or zinc?		Yes No (Skip to Section IV)
What is the hardness level of the receiving water?	mg/L	
Section IV. Outfall Information		
How many outfalls are identified in your SWPPP?		List names of outfalls required to be monitored in the table below.
Do any of your outfalls discharge substantially identical effluents?		Yes No
If YES, for each monitored outfall, indicate outfall names that are substantially identical in the table below.		
a. Monitored Outfall Name*	b. Substantially Identical Outfalls [List name(s) of outfall(s) that are substantially identical to outfall in a.]	c. No Discharge?

*Reference attachment if additional space is needed to complete the table.

Section V. Monitoring Information

Permit Tracking Number:

Nature of Discharge: Rainfall (complete a, b, and c below) Snowmelt

a. Duration of the rainfall event (hours): b. Rainfall amount (inches): c. Time since previous measurable storm event (days):

Outfall Name	Monitoring Type (QBM, ELG, S, I, O)*	Parameter	Quality or Concentration	Units	Results Description	Collection Date	Exceedance due to natural background pollutant levels	No further pollutant reductions achievable?

* (QBM) – Quarterly benchmark monitoring; (ELG) – Annual effluent limitation guidelines monitoring; (S) – State specific monitoring; (I) – Impaired waters monitoring; (O) – Other monitoring as required by ADEC

Comment and/or Explanation of Any Violations (Reference all attachments here)

Section VI. Certification

Printed Name and Title of Principal Executive Officer or Authorized Agent	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	Signature of Principal Executive Officer or Authorized Agent	Date
---	---	--	------

Email of Principal Executive Officer or Authorized Agent:

Instructions for Completing the MSGP Industrial Discharge Monitoring Report (MDMR)

Who Must Submit A Discharge Monitoring Report to ADEC?

An operator or owner of a facility covered under the Multi-Sector General Permit (MSGP or permit) that are required to monitor pursuant to Parts 6.2, 6.3, and 8 of the permit must submit the MSGP Discharge Monitoring Report (MDMR) consistent with the reporting requirements specified in Part 7.1 of the permit.

Completing the Form

Type or print, in the appropriate areas only. "NA" can be entered in areas that are not applicable. If you have any questions about how or when to use this form, contact the ADEC Storm Water Program at (907) 269-6285 or online at <http://www.dec.state.ak.us/water/wppspc/stormwater/stormwater.htm>.

Reasons for Submission

Indicate your reason(s) for submitting this MDMR by checking all boxes that apply. The reasons for submission are defined as follows:

- *Submitting monitoring data:* For each storm event sampled, submit one MDMR form with data for all outfalls sampled. Select this reason even if you only have monitoring data for some of your outfalls (i.e., some outfalls did not discharge). If you select this reason, you are required to complete all Sections of the form.
- *Reporting no discharge for all outfalls for this monitoring period:* Indicates that there were no discharges from all outfalls during this monitoring period. If you select this reason, you are only required to complete Sections I, II, III, IV, and VI.
- *Reporting that your site status has changed to inactive and unstaffed:* Indicates that your facility is currently inactive and unstaffed (See Part 6.2.1.3 of the permit for more information). If you select this reason, you are only required to complete Sections I, II, and VI and include date of status change in the comment field in Section V.
- *Reporting that your site status has changed from inactive to active:* Indicates that your facility is currently active (See Part 6.2.1.3 of the permit for more information). If you select this reason, you are required to complete all Sections of the form and include date of status change in the comment field in Section V.
- *Reporting that no further reductions are achievable for all outfalls and for all pollutants via Part 6.2.1.2 of the permit:* Indicates that your facility has determined that no further pollutant reductions are technologically and economically practicable in light of best industry practice to meet the technology-based effluent limitations or are necessary to meet the water-quality-based effluent limitations in Parts 2 of the permit (See Part 6.2.1.2 of the permit for more information). If you select this reason, you are required to complete Sections I, II and VI. However, if you can make this finding for some outfalls and pollutants, but not for others, you cannot select this reason; you will instead be able to identify which outfalls and which pollutants you can make this finding for in Section V.

Section I. Permit Tracking Number

Enter the APDES or NPDES tracking number assigned by ADEC's or EPA's Storm water Program to the facility. If you do not know the tracking number, you can find the tracking number assigned to your facility on ADEC's Water Permit Search www.dec.state.ak.us/water/WaterPermitSearch/Search.aspx or EPA's Notice of Intent (NOI) Search website (www.epa.gov/npdes/noisearch) if you submitted your NOI on EPA's website.

Section II. Facility Information

- Enter the facility's official or legal name. Unless the name of your facility has changed, please use the same name provided on your NOI. You can use ADEC's Water Permit Search, www.dec.state.ak.us/water/WaterPermitSearch/Search.aspx or EPA's NOI Search website (www.epa.gov/npdes/noisearch) to view your NOI if you submitted your NOI on the EPA website.
- Enter the street address, including city, state, and zip code of the actual physical location of the facility. Do not use a P.O. Box.
- Identify the name, telephone number, and email address of the person who will serve as a contact for ADEC on issues related to monitoring at your facility. This person should be able to answer questions related to storm water discharges and monitoring or have immediate access to individuals with that knowledge. This person does not have to be the facility operator but should have intimate knowledge of monitoring activities at the facility.
- If the form was prepared by someone other than the person who is signing the certification statement in Section VI (for example, if the MDMR was prepared by a member of the facility's storm water pollution prevention team or a consultant for the certifier's signature), include the name, organization, telephone number, and email address of the MDMR preparer.

Section III. Discharge Information

- Indicate the appropriate monitoring period (Quarter 1, 2, 3, or 4) covered by the MDMR. "Alternative" monitoring periods can apply to facilities located in arid and semi-arid climates or in areas subject to snow or prolonged freezing. To use alternative monitoring periods, you must provide a revised monitoring schedule here in the first monitoring report submitted and indicate for which alternative monitoring period you are reporting monitoring data. If using alternative monitoring periods, identify the first day of the monitoring period through the last day of the monitoring period for each of the four periods. The dates should be displayed as month (Mo) / day (Day). See Parts 6.1.6 and 6.1.7 of the permit for more information.
- If you are submitting benchmark monitoring data, identify if your facility is required to collect benchmark samples for one or more hardness-dependent metals (i.e., cadmium, copper, lead, nickel, silver, and zinc). If you select "yes" to this question you must also complete the table in Section III, and if you select "no" to this question, you may skip to Section IV.
- If you selected "yes" for the previous question, then you are required to submit to ADEC with your first benchmark report a hardness level established consistent with the procedures in Appendix J of the permit, which is representative of your receiving water. If your outfalls discharge to more than one receiving water, as reported in your NOI form, you should report hardness for the receiving water with the lowest hardness values. Hardness values must be reported in milligrams per liter (mg/L).

Section IV. Outfall Information

- Enter the total number of outfalls identified in your SWPPP. Outfalls are locations where storm water exits the facility, including pipes, ditches, swales, and other structures used to remove storm water from the facility.
- Indicate if your facility has two or more outfalls that you believe discharge substantially identical effluents (i.e., storm water), based on the similarities of the general industrial activities and control measures, exposed materials that may significantly contribute pollutants to storm water, and runoff coefficients of their drainage areas. See Parts 5.1.5.2 and 6.1.1 of the permit for more information on substantially identical outfalls.
- If you selected "yes" for the previous question, then you must list the outfall name(s) in Column b that you expect to be substantially identical to the corresponding outfall in Column a.
 - a. *Monitored Outfall Name:* List name(s) of outfall(s) you are required to monitor.
 - b. *Substantially Identical Outfalls:* List name(s) of outfall(s) substantially identical to "Monitored Outfall" in Column a. (if applicable).
 - c. *No Discharge:* Check box if you are reporting "No Discharge" for the monitored outfall for the reporting period identified in Section III.

Example:

a. Monitored Outfall Name	b. Substantially Identical Outfall	c. No Discharge
Outfall A	Outfall B; Outfall C	<input type="checkbox"/>
Outfall D		<input checked="" type="checkbox"/>

Reference attachments if additional space is needed to complete the table in Section IV.

Section V. Monitoring Information

- Enter the APDES or NPDES tracking number assigned to the facility reported in Section I.
- For the reported monitoring event, indicate whether the discharge was from a rainfall or snowmelt event. If you select "rainfall", then indicate:
 - a. the duration (in hours) of the rainfall event;
 - b. rainfall total (in inches) for that rainfall event; and
 - c. time (in days) since the previous measurable storm event.
- If the discharge occurs during a period of both rainfall and snowmelt, check both the rainfall and snowmelt boxes and report the appropriate rainfall information in items a-c. To report multiple monitoring events in the same reporting period, copy Page 2 of this Form and enter each monitoring event separately with data for all outfalls sampled.
- For each pollutant monitored at an outfall, you must complete one row in the Table as follows:
 - *Outfall Name:* Provide the outfall name for which you monitored (e.g., Outfall 1, Outfall 2, Outfall 3).
 - *Monitoring Type:* Provide the type of monitoring using the specified codes below:
 - QBM – Quarterly benchmark monitoring;
 - ELG – Annual effluent limitations guidelines monitoring;
 - S – State specific monitoring;
 - I – Impaired waters monitoring; or
 - O – Other monitoring as required by ADEC.

Instructions for Completing the MSGP Industrial Discharge Monitoring Report (MDMR)

- *Parameter(s)*: Enter each "Parameter" (or "pollutant") monitored. For QBM and ELG monitoring, use the same parameter name as in Part 8 of the permit.
- *Quality or Concentration*: Enter sample measurement value for each parameter analyzed and required to be reported. Enter "ND" (i.e., not detected) for any sample results below the method detection limit or "BQL" (i.e., below quantitation limit) for sample results above the detection limit but below the quantitation limit.
- *Units*: Enter the units for sample measurement values (e.g., "mg/L" for milligrams per liter) for each parameter analyzed and required to be reported. For monitoring results reported as ND or BQL, this space will be left blank and the units will be reported under *Results Description*.
- *Results Description*: This section must be completed for any monitoring results reported as ND or BQL in the "Quality or Concentration" column. For ND, report the laboratory detection level and units in this column. For BQL, report the laboratory quantitation limit and units in this column.
- *Collection Date*: Identify the sampling date for each parameter monitoring result reported on this form.
- *Exceedance due to natural background pollutant levels*: Check box if following the first 4 quarters of benchmark monitoring (or sooner if the exceedance is triggered by less than 4 quarters of data) you have determined that the exceedance of the benchmark is attributable solely to the presence of that pollutant in the natural background for that outfall and any substantially identical outfalls. See Part 6.2.4.2 of the permit for more information. Attach supporting rationale for your determination to the submitted MDMR and reference attachment in comments portion of Section V.
- *No further pollutant reductions achievable*: Check box if after collection of 4 quarterly samples (or sooner if the exceedance is triggered by less than 4 quarters of data), the average of the 4 monitoring values for any parameter exceeds the benchmark and you have made the determination that no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practice to meet the technology-based effluent limitations or are necessary to meet the water-quality-based effluent limitations in Parts 2 of the permit (See Part 6.2.1. of the permit for more information) for that outfall and any substantially identical outfalls. Attach supporting rationale for your determination to the submitted MDMR and reference attachment in comments portion of Section V.
- Where violations of the permit requirements are reported, include a brief explanation to describe the cause and corrective actions taken and reference each violation by date. Also, this section should include any additional comments such as are required when changing site status from inactive and unstaffed to active or vice versa. Attach additional pages if you need more space.

Attach additional copies of Section V as necessary to address all outfalls and parameters.

Section VI. Certification

Enter *Printed Name and Title of Principal Executive Officer or Authorized Agent* with *Signature of Principal Executive Officer or Authorized Agent*, and the *Date* this form was signed and the email address of the "*Principal Executive Officer or Authorized Agent*." If you submit multiple pages of Section V monitoring data, each page must be appropriately signed and certified as described below.

The MDMRs must be signed as follows:

- (1) For a corporation, a responsible corporate officer shall sign the MDMR, a responsible corporate officer means:
 - (A) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation; or
 - (B) the manager of one or more manufacturing, production, or operating facilities, if
 - (i) the manager is authorized to make management decisions that govern the operation of the regulated facility, including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental statutes and regulations;
 - (ii) the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and

(iii) authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

(2) For a partnership or sole proprietorship, the general partner or the proprietor, respectively; or

(3) for a municipality, state, or other public agency, either a principal executive officer or ranking elected official shall sign the application; in this subsection, a principal executive officer of an agency means

(A) the chief executive officer of the agency; or

(B) a senior executive officer having responsibility for the overall operations of a principal geographic unit or division of the agency.

Include the name, title, and email address of the person signing the form and the date of signing. An unsigned or undated MDMR will not be considered valid.

Where to File the MDMR Form

Monitoring data collected pursuant to Parts 6.2, 6.3, and 8 of the permit must be reported on the paper MDMR form and sent to the following address:

If you file by mail, please submit the original form with a signature in ink. ADEC will not accept a photocopied signature. Remember to retain a copy for your records.

MSMRs sent by mail:

Alaska Dept. of Environmental Conservation
Wastewater Discharge Authorization Program
555 Cordova Street
Anchorage, AK 99501
Phone: (907) 269-6285

MONTHLY AIRPORT RUNWAY DEICER TRACKING FORM

The stormwater discharge permit requires tracking the amount of deicing materials used on a monthly basis. These records must be maintained with the SWPPP. Record type and amount of deicer (pure product) used during each application. Also record the general location of the application. Sand application can also be noted.

Date	Deicer Used	Quantity Applied	Location of Application	Temp/Weather Conditions	Initials	Comments

APPENDIX I Discharge Notification Form

Part A: Discharge Information		
General information when reporting a spill to outside authorities:		
Name:	King Salmon Airport	
Address:	P.O Box 65 King Salmon, AK, 99613	
Telephone:	907-246-3325	
Owner/Operator:	Alaska DOT&PF 4111 Aviation Ave Anchorage, Alaska 99519	
Primary Contact:	Jay Knight, Airport Manager Work: 907-246-3325 Cell (24 hrs): 907-439-1129	
Type of oil:	Discharge Date and Time:	
Quantity released:	Discovery Date and Time:	
Quantity released to a waterbody:	Discharge Duration:	
Location/Source:		
Actions taken to stop, remove, and mitigate impacts of the discharge:		
Affected media:		
G air	G storm water sewer/POTW	
G water	G dike/berm/oil-water separator	
G soil	G other: _____	
Notification person:	Telephone contact: Business: 24-hr:	
Nature of discharges, environmental/health effects, and damages:		
Injuries, fatalities or evacuation required?		
Part B: Notification Checklist		
	Date and time	Name of person receiving call
Discharge in any amount		
Jay Knight, Airport Manager and Response Coordinator 907-246-3325/ 907-439-1129		
Discharge in amount exceeding 10 gallons and <i>not affecting a waterbody or groundwater</i>		
Bristol Bay Fire Department 911 or 907-246-4465		

Alaska Department of Environmental Conservation 907-465-5250 or 800-478-9300 (24 hour number)		
Discharge in any amount and affecting (or threatening to affect) a waterbody		
Bristol Bay Fire Department 911 or 907-246-4465		
Alaska Department of Environmental Conservation 907-465-5250 or 800-478-9300 (24 hour number)		
National Response Center (800) 424-8802		

Appendix J – Miscellaneous

Airport Tennant Letter – 2011

Airport Tennant Letter – 11/9/2010

SWPPP Staff Title and Responsibility Table

Alternate Authority Authorization Letter

Endangered Species Documentation

STATE OF ALASKA

DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

MAINTENANCE & OPERATIONS – CENTRAL REGION

SEAN PARNELL, GOVERNOR

4111 AVIATION AVENUE
P.O. BOX 196900
ANCHORAGE, ALASKA 99519
TEXT: (907) 269-0473
PHONE: (907) 248-1573
FAX: (907) 269-0760

**In Reply Refer To:
King Salmon Airport SWPPP**

February 7, 2011

Dear Airport Tenant,

As you may already be aware from the letter dated October 27, 2009 which you should have received from the DOT&PF Aviation Leasing Division, the U.S. Environmental Protection Agency (EPA) regulations on stormwater runoff from specific industrial operation have been revised and permitting authority is being transferred to the Alaska Department of Environmental Conservation (ADEC). The Multi-Sector General Permit (MSGP) specifies stormwater management requirements for industrial operations, including Air Transportation (Sector S). As required by these regulations, the Department of Transportation and Public Facilities (DOT&PF) has applied for the general stormwater permit for operation of the airport and common areas. The primary requirement is to write a Stormwater Pollution Prevention Plan (SWPPP).

The SWPPP we have developed for the King Salmon Airport only covers DOT&PF activities, not your activity. Therefore, it is your responsibility to research and determine if a stormwater permit is required for your operations and if so, to comply with the EPA/ADEC rules and the Clean Water Act. Failure to comply could result in a significant penalty.

To assist you in determining your responsibilities, we have attached an EPA fact sheet on stormwater. You will also need to review the regulations at <http://cfpub.epa.gov/npdes/stormwater/msgp.cfm>. Each regulated tenant must develop a SWPPP, apply for permit coverage through the Alaska Department of Environmental Conservation (ADEC), and implement the SWPPP. The MSGP permit requires various inspections and training requirements. More information can be found at <http://www.dec.state.ak.us/water/wnpssc/stormwater/MultiSector.htm>. And for airport specific requirements please review the Sector S Industrial Stormwater Factsheet http://www.epa.gov/npdes/pubs/sector_s_airtransmaint.pdf.

If you decide that you are regulated and intend to file for the permit, please check with your airport manager as it is recommended we coordinate our SWPPPs. We are working to have our SWPPP electronically available on the DOT&PF website at <http://dot.alaska.gov/stwdav/SWPPP.shtml>, the SWPPP should be available no later than March 1, 2011. Also, if you perform deicing, the airport manager will be contacting you regarding monthly reporting requirements.

If you prepare a SWPPP, please send an electronic copy of the final plan to our office (either via email or CD). Please call with any questions you may have (907)269-0714 or email me at jennifer.hillman@alaska.gov.

Sincerely yours,

Environmental Impact Analyst, Maintenance and Operations

cc:

Jay Knight, King Salmon Airport Manager
Jim Thorsness, King Salmon Airport Leasing Specialist

STATE OF ALASKA

DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

ANCHORAGE OFFICE OF AVIATION LEASING

SEAN PARNELL, GOVERNOR

4111 AVIATION AVENUE
P.O. BOX 196900
ANCHORAGE, AK 99519-6900
(907) 269-0450 FAX: (907) 243-5092

October 27, 2009

Dear Airport Tenant:

As you may already be aware, the U.S. Environmental Protection Agency (EPA) regulations on stormwater runoff from specific industrial operations have been revised. The EPA Multi-Sector General Permit (MSGP) specifies stormwater management requirements for industrial operations, including Air Transportation (Sector S). As required by these EPA regulations, the Department of Transportation and Public Facilities (DOT&PF) has applied for the EPA general stormwater permit for operation of the airport and common areas. The primary requirement is to write a storm water pollution prevention plan (SWPPP).

The SWPPP we have developed only covers DOT&PF activities, not your activity. Therefore, it is your responsibility to research and determine if a stormwater permit is required for your operations and if so, to comply with the EPA rules and the Clean Water Act. Failure to comply could result in a significant penalty.

To assist you in determining your responsibilities, we have attached an EPA fact sheet. You will also need to review the regulations at <http://cfpub.epa.gov/npdes/stormwater/msgp.cfm>. Each regulated tenant must develop a SWPPP, apply for permit coverage, and implement the SWPPP. The MSGP permit requires various inspections and training requirements. For you information, Alaska is located within Region 10 for EPA.

If you decide that you are regulated and intend to file for the permit, please check with your airport manager as it is recommended that we coordinate our SWPPPs. Also, if you perform deicing, the airport manager will be contacting you regarding a monthly reporting requirement.

If you prepare a SWPPP, please send a copy of the final plan to our office. Thank you.

Sincerely yours,



Tina Schimschat
Chief, Central Region Aviation Leasing

cc: Airport Manager
Matt Decaro, Environmental Analyst (269-0714)
Attachment: EPA Industrial Stormwater Fact Sheet (9 pages)

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that this is crucial for ensuring transparency and accountability in the organization's operations.

2. The second part of the document outlines the various methods and tools used to collect and analyze data. It highlights the need for consistent and reliable data collection processes to support effective decision-making.

3. The third part of the document focuses on the role of technology in data management and analysis. It discusses how modern software solutions can streamline data collection, storage, and reporting, thereby improving efficiency and accuracy.

4. The fourth part of the document addresses the challenges associated with data management, such as data quality, security, and privacy. It provides strategies to mitigate these risks and ensure that data is used responsibly and ethically.

5. The fifth part of the document discusses the importance of data governance and the role of leadership in establishing a strong data culture. It emphasizes that data should be used to drive innovation and improve organizational performance.

6. The sixth part of the document provides a summary of the key findings and recommendations. It reiterates the importance of data in driving organizational success and provides actionable steps for implementation.

7. The final part of the document concludes with a call to action, encouraging all stakeholders to embrace data-driven decision-making and work together to achieve the organization's strategic goals.

INDUSTRIAL STORMWATER

FACT SHEET SERIES

Sector S: Vehicle Maintenance Areas, Equipment Cleaning Areas, or Deicing Areas Located at Air Transportation Facilities



U.S. EPA Office of Water
EPA-833-F-06-034
December 2006

What is the NPDES stormwater permitting program for industrial activity?

Activities, such as material handling and storage, equipment maintenance and cleaning, industrial processing or other operations that occur at industrial facilities are often exposed to stormwater. The runoff from these areas may discharge pollutants directly into nearby waterbodies or indirectly via storm sewer systems, thereby degrading water quality.

In 1990, the U.S. Environmental Protection Agency (EPA) developed permitting regulations under the National Pollutant Discharge Elimination System (NPDES) to control stormwater discharges associated with eleven categories of industrial activity. As a result, NPDES permitting authorities, which may be either EPA or a state environmental agency, issue stormwater permits to control runoff from these industrial facilities.

What types of industrial facilities are required to obtain permit coverage?

This fact sheet specifically discusses stormwater discharges from airports, airport terminals, airline carriers, and establishments as defined by Standard Industrial Classification (SIC) Major Group 45. Facilities and products in this group fall under the following categories, all of which require coverage under an industrial stormwater permit:

- ◆ Servicing, repairing, or maintaining aircraft and ground vehicles
- ◆ Equipment cleaning and maintenance (including vehicle and equipment rehabilitation mechanical repairs, painting, fueling, lubrication)
- ◆ Deicing/anti-icing operations which conduct the above described activities

The operator and the tenants of the airport that conduct industrial activities as described above and which have stormwater discharges are required to apply for coverage under an NPDES stormwater permit for the discharges from their areas of operation. The airport management and tenants of the airport are encouraged to apply as co-permittees under a permit, and to work in partnership in the development and implementation of a stormwater pollution prevention plan.

Non-stormwater discharges, including discharges from aircraft, ground vehicle and equipment washwaters, dry weather discharges from airport deicing/anti-icing operations, and dry weather discharges resulting from runway maintenance are not required to obtain coverage under an industrial stormwater permit. Dry weather discharges are generated from processes other than those described in the definition of stormwater. The definition of stormwater includes stormwater runoff, snow melt runoff, and surface runoff and drainage.

What does an industrial stormwater permit require?

Common requirements for coverage under an industrial stormwater permit include development of a written stormwater pollution prevention plan (SWPPP), implementation of control measures, and submittal of a request for permit coverage, usually referred to as the Notice of Intent or NOI. The

Sector 5: Vehicle Maintenance Areas, Equipment Cleaning Areas, or Deicing Areas Located at Air Transportation Facilities

SWPPP is a written assessment of potential sources of pollutants in stormwater runoff and control measures that will be implemented at your facility to minimize the discharge of these pollutants in runoff from the site. These control measures include site-specific best management practices (BMPs), maintenance plans, inspections, employee training, and reporting. The procedures detailed in the SWPPP must be implemented by the facility and updated as necessary, with a copy of the SWPPP kept on-site. The industrial stormwater permit also requires collection of visual, analytical, and/or compliance monitoring data to determine the effectiveness of implemented BMPs. For more information on EPA's industrial stormwater permit and links to State stormwater permits, go to www.epa.gov/npdes/stormwater and click on "Industrial Activity."

What pollutants are associated with my facilities activities?

Pollutants conveyed in stormwater discharges from air transportation facilities will vary. Generally, the concern with the use of ethylene and propylene glycols is that they exert high oxygen demands when released into receiving waters. Additionally, the concentration of nitrogen and possibly ammonia are the concern with the respect to deicing/anti-icing operations where urea is used. There are a number of factors that influence to what extent industrial activities and significant materials can affect water quality.

- ◆ Geographic location
- ◆ Topography
- ◆ Hydrogeology
- ◆ Extent of impervious surfaces (e.g., concrete or asphalt)
- ◆ Type of ground cover (e.g., vegetation, crushed stone, or dirt)
- ◆ Outdoor activities (e.g., material storage, loading/unloading, vehicle maintenance)
- ◆ Size of the operation
- ◆ Type, duration, and intensity of precipitation events

The activities, pollutant sources, and pollutants detailed in Table 1 are commonly found at air transportation facilities.

Table 1. Common Activities, Pollutants Sources, and Associated Pollutants at Air Transportation Facilities

Activity	Pollutant Source	Pollutant
Aircraft deicing/anti-icing	Runoff of spent deicing chemicals (e.g. ethylene glycol or propylene glycol) from aircraft exteriors	Biochemical oxygen demand (BOD)
Runway deicing/anti-icing	Runoff of spent deicing chemicals (e.g. ethylene or propylene glycol, urea, potassium or sodium acetate, potassium or sodium formate) from deicing areas	BOD, nitrogen, ammonia
Aircraft servicing	Spills or leaks during servicing	Engine oil, hydraulic fluid, fuel, lavatory waste
Aircraft fueling	Spills and leaks during fuel transfer, spills due to "topping off" tanks, runoff from fueling areas, washdown of fueling areas, leaking storage tanks	Jet fuel, fuel additives, oil, lubricants, heavy metals
Aircraft, ground vehicle, and equipment maintenance and washing	Spills and leaks during maintenance	Engine oils, hydraulic fluids, transmission oil, radiator fluids, and chemical solvents
	Disposal of waste parts	Batteries, oil, fuel filters, oily rags
	Spent washwater	TSS, metals, fuel, hydraulic fluid, oil, lavatory waste
Runway maintenance	Materials removed from runway surface	Tire rubber, oil and grease, paint chips, jet fuel
	Chemicals used to clean the runway surface	Chemical solvents

What BMPs can be used to minimize contact between stormwater and potential pollutants at my facility?

A variety of BMP options may be applicable to eliminate or minimize the presence of pollutants in stormwater discharges from air transportation facilities. You will likely need to implement a combination or suite of BMPs to address stormwater runoff at your facility. Your first consideration should be for pollution prevention BMPs, which are designed to prevent or minimize pollutants from entering stormwater runoff and/or reduce the volume of stormwater requiring management. Prevention BMPs can include regular cleanup, collection and containment of debris in storage areas, and other housekeeping practices, spill control, and employee training. It may also be necessary to implement treatment BMPs, which are engineered structures intended to treat stormwater runoff and/or mitigate the effects of increased stormwater runoff peak rate, volume, and velocity. Treatment BMPs are generally more expensive to install and maintain and include oil-water separators, wet ponds, and proprietary filter devices.

BMPs must be selected and implemented to address the following:

Good Housekeeping Practices

Good housekeeping is a practical, cost-effective way to maintain a clean and orderly facility to prevent potential pollution sources from coming into contact with stormwater. It includes establishing protocols to reduce the possibility of mishandling materials or equipment and training employees in good housekeeping techniques. Common areas where good housekeeping practices should be followed include trash containers and adjacent areas, material storage areas, vehicle and equipment maintenance areas, and loading docks. Good housekeeping practices must include a schedule for regular pickup and disposal of garbage and waste materials and routine inspections of drums, tanks, and containers for leaks and structural conditions. Practices also include containing and covering garbage, waste materials, and debris. Involving employees in routine monitoring of housekeeping practices has proven to be an effective means of ensuring the continued implementation of these measures.

Minimizing Exposure

Where feasible, minimizing exposure of potential pollutant sources to precipitation is an important control option. Minimizing exposure prevents pollutants, including debris, from coming into contact with precipitation and can reduce the need for BMPs to treat contaminated stormwater runoff. It can also prevent debris from being picked up by stormwater and carried into drains and surface waters. Examples of BMPs for exposure minimization include covering materials or activities with temporary structures (e.g., tarps) when wet weather is expected or moving materials or activities to existing or new permanent structures (e.g., buildings, silos, sheds). Even the simple practice of keeping a dumpster lid closed can be a very effective pollution prevention measure.

Erosion and Sediment Control

BMPs must be selected and implemented to limit erosion on areas of your site that, due to topography, activities, soils, cover, materials, or other factors are likely to experience erosion. Erosion control BMPs such as seeding, mulching, and sodding prevent soil from becoming dislodged and should be considered first. Sediment control BMPs such as silt fences, sediment ponds, and stabilized entrances, trap sediment after it has eroded. Sediment control BMPs should be used to back-up erosion control BMPs.

Management of Runoff

Your SWPPP must contain a narrative evaluation of the appropriateness of stormwater management practices that divert, infiltrate, reuse, or otherwise manage stormwater runoff so as to reduce the discharge of pollutants. Appropriate measures are highly site-specific, but may include, among others, vegetative swales, collection and reuse of stormwater, inlet controls, snow management, infiltration devices, and wet retention measures.

Sector 5: Vehicle Maintenance Areas, Equipment Cleaning Areas, or Deicing Areas Located at Air Transportation Facilities

A combination of preventive and treatment BMPs will yield the most effective stormwater management for minimizing the offsite discharge of pollutants via stormwater runoff. Though not specifically outlined in this fact sheet, BMPs must also address preventive maintenance records or logbooks, regular facility inspections, spill prevention and response, and employee training.

All BMPs require regular maintenance to function as intended. Some management measures have simple maintenance requirements, others are quite involved. You must regularly inspect all BMPs to ensure they are operating properly, including during runoff events. As soon as a problem is found, action to resolve it should be initiated immediately.

Implement BMPs, such as those listed below in Table 2 for the control of pollutants at air transportation facilities, to minimize and prevent the discharge of pollutants in stormwater. Identifying weaknesses in current facility practices will aid the permittee in determining appropriate BMPs that will achieve a reduction in pollutant loadings. BMPs listed in Table 2 are broadly applicable to air transportation facilities; however, this is not a complete list and you are recommended to consult with regulatory agencies or a stormwater engineer/consultant to identify appropriate BMPs for your facility.

Table 2. BMPs for Potential Pollutant Sources at Air Transportation Facilities

Pollutant Source	BMPs
Deicing/anti-icing aircraft	<ul style="list-style-type: none"> <input type="checkbox"/> Establish a centralized aircraft deicing station with containment of surface and subsurface drainage. <input type="checkbox"/> To reduce deicing fluid applied: <ul style="list-style-type: none"> - Forced-air deicing systems - Computer-controlled fixed-gantry systems - Infrared technology - Hot water - Varying glycol content to air temperature - Enclosed-basket deicing trucks - Mechanical methods - Solar radiation - Hangar storage - Aircraft covers - Thermal blankets fro MD-80s and DC-9s <input type="checkbox"/> Apply deicing fluid and anti-icer to planes on deicing pads if available. <input type="checkbox"/> Apply anti-icer to aircraft that will be parked overnight to make it easier to remove accumulated snow and ice in the morning. <input type="checkbox"/> Apply anti-icer to aircraft immediately after deicing to provide extended hold-over time prior to take-off. <input type="checkbox"/> Ensure that stormwater inlets are blocked when deicing/anti-icing during dry weather. <input type="checkbox"/> Use mechanical vacuum systems or other devices to collect aircraft deicing runoff from the apron surface for proper disposal. <input type="checkbox"/> Dispose collected aircraft deicing runoff to sanitary sewage facility (if allowed by sewer authority), on-site treatment, or recycle (resell or reuse). <input type="checkbox"/> Use portable tanks, retention and detention ponds for temporary storage of collected deicing runoff. <input type="checkbox"/> Collect contaminated runoff in a wet pond for biochemical decomposition (be aware of attracting wildlife that may prove hazardous to flight operations). <input type="checkbox"/> Recover and recycle/dispose of unused deicing fluids in deicing trucks. <input type="checkbox"/> Recover deicing materials when applied during non-precipitation events (e.g., covering storm sewer inlets, using booms, installing absorptive interceptors in the drains, etc.) to prevent materials from later contaminating stormwater.

INDUSTRIAL STORMWATER FACT SHEET SERIES

Sector 5: Vehicle Maintenance Areas, Equipment Cleaning Areas, or Deicing Areas Located at Air Transportation Facilities

Table 2. BMPs for Potential Pollutant Sources at Air Transportation Facilities (continued)

Pollutant Source	BMPs
Deicing/anti-icing runways and pads	<ul style="list-style-type: none"> <input type="checkbox"/> Evaluate and optimize present chemical application rates <input type="checkbox"/> Use sand where possible to enhance friction. <input type="checkbox"/> Plow and broom runways prior to application of deicing chemicals. <input type="checkbox"/> Heat solid deicers and sand prior to application. <input type="checkbox"/> Install and calibrate devices to meter the amount of pavement deicer being applied. <input type="checkbox"/> Emphasize anti-icing operations which minimize the need to deice. <input type="checkbox"/> Install runway ice detection systems ("pavement sensors") to monitor pavement temperatures. <input type="checkbox"/> Pre-wet with liquid deicers to improve adhesion of solid deicers to the iced surface. <input type="checkbox"/> Use deicers which have less of an environmental impact (e.g. sodium formate and potassium acetate as opposed to urea and glycol). <input type="checkbox"/> Ensure proper handling and disposal of unused deicing chemicals in vehicles. <input type="checkbox"/> Use ice detection systems. <input type="checkbox"/> Use airport traffic flow strategies and departure slot allocation systems.
Aircraft, ground vehicle, and equipment maintenance areas (including aircraft service areas)	<p>Good Housekeeping</p> <ul style="list-style-type: none"> <input type="checkbox"/> Eliminate floor drains that are connected to the storm or sanitary sewer; if necessary, install a sump that is pumped regularly. Collected wastes should be properly treated or disposed of by a licensed waste disposal company. <input type="checkbox"/> Prevent and contain spills and drips. <input type="checkbox"/> Do all cleaning at a centralized station so the solvents stay in one area. <input type="checkbox"/> Remove any parts that are dipped in liquid slowly to avoid spills. <input type="checkbox"/> Use drip pans, drain boards, and drying racks to direct drips back into a fluid holding tank for reuse. <input type="checkbox"/> Drain all parts of fluids prior to disposal. Oil filters can be crushed and recycled. <input type="checkbox"/> Transfer used fluids to the proper container promptly; do not leave full drip pans or other open containers around the shop. Empty and clean drip pans and containers. <input type="checkbox"/> Clean up leaks, drips, and other spills without using large amounts of water. Use absorbents for dry cleanup whenever possible. <input type="checkbox"/> Prohibit the practice of hosing down an area where the practice would result in the discharge of pollutants to a stormwater system. <input type="checkbox"/> Prohibit pouring liquid waste into floor drains, sinks, outdoor storm drain inlets, or other storm drains or sewer connections. <input type="checkbox"/> Maintain an organized inventory of materials. <input type="checkbox"/> Eliminate or reduce the number and amount of hazardous materials and waste by substituting nonhazardous or less hazardous materials. <input type="checkbox"/> Label and track the recycling of waste material (e.g., used oil, spent solvents, batteries). <input type="checkbox"/> Store batteries and other significant materials inside. <input type="checkbox"/> Dispose of greasy rags, oil filters, air filters, batteries, spent coolant, and degreasers in compliance with RCRA regulations.

INDUSTRIAL STORMWATER FACT SHEET SERIES

Sector 5: Vehicle Maintenance Areas, Equipment Cleaning Areas, or Deicing Areas Located at Air Transportation Facilities

Table 2. BMPs for Potential Pollutant Sources at Air Transportation Facilities (continued)

Pollutant Source	BMPs
Aircraft, ground vehicle, and equipment maintenance areas (including aircraft service areas) (continued)	<p>Minimizing Exposure</p> <ul style="list-style-type: none"> <input type="checkbox"/> Perform all cleaning operations indoors or under covering when possible. Conduct the cleaning operations in an area with a concrete floor with no floor drainage other than to sanitary sewers or treatment facilities. <input type="checkbox"/> If operations are uncovered, perform them on a concrete pad that is impervious and contained. <input type="checkbox"/> Park vehicles and equipment indoors or under a roof whenever possible and maintain proper control of oil leaks/spills. <input type="checkbox"/> Check vehicles closely for leaks and use pans to collect fluid when leaks occur. <p>Management of Runoff</p> <ul style="list-style-type: none"> <input type="checkbox"/> Use berms, curbs, grassed swales, or other diversion measures to ensure that stormwater runoff from other parts of the facility does not flow over the maintenance area. <input type="checkbox"/> Collect the stormwater runoff from the cleaning area and provide treatment or recycling. <input type="checkbox"/> Discharge vehicle wash or rinse water to the sanitary sewer (if allowed by sewer authority), wastewater treatment, a land application site, or recycle on-site. DO NOT discharge washwater to a storm drain or to surface water. <p>Inspections and Training</p> <ul style="list-style-type: none"> <input type="checkbox"/> Inspect the maintenance area regularly to ensure BMPs are implemented. <input type="checkbox"/> Train employees on waste control and disposal procedures. <input type="checkbox"/> Inspect the maintenance area regularly for proper implementation of control measures. <input type="checkbox"/> Train employees on proper waste control and disposal procedures.
Aircraft, ground vehicle, and equipment cleaning areas	<ul style="list-style-type: none"> <input type="checkbox"/> Perform all cleaning operations indoors. <input type="checkbox"/> Confine activities to designated areas outside drainage pathways and away from surface waters. <input type="checkbox"/> If washing outdoors, cover the cleaning operation and ensure that all washwaters drain to the intended collection system. <input type="checkbox"/> Use phosphate-free biodegradable detergents. <input type="checkbox"/> Contain and recycle washwaters. <input type="checkbox"/> Collect stormwater runoff from the cleaning area and provide treatment or recycling. <input type="checkbox"/> Inspect cleaning area regularly to ensure BMPs are implemented and maintained. <input type="checkbox"/> Train employees on proper washing procedures.
Aircraft, ground vehicle, and equipment storage areas	<ul style="list-style-type: none"> <input type="checkbox"/> Store aircraft, ground vehicles and equipment indoors. <input type="checkbox"/> Cover the storage area with a roof. <input type="checkbox"/> Store aircraft, ground vehicles, and equipment awaiting maintenance in designated areas only. <input type="checkbox"/> Park leaking deicing trucks in contained areas. <input type="checkbox"/> Install perimeter drains, berms, and dikes around storage areas to limit run-on. <input type="checkbox"/> Use absorbents for dry cleanup for spills and leaks. <input type="checkbox"/> Use drip pans under all vehicles and equipment for the collection of fluid leaks. <input type="checkbox"/> Clean pavement surface to remove oil and grease without using large amounts of water.

INDUSTRIAL STORMWATER FACT SHEET SERIES

Sector 5: Vehicle Maintenance Areas, Equipment Cleaning Areas, or Deicing Areas Located at Air Transportation Facilities

Table 2. BMPs for Potential Pollutant Sources at Air Transportation Facilities (continued)

Pollutant Source	BMPs
Aircraft, ground vehicle, and equipment storage areas (continued)	<ul style="list-style-type: none"> <input type="checkbox"/> Regularly sweep area to minimize debris on the ground. <input type="checkbox"/> Provide dust control if necessary. When controlling dust, sweep and/or apply water or materials that will not impact surface or ground water. <input type="checkbox"/> Inspect the storage yard for filling drip pans regularly to ensure BMPs are implemented. <input type="checkbox"/> Train employees on procedures for storage and inspection items.
Material storage areas	<ul style="list-style-type: none"> <input type="checkbox"/> Store materials indoors. <input type="checkbox"/> Maintain good integrity of all storage containers (e.g., used oils, hydraulic fluids, spent solvents, waste aircraft fuel). <input type="checkbox"/> Create a centralized storage area for waste materials. <input type="checkbox"/> Cover and/or enclose chemical storage areas (including temporary cover such as a tarp that prevents contact with precipitation). <input type="checkbox"/> Provide secondary containment around chemical storage areas. <input type="checkbox"/> If containment structures have drains, ensure that the drains have valves, and that valves are maintained in the closed position. Institute protocols for checking/testing stormwater in containment areas prior to discharge. <input type="checkbox"/> Locate storage areas away from high traffic areas and surface waters. <input type="checkbox"/> Inspect storage tanks and piping systems (pipes, pumps, flanges, couplings, hoses, and valves) for failures or leaks and perform preventive maintenance. <input type="checkbox"/> Plainly label all containers. <input type="checkbox"/> Maintain an inventory of fluids to identify leakage. <input type="checkbox"/> Provide fluid level indicators. <input type="checkbox"/> Properly dispose of chemicals that are no longer in use. <input type="checkbox"/> Store and handle reactive, ignitable, or flammable liquids in compliance with applicable local fire codes, local zoning codes, and the National Electric Code. <input type="checkbox"/> Provide drip pads/pans where chemicals are transferred from one container to another to allow for recycling of spills and leaks. <input type="checkbox"/> Develop and implement spill plans or spill prevention, containment, and countermeasure (SPCC) plans, if required for your facility. <input type="checkbox"/> Train employees in spill prevention and control and proper materials management.
Airport fuel system and fueling areas	<ul style="list-style-type: none"> <input type="checkbox"/> Conduct fueling operations (including the transfer of fuel to tank trucks) on an impervious or contained pad and under a roof or canopy where possible. Covering should extend beyond spill containment pad to prevent rain from entering. <input type="checkbox"/> When fueling in uncovered area, use concrete pad (asphalt is not chemically resistant to the fuels being handled). <input type="checkbox"/> Develop and implement a system to report any spill exceeding 5 feet in any direction or which has entered the storm drainage system. <input type="checkbox"/> Use drip pans and absorptive materials beneath aircraft during fueling operations where leaks or spills of fuel can occur and where making and breaking hose connections. <input type="checkbox"/> Use fueling hoses with check valves to prevent hose drainage after filling. <input type="checkbox"/> Insure that storm water valves, plugs and similar appurtenances are closed during fuel transfer operations.

INDUSTRIAL STORMWATER FACT SHEET SERIES

Sector 5: Vehicle Maintenance Areas, Equipment Cleaning Areas, or Deicing Areas Located at Air Transportation Facilities

Table 2. BMPs for Potential Pollutant Sources at Air Transportation Facilities (continued)

Pollutant Source	BMPs
Airport fuel system and fueling areas (continued)	<ul style="list-style-type: none"> <input type="checkbox"/> Provide spill kits on all fuel trucks, at fueling stations, in each hangar and at strategic locations. Each kit should have at a minimum, loose absorbent, pails, broom and shovel. Store used materials in individual sealed container and labeled to ensure proper handling and disposal as a hazardous material. <input type="checkbox"/> Keep spill cleanup materials readily available. <input type="checkbox"/> Clean up spills and leaks immediately. <input type="checkbox"/> Use dry cleanup methods for fuel areas rather than hosing down the fuel area. Sweep up absorbents as soon as spilled substances have been absorbed. <input type="checkbox"/> Use spill and overflow protection devices. <input type="checkbox"/> Minimize run-on of stormwater into the fueling area by grading the area such that stormwater only runs off. <input type="checkbox"/> Collect stormwater runoff and provide treatment or recycling. <input type="checkbox"/> Provide curbing or posts around fuel pumps to prevent collisions from vehicles. <input type="checkbox"/> Regularly inspect and perform preventive maintenance on fuel storage tanks to detect potential leaks before they occur. <input type="checkbox"/> Inspect the fueling area for leaks and spills. <input type="checkbox"/> Do not allow "topping off" of the fuel in the receiving equipment. <input type="checkbox"/> Train personnel on vehicle fueling BMPs.
Storing liquid fuels	<ul style="list-style-type: none"> <input type="checkbox"/> If area is uncovered, connect sump outlet to sanitary sewer (if allowed by the sewer authority) or an oil/water separator, catch basin filter, etc. If connecting to a sanitary sewer check with the system operator to ensure that the discharge is acceptable. If implementing separator or filter technologies ensure that regular inspections and maintenance procedures are in place. <input type="checkbox"/> Develop and implement spill plans. <input type="checkbox"/> Train employees in spill prevention and control. <p>Above ground tanks</p> <ul style="list-style-type: none"> <input type="checkbox"/> Provide secondary containment, such as dikes, with a height sufficient to contain a spill (the greater of 10 percent of the total enclosed tank volume or 110 percent of the volume contained in the largest tank). <input type="checkbox"/> If containment structures have drains, ensure that the drains have valves, and that valves are maintained in the closed position. Institute protocols for checking/testing stormwater in containment areas prior to discharge. <input type="checkbox"/> Use double-walled tanks with overflow protection. <input type="checkbox"/> Keep liquid transfer nozzles/hoses in secondary containment area. <p>Portable containers/drums</p> <ul style="list-style-type: none"> <input type="checkbox"/> Store drums indoors when possible. <input type="checkbox"/> Store drums, including empty or used drums, in secondary containment with a roof or cover (including temporary cover such as a tarp that prevents contact with precipitation). <input type="checkbox"/> Provide secondary containment, such as dikes or portable containers, with a height sufficient to contain a spill (the greater of 10 percent of the total enclosed tank volume or 110 percent of the volume contained in the largest tank). <input type="checkbox"/> Clearly label drum with its contents.
Deicing chemical loading areas	<ul style="list-style-type: none"> <input type="checkbox"/> Store bulk aircraft deicing fluids in contained areas. <input type="checkbox"/> Load deicing trucks in contained areas.

What if activities and materials at my facility are not exposed to precipitation?

The industrial stormwater program requires permit coverage for a number of specified types of industrial activities. However, when a facility is able to prevent the exposure of ALL relevant activities and materials to precipitation, it may be eligible to claim no exposure and qualify for a waiver from permit coverage.

If you are regulated under the industrial permitting program, you must either obtain permit coverage or submit a no exposure certification form, if available. Check with your permitting authority for additional information as not every permitting authority program provides no exposure exemptions.

Where do I get more information?

For additional information on the industrial stormwater program see www.epa.gov/npdes/stormwater/msgp.

A list of names and telephone numbers for each EPA Region or state NPDES permitting authority can be found at www.epa.gov/npdes/stormwatercontacts.

References

Information contained in this Fact Sheet was compiled from EPA's past and current Multi-Sector General Permits and from the following sources:

- ◆ City of Phoenix, Street Transportation Department. 2004. Best Management Practices for Section 5 - Vehicle Maintenance Equipment Cleaning, or Deicing at Air Transportation Facilities. <http://phoenix.gov/STREETS/vehmnt2.pdf>
- ◆ Orange County, California, Watershed & Coastal Resources Division. "Airplane Maintenance and Repair." www.ocwatersheds.com/StormWater/documents_bmp_existing_development.asp
- ◆ Pierce County Washington Public Works and Utilities. 2002. "Stormwater Pollution Prevention Manual: A Guide to Best Management Practices for Industries, Businesses, and Homeowners." www.co.pierce.wa.us/pc/services/home/environ/water/wq/bmpmanual.htm
- ◆ Switzenbaum, et. al., 1999. Workshop: Best Management Practices for Airport Deicing Stormwater: Publication 173. www.umass.edu/tei/wrrc/WRRC2004/pdf/Switz173.pdf
- ◆ U.S. EPA. 1992. Stormwater Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices. EPA 832-R-92-006 www.epa.gov/npdes/stormwater
- ◆ U.S. EPA, Office of Science and Technology. 1999. Preliminary Data Summary of Urban Stormwater Best Management Practices. EPA-821-R-99-012 www.epa.gov/OST/stormwater/
- ◆ U.S. EPA, Office of Water. 2002. Source Water Protections Practices Bulletin: Managing Aircraft and Airfield Deicing Operations to Prevent Contamination of Drinking Water. EPA-816-F-02-018. www.epa.gov/safewater/sourcewater/pubs/fs_swpp_deicingair.pdf
- ◆ U.S. EPA, Office of Wastewater Management. *NPDES Stormwater Multi-Sector General Permit for Industrial Activities (MSGP)*. www.epa.gov/npdes/stormwater/msgp

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

29

30

31

32

33

34

35

36

37

38

39

40

41

42

43

44

STATE OF ALASKA

DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

CENTRAL REGION - DIVISION OF MAINTENANCE & OPERATIONS

SEAN PARNELL, GOVERNOR

*P.O. BOX 65
KING SALMON, ALASKA 99613
PHONE (907) 246-3325
FAX (907) 246-3023*

February 8, 2011

To: ALCON

From: Jay W. Knight, King Salmon Airport Manager

Re: Acting Airport Manager

To Whom It May Concern,

During my absences from my position as Airport Manager, Kyler Hylton, Glenn Anderson, Amos Anderson or John Donkersloot may serve as acting Airport Manager in my stead. During these times all the above personnel will be responsible for daily inspections, regular, incidental and emergency operations for King Salmon and the other ten airports including, but not limited to North & South Naknek, Levelock, Ugashik, Pilot Point, Perryville, Port Heiden, Chignik Bay, Lagoon and Lake, that are under our charge and they have full authority to make any and all decisions required to do so.

Sincerely,

Jay W. Knight
Airport Manager

Appendix J – Staff Title and Responsibilities

Title	Staff Name
DISTRICT SUPERINTENDENT	Troy Larue
AIRPORT MANAGER	Jay Knight
AIRPORT MANAGER ALTERNATE	Kyler Hylton, Glenn Anderson, Amos Anderson or John Donkersloot
CENTRAL REGION M&O ENVIRONMENTAL SPECIALIST	Jennifer Hillman

Appendix K – SPCC Plan

Spill Prevention Control and Countermeasure Plan

Alaska Department of Transportation and Public Facilities
Anchorage, Alaska

SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN

King Salmon Maintenance Station

King Salmon, Alaska

January 2011

TABLE OF CONTENTS

	Page
Introduction	1
Part 1: Plan Administration	
1.1 Management Approval and Designated Person	3
1.2 Professional Engineer Certification	3
1.3 Location of SPCC Plan	4
1.4 Plan Review	4
1.5 Cross-Reference with SPCC Provisions	5
Part 2: General Facility Information	
2.1 Facility Description	9
2.2 Evaluation of Discharge Potential	11
Part 3: Discharge Prevention – General SPCC Provisions	
3.1 Compliance with Applicable Requirements	12
3.2 Facility Layout Diagram	12
3.3 Spill Reporting	12
3.4 Potential Discharge Volumes and Direction of Flow	12
3.5 Containment and Diversionary Structures	13
3.6 Practicability of Secondary Containment	14
3.7 Inspections, Tests, and Records	14
3.8 Personnel, Training, and Discharge Prevention Procedures	16
3.9 Security	17
Part 4: Discharge Prevention – SPCC Provisions for Onshore Facilities (Excluding Production Facilities)	
4.1 Facility Drainage	18
4.2 Bulk Storage Containers	18
4.3 Transfer Operations, Pumping, and In-Plant Processes	21
Part 5: Discharge Response	
5.1 Response to a Minor Discharge	22
5.2 Response to a Major Discharge	23
5.3 Waste Disposal	24
5.4 Discharge Notification	24

5.5 Cleanup Contractors and Equipment Suppliers	25
---	----

List of Tables

Table 1-1: Plan Review Log	6
Table 1-2: SPCC Cross-Reference	7
Table 2-1: Oil Containers	10
Table 3-1: Potential Discharge Volume and Direction of Flow	13
Table 3-2: Inspection and Testing Program	15
Table 4-1: List of Oil Containers	18
Table 4-2: Scope and Frequency of Bulk Storage Containers Inspections and Tests	20

Appendices

- A: Site Plan and Facility Diagram
- B: Substantial Harm Determination
- C: Facility Inspection Checklists
- D: Record of Containment Dike Drainage
- E: Record of Discharge Prevention Briefings and Training
- F: Calculation of Secondary Containment Capacity
- G: Records of Tank Integrity and Pressure Tests
- H: Emergency Contacts
- I: Discharge Notification Form
- J: Discharge Response Equipment Inventory
- K: Agency Notification Standard Report

LIST OF ACRONYMS AND ABBREVIATIONS

AST	Aboveground Storage Tank
EPA	U.S. Environmental Protection Agency
ADEC	Alaska Department of Environmental Conservation
ADOT&PF	Alaska Department of Transportation and Public Facilities
M&O	Maintenance and Operations
NPDES	National Pollutant Discharge Elimination System
PE	Professional Engineer
SPCC	Spill Prevention, Control, and Countermeasure
STI	Steel Tank Institute
SWPPP	Stormwater Pollution Prevention Plan
UST	Underground Storage Tank

INTRODUCTION

Purpose

The purpose of this Spill Prevention, Control, and Countermeasure (SPCC) Plan is to describe measures implemented by Alaska Department of Transportation and Public Facilities (ADOT&PF) to prevent oil discharges from occurring, and to prepare ADOT&PF to respond in a safe, effective, and timely manner to mitigate the impacts of a discharge at the King Salmon Airport and Maintenance Station.

This Plan has been prepared to meet the requirements of Title 40, *Code of Federal Regulations*, Part 112 (40 CFR part 112), and supersedes the plan developed in June 1998 to meet provisions in effect since 1974.

In addition to fulfilling requirements of 40 CFR part 112, this SPCC Plan is used as a reference for oil storage information and testing records, as a tool to communicate practices on preventing and responding to discharges with employees, as a guide to facility inspections, and as a resource during emergency response. It is the policy of ADOT&PF to prevent the discharge of oil and hazardous substances and to provide for prompt and coordinated response to contain and cleanup spills, should they occur.

ADOT&PF has determined that this facility does not pose a risk of substantial harm under 40 CFR part 112, as recorded in the "Substantial Harm Determination" included in Appendix B of this Plan.

This Plan has been developed for ADOT&PF above ground storage tanks (ASTs) at the King Salmon Maintenance Facility and provides guidance on activities that ADOT&PF must perform to comply with the SPCC rule:

- Complete monthly and annual site inspections as outlined in the Inspection, Tests, and Records section of this Plan (Section 3.7) using the inspection checklists included in Appendix C.
- Perform preventive maintenance of equipment, secondary containment systems, and discharge prevention systems described in this Plan as needed to keep them in proper operating conditions.
- Conduct annual employee training as outlined in the Personnel, Training, and Spill Prevention Procedures section of this Plan (Section 3.8) and document them on the log included in Appendix E.
- If either of the following occurs, submit the SPCC Plan to the EPA Region 10 Regional Administrator (RA) and the Alaska Department of Environmental Conservation (ADEC), along with other information as detailed in Section 5.4 of this Plan:

- The facility discharges more than 1,000 gallons of oil into or upon the navigable waters of the U.S. or adjoining shorelines in a single spill event; or
- The facility discharges oil in quantity greater than 42 gallons in each of two spill events within any 12-month period.

- Review the SPCC Plan at least once every five (5) years and amend it to include more effective prevention and control technology, if such technology will significantly reduce the likelihood of a spill event and has been proven effective in the field at the time of the review. Plan amendments, other than administrative changes discussed above, must be recertified by a Professional Engineer on the certification page in Section 1.2 of this Plan.

- Amend the SPCC Plan within six (6) months whenever there is a change in facility design, construction, operation, or maintenance that materially affects the facility's spill potential. The revised Plan must be recertified by a Professional Engineer (PE).

- Review the Plan on an annual basis. Update the Plan to reflect any "administrative changes" that are applicable, such as personnel changes or revisions to contact information, such as phone numbers. Administrative changes must be documented in the Plan review log of Section 1.4 of this Plan, but do not have to be certified by a PE.

Part 1: Plan Administration

1.1 Management Approval and Designated Person (40 CFR 112.7)

ADOT &PF is committed to preventing discharges of oil to navigable waters and the environment, and to maintaining the highest standards for spill prevention control and countermeasures through the implementation and regular review and amendment to the Plan. This SPCC Plan has the full approval ADOT&PF. ADOT&PF has committed the necessary resources to implement the measures described in this Plan.


The Facility Operator is the Designated Person Accountable for Oil Spill Prevention at the facility and has the authority to commit the necessary resources to implement this Plan.


Authorized Facility Representative (facility response coordinator)	Jay Knight
Signature: 	King Salmon Airport Manager
Title:	
Date: 1-27-11	

1.2 Professional Engineer Certification (40 CFR 112.3(d))

The undersigned Registered Professional Engineer is familiar with the requirements of Part 112 of Title 40 of the *Code of Federal Regulations* (40 CFR part 112) and has visited and examined the facility, or has supervised examination of the facility by appropriately qualified personnel. The undersigned Registered Professional Engineer attests that this Spill Prevention, Control, and Countermeasure Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards and the requirements of 40 CFR part 112; that procedures for required inspections and testing have been established; and that this Plan is adequate for the facility. [40 CFR 112.3(d)]

This certification in no way relieves the owner or operator of the facility of his/her duty to prepare and fully implement this SPCC Plan in accordance with the requirements of 40 CFR part 112. This Plan is valid only to the extent that the facility owner or operator maintains, tests, and inspects equipment, containment, and other devices as prescribed in this Plan.

Signature: 	Professional Engineer Registration Number:
Name: Jennifer Reed	Title: Chief Engineer
Company: ADOT	Date: 1/27/11



1.3 Location of SPCC Plan (40 CFR 112.3(e))

In accordance with 40 CFR 112.3(e), a complete copy of this SPCC Plan is maintained at the King Salmon Maintenance facility in the office building as part of the Storm Water Pollution Prevention Plan (SWPPP), located at:

Mile Post 1 of the Alaska Peninsula Highway/ P.O. Box 65
King Salmon, Alaska, 99613

The front office is attended whenever the facility is operating.

1.4 Plan Review (40 CFR 112.3 and 112.5)

1.4.1 Changes in Facility Configuration

In accordance with 40 CFR 112.5(a), ADOT&PF periodically reviews and evaluates this SPCC Plan for any change in the facility design, construction, operation, or maintenance that materially affects the facility's potential for an oil discharge, including, but not limited to:

- commissioning of containers;
- reconstruction, replacement, or installation of piping systems;
- construction or demolition that might alter secondary containment structures; or
- changes of product or service, revisions to standard operation, modification of testing/inspection procedures, and use of new or modified industry standards or maintenance procedures.

Amendments to the Plan made to address changes of this nature are referred to as technical amendments, and must be certified by a PE. Non-technical amendments can be done (and must be documented in this section) by the facility owner and/or operator. Non-technical amendments include the following:

- change in the name or contact information (i.e., telephone numbers) of individuals responsible for the implementation of this Plan; or
- change in the name or contact information of spill response or cleanup contractors.

ADOT&PF must make the needed revisions to the SPCC Plan as soon as possible, but no later than six months after the change occurs. The Plan must be implemented as soon as possible following any technical amendment, but *no later than six months* from the date of the amendment. The Facility Manager is responsible for initiating revisions with Maintenance and Operations (M&O) Environmental Analyst who will oversee amendments to the SPCC Plan.

1.4.2 Scheduled Plan Reviews

In accordance with 40 CFR 112.5(b), DOT&PF reviews this SPCC Plan at least once every five years. Revisions to the Plan, if needed, are made within six months of the five-year review. A registered Professional Engineer certifies any technical amendment to the Plan, as described

above, in accordance with 40 CFR 112.3(d). The last SPCC review occurred in *June 1998*. This Plan is dated *January 2011*. The next plan review is therefore scheduled to take place on or prior to *January 2016*.

1.4.3 Record of Plan Reviews

Scheduled reviews and Plan amendments are recorded in the Plan Review Log (Table 1-1). This log must be completed even if no amendment is made to the Plan as a result of the review. Unless a technical or administrative change prompts an earlier review of the Plan, the next scheduled review of this Plan must occur by *January 2016*.

1.5 Cross-Reference with SPCC Provisions (40 CFR 112.7)

This SPCC Plan does not follow the exact order presented in 40 CFR part 112. Section headings identify, where appropriate, the relevant section(s) of the SPCC rule. Table 1-2 presents a cross-reference of Plan sections relative to applicable parts of 40 CFR part 112.

Table 1-1: Plan Review Log

By	Date	Activity	PE certification required?	Comments

* Previous PE certifications of this Plan are summarized below.

Date	Scope	PE Name	Licensing State and Registration No.
June 1998	Previous SPCC for the facility	Lorie M. Dilley, P.E., C.P.G.	Alaska CE 9256

Table 1-2: SPCC Cross-Reference

Provision	Plan Section	Page
112.3(d)	Professional Engineer Certification	3
112.3(e)	Location of SPCC Plan	4
112.5	Plan Review	4, 6 Table 1-1
112.7	Management Approval	3
112.7	Cross-Reference with SPCC Rule	Table 1-2, page 7
112.7(a)(3)	Part 2: General Facility Information Appendix A: Site Plan and Facility Diagram	9 Appendix A
112.7(a)(4)	5.4 Discharge Notification	24 Appendix I Appendix K
112.7(a)(5)	Part 5: Discharge Response	22
112.7(b)	3.4 Potential Discharge Volumes and Direction of Flow	13
112.7(c)	3.5 Containment and Diversionary Structures	13
112.7(d)	3.6 Practicability of Secondary Containment	14
112.7(e)	3.7 Inspections, Tests, and Records	14 Appendix B
112.7(f)	3.8 Personnel, Training and Discharge Prevention Procedures	16
112.7(g)	3.9 Security	17
112.8(b)	4.1 Facility Drainage	18
112.8(c)(1)	4.2.1 Construction	19
112.8(c)(2)	4.2.2 Secondary Containment	19
112.8(c)(4)	4.2.4 Corrosion Protection	19
112.8(c)(6)	4.2.6 Inspection Appendix B - Facility Inspection Checklists	19 Appendix C

ADOT&PF King Salmon Maintenance Station SPCC Plan, King Salmon, Alaska

Provision	Plan Section	Page
112.8(c)(8)	4.2.8 Overfill Prevention System	20
112.8(c)(10)	4.2.10 Visible Discharges	20
112.8(d)	4.3 Transfer Operations, Pumping and In-Plant Processes	21
112.20(e)	Certification of Substantial Harm Determination	Appendix B

* Only selected excerpts of relevant rule text are provided. For a complete list of SPCC requirements, refer to the full text of 40 CFR part 112.

Part 2: General Facility Information

Name:	Alaska Department of Transportation and Public Facilities, King Salmon Maintenance Station
Address:	P.O. Box 65 King Salmon, Alaska 99613 (907) 246-3325
Type:	Maintenance Facility
Date of Initial Operations:	December 1997
Owner/Operator:	Alaska Department of Transportation and Public Facilities P.O. Box 196900 4111 Aviation Drive Anchorage, Alaska 99519
Primary contact:	Jay Knight, Airport Manager Work: (907) 246-3325 Cell (24 hours): (907) 439-1129

2.1 Facility Description (40 CFR 112.7(a)(3))

2.1.1 Location and Activities

The King Salmon Maintenance Station includes the Maintenance and Operations (M&O) building/ARFF building, sand storage buildings, and vehicle and equipment storage buildings. A vicinity map and site map are presented in Figures 1 and 2. The station stores equipment and resources necessary for airport maintenance, airport fire response, and maintenance of state roads. The aboveground storage tanks (AST) are used to store and dispense fuel to facility vehicles and to heat the facility. Used oil and lubricant tanks and a hydraulic fluid reservoir are also located indoors, on pallets in 55 gallon drums and 110 gallon wall mounted lubricant dispenser with a pallet for secondary containment. Outside activities include equipment fueling, runway maintenance, and deicing and sanding activities.

2.1.2 Oil Storage

Oil storage at the facility consists of two ASTs: 4,000 gallon diesel fuel tank as well as a 3,000 gallon fuel tank for building heating, both located next to the ARFF/Maintenance a. Both tanks contain #1 diesel fuel.

The capacities of oil containers present at the site are listed below and locations are indicated on the facility diagram in Figure A-2. All containers with capacity of 55 gallons or more are included. The capacity of the oil/water separator is not included in the total storage capacity for the facility since it is used to treat storm water and as a means of secondary containment for areas of the facility with potential for an oil discharge.

Table 2-1: Oil Containers

ID	Storage capacity	Content	Description
Fixed Storage			
1	4,000 gallons	Diesel	Double walled aboveground horizontal tank elevated on built-in saddles
2	3,000 gallons	Diesel	Double walled aboveground horizontal tank elevated on built-in saddles
3	110	Lubricant dispenser	Single walled, wall mounted lubricant dispenser with pallet secondary containment.
4	55 gallons	Waste oil, oil, hydraulic fluid	Single walled 55 gallon drums stored indoors and on pallets

Total Oil Storage: 7,110 gallons + drums

Other containers: (1) 45-gallon oil/water separator

Note: The oil/water separator is used treat facility drainage (i.e., wastewater) prior to discharge of shop waste water into the adjacent vegetated ditch. Discharge from the facility includes storm water from vehicles, fire prevention fluids and waste water associated with vehicle maintenance . No external oil tanks are associated with the oil/water separator. This equipment is used to meet certain secondary containment requirements under 40 CFR part 112, as described later in this Plan. Thus, the capacity of the oil/water separator is not counted towards the facility total storage capacity.

2.2 Evaluation of Discharge Potential

2.2.1 Distance to Navigable Waters and Adjoining Shorelines and Flow Paths

The nearest navigable water body that would be impacted by a spill from this facility is the Naknek River, approximately 100 feet (straight line) from the end of the southeastern portion of the 12/30 runway and safety area. At this location of the airport stormwater leaves the airport via sheet flow (see watershed E on Figure 2 in Appendix A). There is no oil storage at this location but the potential for equipment leak is possible as well as stormwater discharges from deicing practices. At the south end of the 18/36 runway the Naknek River is 500 feet from the safety area. At this location of the airport stormwater leaves the airport via sheet flow (see watershed B on Figure 2 in Appendix A). There is no oil storage at this location but the potential for equipment leak is possible as well as stormwater discharges from deicing practices. The maintenance facility is part of watershed A, a release from the facility would flow south and west to the vegetated ditch adjacent to the maintenance facility. A spill at the northwestern end of the 12/30 runway could enter Eskimo Creek via sheet flow which drains into Naknek River approximately 0.2 miles away (see watershed F on Figure 2 in appendix A). There is no oil storage at this location but the potential for equipment leak is possible as well as stormwater discharges from deicing practices.

2.2.2 Discharge History

This facility has not had a documented spill since it opened in 1972. If this facility has a greater than 1,000 gallon release to the water, or two federally reportable spills in a 12 month period, then the SPCC Plan must be submitted to the EPA Regional Administrator and ADEC.

PART 3: Discharge Prevention - General SPCC Provisions

The following measures are implemented to prevent oil discharges during the handling, use, or transfer of oil products at the facility. Oil-handling employees have received training in the proper implementation of these measures.

3.1 Compliance with Applicable Requirements (40 CFR 112.7(a)(2))

This facility uses an oil/water separator as part of its drainage system to contain oil discharged. The separator provides environmental protection equivalent to the requirements under 112.8(b)(3) to use ponds, lagoons, or catchment basins to retain oil at the facility in the event of an uncontrolled discharge. As described in Section 3.5 of this Plan, the operational and emergency oil storage capacity of the oil/water separator is sufficient to handle the quantity of oil expected to be discharged from tank overfills or transfer operations.

3.2 Facility Layout Diagram (40 CFR 112.7(a)(3))

Figure A-1 in Appendix A shows the general location of the facility on a U.S. Geological Survey topographic map. Figure A-2 in Appendix A presents a layout of the facility and the location of storage tanks and drums. The diagram also shows the location of storm water drain inlets and the direction of surface water runoff. As required under 40 CFR 112.7(a)(3), the facility diagram indicates the location of ASTs.

3.3 Spill Reporting (40 CFR 112.7(a)(4))

The discharge notification form included in Appendix I will be completed upon immediate detection of a discharge and prior to reporting a spill to the proper notification contacts.

3.4 Potential Discharge Volumes and Direction of Flow (40 CFR 112.7(b))

Table 3-1 presents expected volume, discharge rate, general direction of flow in the event of equipment failure, and means of secondary containment for different parts of the facility where oil is stored, used, or handled.

Table 3-1: Potential Discharge Volumes and Direction of Flow

Potential Event	Maximum volume released (gallons)	Maximum discharge rate	Direction of Flow	Secondary Containment
Fuel Tank – Maintenance Facility				
Failure of aboveground tank (collapse or puncture below product level)	4,000	Gradual to instantaneous	South to drainage ditch	Double walled construction
Tank overfill	1 to 55	55 gal/min	South to drainage ditch	Double walled construction
Pipe failure	4,000	10 gal/min	South to drainage ditch	Double walled construction
Leaking pipe or valve packing	4,000	3 gal/min	South to drainage ditch	Double walled construction
Fuel Tank – Maintenance Building				
Failure of aboveground tank (collapse or puncture below product level)	3,000	Gradual to instantaneous	South to drainage ditch	Double walled construction
Tank overfill	1-55	55 gal/min	South to drainage ditch	Double walled construction
Pipe failure	3,000	32 gal/min	South to drainage ditch	Double walled construction
Leaking pipe or valve packing	3,000	3-8 gal/min	South to drainage ditch	Double walled construction
Hydraulic Fluid Dispenser – Maintenance Building				
Failure of Dispenser	110	Gradual to instantaneous	Stored indoors	Pallet and oil/water separator
Overfill	1-10	10 gal/min	Stored indoors	Pallet and oil/water separator
Maintenance Building				
Leak or failure of drum	1 to 55	Gradual to instantaneous	North and west to isolated low area	Stored indoors
Other Areas				

3.5 Containment and Diversionary Structures (40 CFR 112.7(c))

Methods of secondary containment at this facility include a combination of structures drainage systems (e.g., oil/water separator), and land-based spill response (e.g., drain covers, sorbents) to prevent oil from reaching navigable waters and adjoining shorelines:

For bulk storage containers (refer to Section 4.2.2 of this Plan):

- **Double-wall tank construction.**
- **Sorbent material.** Spill cleanup kits that include absorbent material and booms are stored in the maintenance building and the Red River Facility located on the airport and owned by the U.S. Air Force. The inventory is checked regularly to ensure that used material is replenished.
- **Oil/water separator.** The oil/water separator is designed to separate and retain oil at the facility. The oil/water separator has a static holding capacity of 45 gallons and a design flow rate of 25 gallons per minute. The maximum amount of oil potentially discharged within the shop is 110 gallons. Best Management Practices are used to minimize the amount of solids and oil that flow into the oil/water separator. Facility personnel are instructed to avoid and address small spills using sorbents to minimize runoff of oil into the oil/water separator. The oil/water separator is inspected monthly as part of the scheduled inspection to check the level of water within the separator and measure the depth of bottom sludges and floating oils. Floating oil is removed when it reaches a thickness of 2 inches.

3.6 Practicability of Secondary Containment (40 CFR 112.7(d))

ADOT&PF management has determined that secondary containment is practicable at this facility.

3.7 Inspections, Tests, and Records (40 CFR 112.7(e))

As required by the SPCC rule, ADOT&PF performs the inspections, tests, and evaluations listed in the following table. Table 3-2 summarizes the various types of inspections and tests performed at the facility. The inspections and tests are described later in this section, and in the respective sections that describe different parts of the facility (e.g., Section 4.2.6 for bulk storage containers).

Table 3-2: Inspection and Testing Program

Facility Component	Action	Frequency/Circumstances
Aboveground container	Test container integrity. Combine visual inspection with another testing technique (non-destructive shell testing). Inspect outside of container for signs of deterioration and discharges.	Following a regular schedule (monthly, annual, and during scheduled inspections) and whenever material repairs are made.
Container supports and foundation	Inspect container's supports and foundations.	Following a regular schedule (monthly, annual, and during scheduled inspections) and whenever material repairs are made.
Liquid level sensing devices (overflow)	Test for proper operation.	Monthly

3.7.1 Daily Inspection

A DOT&PF employee performs a complete walk-through of the facility each day. This daily visual inspection involves: (1) looking for tank/piping damage or leakage, stained or discolored soils; (2) observing shop drains, ditches, and low lying areas.

3.7.2 Monthly Inspection

The checklist provided in Appendix C is used for monthly inspections by ADOT&PF personnel. The monthly inspections cover the following key elements:

- Observing the exterior of aboveground storage tanks, pipes, and other equipment for signs of deterioration, leaks, corrosion, and thinning.
- Observing the exterior of portable containers for signs of deterioration or leaks.
- Observing tank foundations and supports for signs of instability or excessive settlement.
- Observing the tank fill and discharge pipes for signs of poor connection that could cause a discharge, and tank vent for obstructions and proper operation.
- Verifying the proper functioning of overflow prevention systems.
- Checking the inventory of spill response kits.
- Observing the effluent and measuring the quantity of accumulated oil within the oil/water separator.

All problems regarding tanks, piping, containment, or spill response kits must immediately be reported to the Airport Manager. Visible oil leaks from tank walls, piping, or other components must be repaired as soon as possible to prevent a larger spill or a discharge to navigable waters or adjoining shorelines. Pooled oil is removed immediately upon discovery.

Written monthly inspection records are signed by the Airport Manager and maintained with this SPCC Plan for a period of three years.

3.7.3 Annual Inspection

Facility personnel perform a more thorough inspection of facility equipment on an annual basis. This annual inspection complements the monthly inspection described above and is performed in July of each year using the checklist provided in Appendix C of this Plan.

The inspection is will preferably take place after a large storm event to observe drainage ditches and oil/water separator functioning.

Written annual inspection records are signed by the Airport Manager and maintained with this SPCC Plan for a period of three years.

3.7.4 Periodic Integrity Testing

In addition to the above monthly and annual inspections by facility personnel, all tanks are periodically evaluated by an outside certified tank inspector following the Steel Tank Institute (STI) *Standard for the Inspection of Aboveground Storage Tanks*, SP-001, 2005 version, as described in Section 4.2.6 of this Plan.

3.8 Personnel, Training, and Discharge Prevention Procedures (40 CFR 112.7(f))

The Airport Manager is the facility designee and is responsible for oil discharge prevention, control, and response preparedness activities at this facility.

ADOT&PF management has instructed facility personnel in the operation and maintenance of oil pollution prevention equipment, discharge procedure protocols, applicable pollution control laws, rules and regulations, general facility operations, and the content of this SPCC Plan. Any new facility personnel are provided with this same training.

Annual discharge prevention briefings are held by the Airport Manager for all facility personnel involved in oil operations. The briefings are aimed at ensuring continued understanding and adherence to the discharge prevention procedures presented in the SPCC Plan. The briefings also highlight and describe known discharge events or failures, malfunctioning components, and recently implemented precautionary measures and best practices. Facility operators and other personnel will have the opportunity during the briefings to share recommendations concerning health, safety, and environmental issues encountered during facility operations.

Future training exercises will be periodically held to prepare for possible discharge responses.

Records of the briefings and discharge prevention training are kept on the form shown in Appendix E and maintained with this SPCC Plan for a period of three years.

3.9 Security (40 CFR 112.7(g))

Security issues addressed in the SPCC regulations include vandalism, accidental damage from vehicles or foot traffic, unauthorized or inappropriate access, and safety precautions for equipment that is not in service. Accordingly, security measures should be implemented to control access, emphasize operational safety, and enhance spill prevention efforts. Specific features referenced in the regulations consist of fences, locks, and lighting. Security measures include:

- Posts and ballards
- Lighting
- Locks for dispensing devices during unmanned hours
- Emergency shut off devices
- Signs and labels

When tanks are in non-operating or standby status, valves that allow outward flow of fuel are to be securely closed in non-operating status.

PART 4: Discharge Prevention – SPCC Provisions for Onshore Facilities (Excluding Production Facilities)

4.1 Facility Drainage (40 CFR 112.8(b))

Any potential discharge from ASTs and discharges occurring during fueling/maintenance operations will be contained by the oil/water separator, drainage ditches or low lying area. The maintenance station is approximately 0.2 miles from surface waters which allows buffering capacity for spills. The facility includes an oil/water separator, which is used as containment for spill sources on paved and indoor areas. This separator provides environmental protection equivalent to ponds, lagoons, or catchments basins required under 40 CFR 112.8(b)(3) and (4), as allowed in 40 CFR 112.7(a)(2). Discharges outside the containment area, such as those occurring in the fuel dispensing area or while unloading heating oil, will flow by gravity into the adjacent vegetated ditch where oil can be retained until it can be pumped out.

4.2 Bulk Storage Containers (40 CFR 112.8(c))

Table 4-1 summarizes the construction, volume, and content of bulk storage containers at Bethel Maintenance facility.

Table 4-1: List of Oil Containers

Tank	Location	Type (Construction Standard)	Capacity (gallons)	Content	Discharge Prevention & Containment
#1	Maintenance Facility	UL listed Above Ground Fire Guard Secondary Containment Storage Tank	4,000	Diesel	Concrete dike. Liquid level gauge.
#2	Maintenance Facility	UL listed Above Ground Fire Guard Secondary Containment Storage Tank	3,000	Diesel	Concrete dike. Liquid level gauge.
#3	Maintenance Facility	Lubricant Dispenser	110	Vehicle Lubricants	Secondary pallet containment, stored indoors, oil/water separator in drains.
	Inside Maintenance Building	Steel drums	55	Motor oil and used oil	Spill pallets with built-in containment capacity. Building also serves as containment since floor drains flow into oil/water separator

4.2.1 Construction (40 CFR 112.8 (c)(1))

All oil tanks used at this facility are constructed of steel, in accordance with industry specifications as described above. The design and construction of all bulk storage containers are compatible with the characteristics of the oil product they contain, and with temperature and pressure conditions.

Piping between fixed aboveground bulk storage tanks is made of steel and placed aboveground on appropriate supports designed to minimize erosion and stress.

4.2.2 Secondary Containment (40 CFR 112.8(c)(2))

All ASTs are double walled tanks with overfill protection and liquid level gauges. In the event of a spill oil will flow to low vegetated areas isolated from surface waters until it is able to be retrieved.

The 55-gallon drums are stored indoors when possible and the drain system and oil water separators in the SEF and warm storage buildings serve as a source of secondary containment.

4.2.3 Corrosion Protection (40 CFR 112.8(c)(4))

All tanks are coated with White Chemline Polyurethane to prevent corrosion. Tanks are monitored and inspected regularly for leaks and wear. All piping is above ground and is made of black iron.

4.2.4 Inspections and Tests (40 CFR 112.8(c)(6))

Visual inspections of ASTs by facility personnel are performed according to the procedure described in this SPCC Plan. Leaks from tank seams, gaskets, rivets, and bolts are promptly corrected. Records of inspections and tests are signed by the inspector and kept at the facility for at least three years.

Annual inspections by certified and contracted individuals are conducted and records of certified tank inspections are kept at the facility for at least three years. Shell test comparison records are retained for the life of the tanks.

Table 4-2 summarizes inspections and tests performed on bulk storage containers ("EE" indicates that an environmentally equivalent measure is implemented in place of the inspection/test, as discussed in Section 3.1 of this Plan).

Table 4-2: Scope and Frequency of Bulk Storage Containers Inspections and Tests

Inspection/Test	Tank ID							Drums
	#1	#2	#3	#4	#5	#6	#7	
Visual inspection by facility personnel (as per checklist of Appendix C)	M A	M A	M A					M A
External inspection by certified inspector (as per STI Standard SP-001)	20 yr	20 yr	20 yr					EE
Internal inspection by certified inspector (as per STI Standard SP-001)	20 yr*	20 yr*	20 yr*					EE
Tank tightness test meeting requirements of 40 CFR 280								

Legend: M: Monthly
A: Annual
EE: Inspection not required given use of environmentally equivalent measure (refer to Section 3.1 of this Plan).
* Or earlier, as recommended by the certified inspector based on findings from an external inspection.
† Internal inspection may be recommended by the certified inspector based on findings from the external inspection.

The frequency above is based on implementation of a scheduled inspection/testing program. To initiate the program, ASTs will be inspected by the following dates:

- All tanks will be visually inspected monthly beginning April 2011.
- All tanks must be undergo an external inspection on or before April 2012

4.2.6 Overfill Prevention Systems (40 CFR 112.8(c)(8))

All tanks are equipped with a liquid level gauge. General secondary containment is provided in the event of overfills, as described in this Plan.

Facility personnel are present, when possible, throughout the filling operations to monitor the product level in the tanks, when possible.

4.2.7 Visible Discharges (40 CFR 112.8(c)(10))

Visible discharges from any container or appurtenance – including seams, gaskets, piping, pumps, valves, rivets, and bolts – are quickly corrected upon discovery.

Oil is promptly removed and disposed of according to the waste disposal method described in Part 5 of this Plan.

4.3 Transfer Operations, Pumping, and In-Plant Processes (40 CFR 112.8(d))

Transfer operations at this facility include:

- The filling of oil to storage tanks.
- The filling of operations vehicles.

All piping at this facility is aboveground and cathodically protected against corrosion and is provided with a protective wrapping and coating. All pipes are visually inspected on a monthly basis. Inspection includes aboveground valves, piping, appurtenances, expansion joints, valve glands and bodies, catch pans, pipeline supports, locking of valves, and metal surfaces. Observations are noted on the monthly inspection checklist provided in this Plan. If corrosion damage is found, additional examination and corrective action must be taken as deemed appropriate considering the magnitude of the damage.

Lines that are not in service or are on standby for an extended period of time are capped or blank-flanged and marked as to their origin.

All pipe supports are designed to minimize abrasion and corrosion and to allow for expansion and contraction. Pipe supports are visually inspected during the monthly inspection of the facility.

Warning signs are posted at appropriate locations throughout the facility to prevent vehicles from damaging aboveground piping and appurtenances.

Part 5: Discharge Response

This section describes the response and cleanup procedures in the event of an oil discharge. The uncontrolled discharge of oil to groundwater, surface water, or soil is prohibited by state and federal laws. Immediate action must be taken to control, contain, and recover discharged product.

In general, the following steps are taken:

- Eliminate potential spark sources;
- If possible and safe to do so, identify and shut down source of the discharge to stop the flow;
- Contain the discharge with sorbents, berms, fences, trenches, sandbags, or other material;
- Contact the Airport Manager or his/her alternate;
- Contact regulatory authorities and the response organization; and
- Collect and dispose of recovered products according to regulation.

For the purpose of establishing appropriate response procedures, this SPCC Plan classifies discharges as either “minor” or “major,” depending on the volume and characteristics of the material released.

A list of Emergency Contacts is provided in Appendix H. The list is also posted at prominent locations throughout the facility. A list of discharge response material kept at the facility is included in Appendix J.

5.1 Response to a Minor Discharge

A “minor” discharge is defined as one that poses no significant harm (or threat) to human health and safety or to the environment. Minor discharges are generally those where:

- The quantity of product discharged is small (e.g., may involve less than 10 gallons of oil);
- Discharged material is easily stopped and controlled at the time of the discharge;
- Discharge is localized near the source;
- Discharged material is not likely to reach water;
- There is little risk to human health or safety; and
- There is little risk of fire or explosion.

Minor discharges can usually be cleaned up by ADOT&PF personnel. The following guidelines apply:

- Immediately notify the Airport Manager.
- Under the direction of the Airport Manager, contain the discharge with discharge response materials and equipment. Place discharge debris in properly labeled waste containers.
- The Airport Manager will complete the discharge notification form (Appendix I) and attach a copy to this SPCC Plan.
- If the discharge involves between 1 and 10 gallons of oil, the Airport Manager will notify the ADEC in writing within 10 days.
- If the discharge involves between 10 and 55 gallons of oil, the Airport Manager will notify the ADEC within 48 hours.
- If the discharge involves more than 55 gallons of oil, the Airport Manager will notify the ADEC immediately.

5.2 Response to a Major Discharge

A “major” discharge is defined as one that may not be safely controlled or cleaned up by facility personnel, such as when:

- The discharge is large enough to spread beyond the immediate discharge area;
- The discharged material enters water;
- The discharge requires special equipment or training to clean up;
- The discharged material poses a hazard to human health or safety; or
- There is a danger of fire or explosion.

In the event of a major discharge, the following guidelines apply:

- All workers must immediately evacuate the discharge site via the designated exit routes and move to the designated staging areas at a safe distance from the discharge. Exit routes are included on the facility diagram and posted in the maintenance building, in the office building, and on the outside wall of the outside shed that contains the spill response equipment.
- If the Airport Manager is not present at the facility, the senior on-site person notifies the Airport Manager of the discharge and has authority to initiate notification and response. Certain notifications are dependent on the circumstances and type of discharge.
- The Airport Manager (or senior on-site person) must call for medical assistance if workers are injured.
- The Airport Manager (or senior on-site person) must notify the Fire Department or Police Department.
- The Airport Manager (or senior on-site person) must call the spill response and cleanup contractors listed in the Emergency Contacts list in Appendix H.

- The Airport Manager (or senior on-site person) must immediately contact the ADEC.
- The Airport Manager (or senior on-site person) must record the call on the Discharge Notification form in Appendix I and attach a copy to this SPCC Plan.
- The Airport Manager (or senior on-site person) coordinates cleanup and obtains assistance from a cleanup contractor or other response organization as necessary.

If the Airport Manager is not available at the time of the discharge, then the next highest person in seniority assumes responsibility for coordinating response activities.

5.3 Waste Disposal

Wastes resulting from a minor discharge response will be containerized in impervious bags, drums, or buckets. The facility manager will characterize the waste for proper disposal and ensure that it is removed from the facility by a licensed waste hauler within two weeks.

Wastes resulting from a major discharge response will be removed and disposed of by a cleanup contractor, unless the event is manageable by DOT&PF staff.

5.4 Discharge Notification

Any size discharge (i.e., one that creates a sheen, emulsion, or sludge) that affects or threatens to affect navigable waters or adjoining shorelines must be reported immediately to the National Response Center (1-800-424-8802). The Center is staffed 24 hours a day.

A summary sheet is included in Appendix I to facilitate reporting. The person reporting the discharge must provide the following information:

- Name, location, organization, and telephone number
- Name and address of the party responsible for the incident
- Date and time of the incident
- Location of the incident
- Source and cause of the release or discharge
- Types of material(s) released or discharged
- Quantity of materials released or discharged
- Danger or threat posed by the release or discharge
- Number and types of injuries (if any)
- Media affected or threatened by the discharge (i.e., water, land, air)
- Weather conditions at the incident location
- Any other information that may help emergency personnel respond to the incident

Contact information for reporting a discharge to the appropriate authorities is listed in Appendix H and is also posted in prominent locations throughout the facility (e.g. in the maintenance building and the ARFF building).

In addition to the above reporting, 40 CFR 112.4 requires that information be submitted to the United States Environmental Protection Agency (EPA) Regional Administrator and the appropriate state agency in charge of oil pollution control activities (see contact information in Appendix H) whenever the facility discharges (as defined in 40 CFR 112.1(b)) *more than 1,000 gallons of oil in a single event*, or discharges (as defined in 40 CFR 112.1(b)) *more than 42 gallons of oil in each of two discharge incidents within a 12-month period*. The following information must be submitted to the EPA Regional Administrator and to MADEP within 60 days:

- Name of the facility;
- Name of the owner/operator;
- Location of the facility;
- Maximum storage or handling capacity and normal daily throughput;
- Corrective action and countermeasures taken, including a description of equipment repairs and replacements;
- Description of facility, including maps, flow diagrams, and topographical maps;
- Cause of the discharge(s) to navigable waters and adjoining shorelines, including a failure analysis of the system and subsystem in which the failure occurred;
- Additional preventive measures taken or contemplated to minimize possibility of recurrence; and
- Other pertinent information requested by the Regional Administrator.

A standard report for submitting the information to the EPA Regional Administrator and to ADEC is included in Appendix K of this Plan.

5.5 Cleanup Contractors and Equipment Suppliers

Contact information for specialized spill response and cleanup contractors are provided in Appendix H. These contractors have the necessary equipment to respond to a discharge of oil.

Spill kits are located inside the maintenance building. The inventory of response supplies and equipment is provided in Appendix J of this Plan. The inventory is verified on a monthly basis. Spill kits supplies may vary depending the needs of the facility.

Appendix A Site Plan and Facility Diagram

Figure A-1: Site Plan.

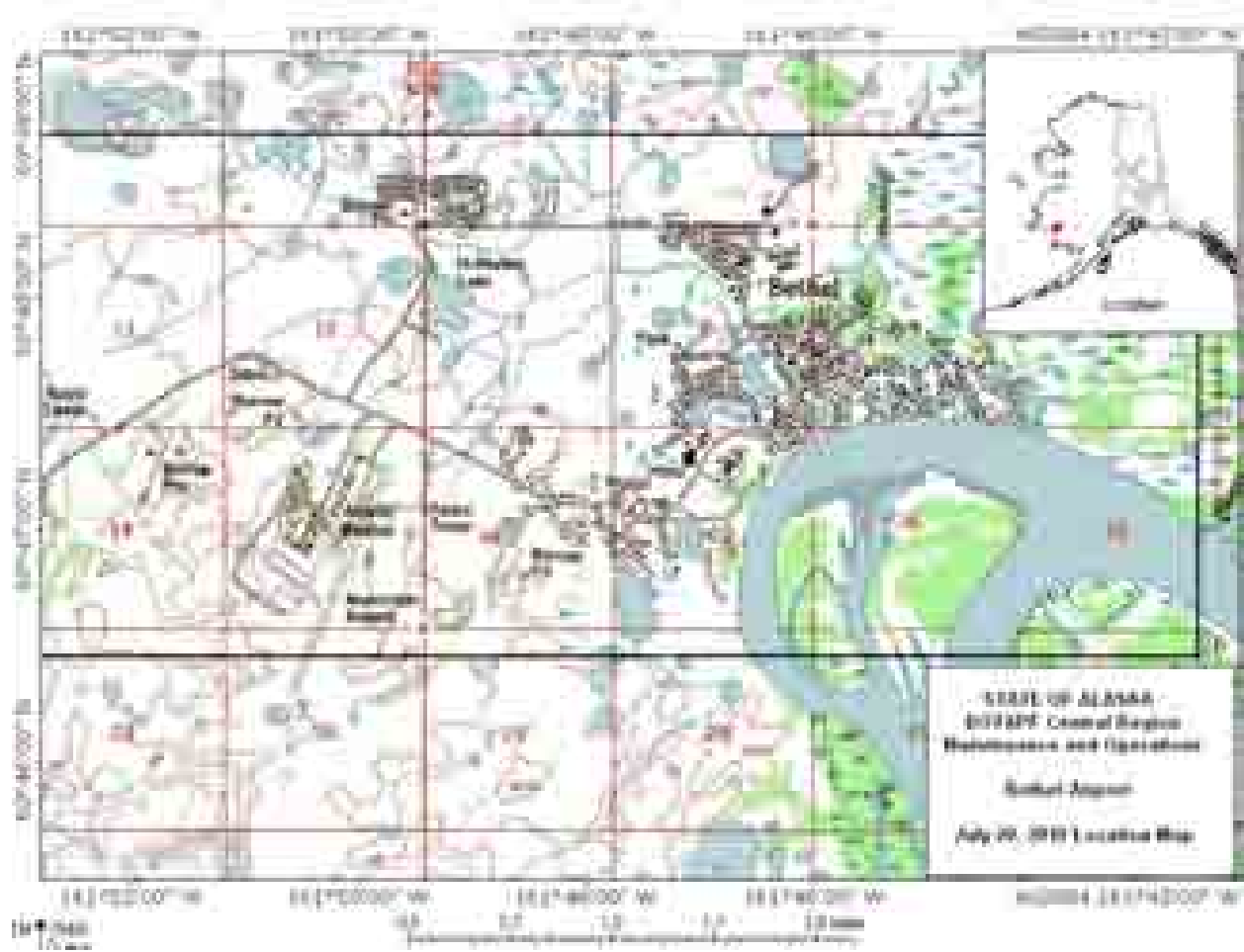
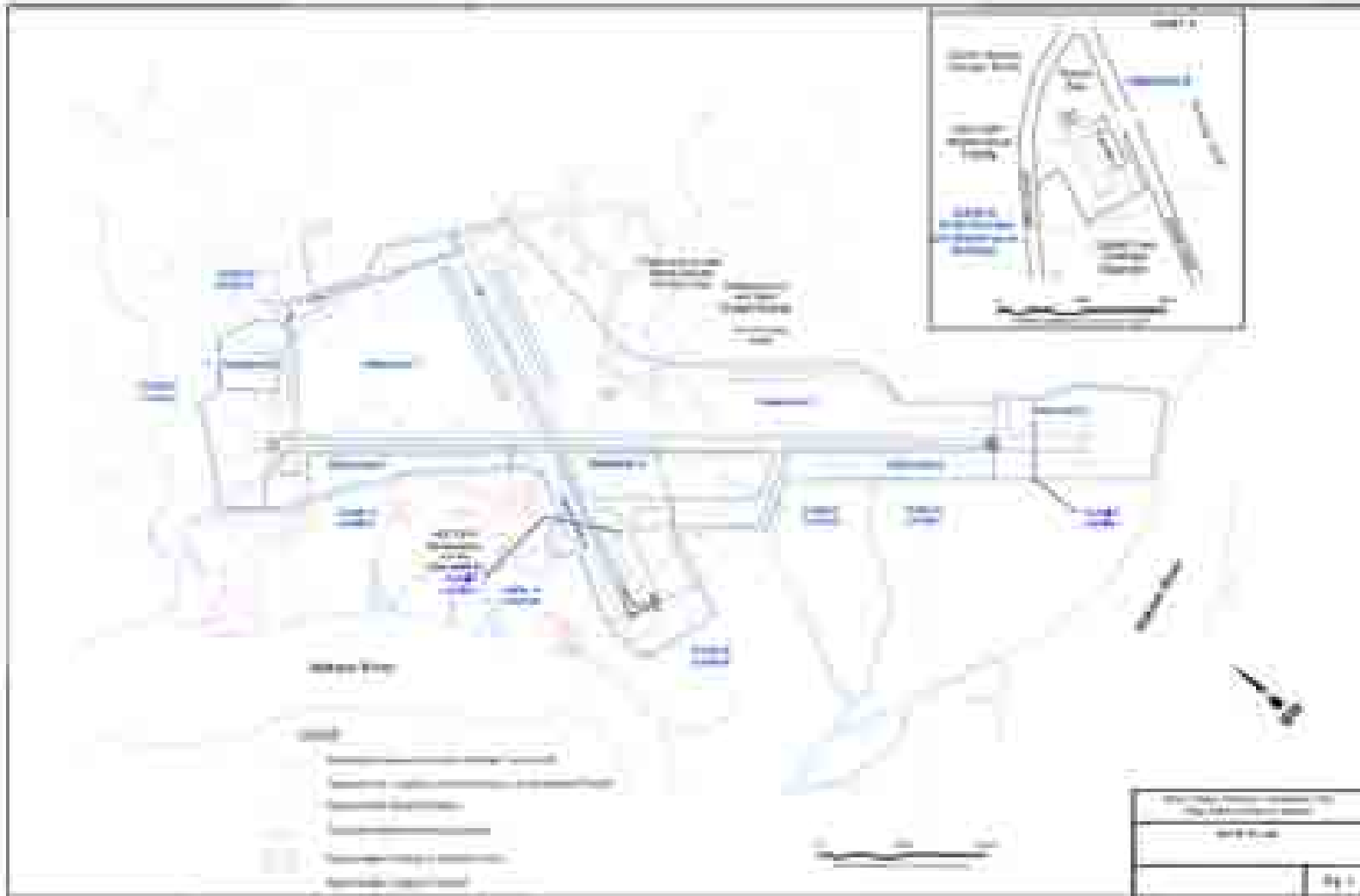


Figure A-2: Facility Diagram.



Appendix B Substantial Harm Determination

Facility Name: King Salmon Airport and Maintenance Station
Facility Address: P.O. Box 65
King Salmon, Alaska 99613

1. Does the facility transfer oil over water to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?
Yes No
2. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground storage tank area?
Yes No
3. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in 40 CFR part 112 Appendix C, Attachment C-III or a comparable formula) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments?
Yes No
4. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in 40 CFR part 112 Appendix C, Attachment C-III or a comparable formula) such that a discharge from the facility would shut down a public drinking water intake?
Yes No
5. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?
Yes No

Certification

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Signature  Title King Salmon Airport Manager
Jay Knight Name (type or print) Date 1-27-11

APPENDIX C

Facility Inspection Checklists

The following checklists are to be used for monthly and annual facility-conducted inspections. Completed checklists must be signed by the inspector and maintained at the facility, with this SPCC Plan, for at least three years.

Monthly Inspection Checklist

This inspection record must be completed *each month* except the month in which an annual inspection is performed. Provide further description and comments, if necessary, on a separate sheet of paper and attach to this sheet. *Any item that receives “yes” as an answer must be described and addressed immediately.

	Y*	N	Description & Comments
Storage tanks			
<i>Tank surfaces show signs of leakage</i>			
<i>Tanks are damaged, rusted or deteriorated</i>			
<i>Bolts, rivets, or seams are damaged</i>			
<i>Tank supports are deteriorated or buckled</i>			
<i>Tank foundations have eroded or settled</i>			
<i>Level gauges or alarms are inoperative</i>			
<i>Vents are obstructed</i>			
<i>Secondary containment is damaged or stained</i>			
<i>Water/product in interstice of double-walled tank</i>			
<i>Dike drainage valve is open or is not locked</i>			
Piping			
<i>Valve seals, gaskets, or other appurtenances are leaking</i>			
<i>Pipelines or supports are damaged or deteriorated</i>			
<i>Joints, valves and other appurtenances are leaking</i>			
<i>Buried piping is exposed</i>			
Oil/water separator			
<i>Oil/water separator > 2 inches of accumulated oil</i>			
<i>Oil/water separator effluent has a sheen</i>			
Security			
<i>Fencing, gates, or lighting is non-functional</i>			
<i>Pumps and valves are locked if not in use</i>			
Response Equipment			
<i>Response equipment inventory is complete</i>			

Date: _____

Signature: _____

Annual Facility Inspection Checklist

This inspection record must be completed *each year*. If any response requires further elaboration, provide comments in Description & Comments space provided. Further description and comments, if necessary, must be provided on a separate sheet of paper and attached to this sheet. *Any item that receives “yes” as an answer must be described and addressed immediately.

	Y*	N	Description & Comments
Storage tanks			
<i>Tank #1</i>			
<i>Tank surfaces show signs of leakage</i>			
<i>Tank is damaged, rusted or deteriorated</i>			
<i>Bolts, rivets or seams are damaged</i>			
<i>Tank supports are deteriorated or buckled</i>			
<i>Tank foundations have eroded or settled</i>			
<i>Level gauges or alarms are inoperative</i>			
<i>Vents are obstructed</i>			
<i>Tank #2</i>			
<i>Tank surfaces show signs of leakage</i>			
<i>Tank is damaged, rusted, or deteriorated</i>			
<i>Bolts, rivets, or seams are damaged</i>			
<i>Tank supports are deteriorated or buckled</i>			
<i>Tank foundations have eroded or settled</i>			
<i>Level gauges or alarms are inoperative</i>			
<i>Vents are obstructed</i>			
Piping			
<i>Valve seals or gaskets are leaking</i>			
<i>Pipelines or supports are damaged or deteriorated</i>			
<i>Joints, valves and other appurtenances are leaking</i>			
<i>Buried piping is exposed</i>			
<i>Out-of-service pipes are not capped</i>			
<i>Warning signs are missing or damaged</i>			
Oil/water separator			
<i>Oil/water separator > 2 inches of accumulated oil</i>			
<i>Oil/water separator effluent has a sheen</i>			
Security			
<i>Fencing, gates, or lighting is non-functional</i>			
<i>Pumps and valves are not locked (and not in use)</i>			
Response equipment			
<i>Response equipment inventory is incomplete</i>			

Annual reminders:

- Hold SPCC Briefing for all oil-handling personnel (and update briefing log in the Plan);
- Check contact information for key employees and response/cleanup contractors and update them in the Plan as needed;

Additional Remarks:

Date: _____

Signature: _____

APPENDIX G

Records of Tank Integrity and Pressure Tests

Attach copies of official records of tank integrity and pressure tests.

APPENDIX H Emergency Contacts

Designated person responsible for spill prevention: *Jay Knight, Airport Manager*
907-246-3325

EMERGENCY TELEPHONE NUMBERS:

Facility

Jay Knight, Airport Manager 907-246-3325 or
cell 907-439-1129

Local Emergency Response

Bristol Bay Fire Department and Police 911 or
907-246-4465

Bristol Bay Borough Police Department 911 or 907-246-
4222

Bristol Bay Area Health Corporation 907-246-3322

Response/Cleanup Contractors

Bristol Bay Contractors 907-246-3360

Notification

Alaska Department of Environmental Conservation 907-465-5250 or
800-478-9300 (24
hour number)

National Response Center 800-424-8802 (24
hour number)

United States Environmental Protection Agency, Region 10 206-553-1263 (24
hour emergency
number)

APPENDIX I Discharge Notification Form

Part A: Discharge Information		
General information when reporting a spill to outside authorities:		
Name:	King Salmon Airport	
Address:	P.O Box 65 King Salmon, AK, 99613	
Telephone:	907-246-3325	
Owner/Operator:	Alaska DOT&PF 4111 Aviation Ave Anchorage, Alaska 99519	
Primary Contact:	Jay Knight, Airport Manager Work: 907-246-3325 Cell (24 hrs): 907-439-1129	
Type of oil:	Discharge Date and Time:	
Quantity released:	Discovery Date and Time:	
Quantity released to a waterbody:	Discharge Duration:	
Location/Source:		
Actions taken to stop, remove, and mitigate impacts of the discharge:		
Affected media:		
G air	G storm water sewer/POTW	
G water	G dike/berm/oil-water separator	
G soil	G other: _____	
Notification person:	Telephone contact: Business: 24-hr:	
Nature of discharges, environmental/health effects, and damages:		
Injuries, fatalities or evacuation required?		
Part B: Notification Checklist		
	Date and time	Name of person receiving call
Discharge in any amount		
Jay Knight, Airport Manager and Response Coordinator 907-246-3325/ 907-439-1129		
Discharge in amount exceeding 10 gallons and <i>not affecting a waterbody or groundwater</i>		
Bristol Bay Fire Department 911 or 907-246-4465		

Alaska Department of Environmental Conservation 907-465-5250 or 800-478-9300 (24 hour number)		
Discharge in any amount and affecting (or threatening to affect) a waterbody		
Bristol Bay Fire Department 911 or 907-246-4465		
Alaska Department of Environmental Conservation 907-465-5250 or 800-478-9300 (24 hour number)		
National Response Center (800) 424-8802		

APPENDIX J

Discharge Response Equipment Inventory

The discharge response equipment inventory is verified during the monthly inspection and must be replenished as needed.

Maintenance Building

Maintenance Facility: Located in Utility room

- Suits
- Absorbents
- Squeegees
- Broom
- Gloves
- Kitty litter is available around the shop

Cold Storage – Red River Facility (on the airport)

- Straw wattles
- Absorbent pads

APPENDIX K Agency Notification Standard Report

Information contained in this report, and any supporting documentation, must be submitted to the EPA Region 1 Regional Administrator, and to MADEP, within 60 days of the qualifying discharge incident.

Facility:	<i>King Salmon Airport</i>
Owner/operator:	<i>Alaska DOT&PF 4111 Aviation Av Anchorage, Alaska 99519</i>
Name of person filing report:	
Location:	<i>PO Box 65 King Salmon, Alaska, 99613</i>
Maximum storage capacity:	<i>7,000 gallons</i>
Nature of qualifying incident(s):	
<p>Discharge to navigable waters or adjoining shorelines exceeding 1,000 gallons Second discharge exceeding 42 gallons within a 12-month period.</p>	

Description of facility (attach maps, flow diagrams, and topographical maps):

The King Salmon Airport is located just southeast of King Salmon, AK (Appendix A). The facility consists of one main 8,901-foot-long asphalt-surfaced runway (12/30) and a shorter 4,018-foot long asphalt-surfaced runway (18/36). There is also a 4,000-foot-long seaplane landing area designated NW/SE located on the Naknek River just south of the runways. There are 7 paved taxiways connecting the runways to several aprons: the 2 longer taxiways are 1,060 feet and 1,650 feet long, while the remaining 5 taxiways are between 385 feet and 650 feet in length. Leased areas are located along the 3 aprons. Outside activities include equipment fueling, runway maintenance, and deicing and sanding activities. Diesel fuel for equipment fueling is located in a 4,000 gallon aboveground storage tank (AST) located to the north of the Maintenance & Operations (M&O) building on a gravel surfaced area. Diesel fuel for heating the M&O building is located adjacent to the fueling tank in a 3,000 gallon AST. Pelletized urea and sand are stored indoors and the potassium acetate is stored in above ground storage tanks northeast of the runways (see Appendix A). Runway maintenance is limited to repainting runway markings (once a year) and sealing stress cracks in the asphalt surface (as necessary). These activities are performed in accordance with DOT&PF procedures and require dry weather. Deicing activities include mechanical plowing and the application of sand, urea, and potassium acetate on runways, taxiways, and aprons. Equipment maintenance takes place indoors in the Maintenance & Operations building, which has concrete floors and is located southwest of the runway intersection.

Drainage patterns for the King Salmon Airport are shown on figure(s) in Appendix A. There are 8 drainage areas at the King Salmon airport, which are designated as Watersheds A-H in Appendix A. Seven of these drainage areas have distinct outfalls and are designated as Outfalls A-H.

In general, storm water runoff from runways, taxiways, and aprons drains into grassy swales which parallel the runways. The storm water then either drains to isolated low vegetated areas or into one of several small unnamed creeks that eventually drain into the Naknek River. Flow in the vicinity of the maintenance building is part of Watershed A and is conveyed via sheet flow towards the south into a vegetated drainage ditch which flows to Outfall A.

Agency Notification Standard Report (cont'd)

Cause of the discharge(s), including a failure analysis of the system and subsystems in which the failure occurred:

Corrective actions and countermeasures taken, including a description of equipment repairs and replacements:

Additional preventive measures taken or contemplated to minimize possibility of recurrence:

Other pertinent information:

Appendix L –Best Management Practices and Typical

Best Management Practices – Summary Table

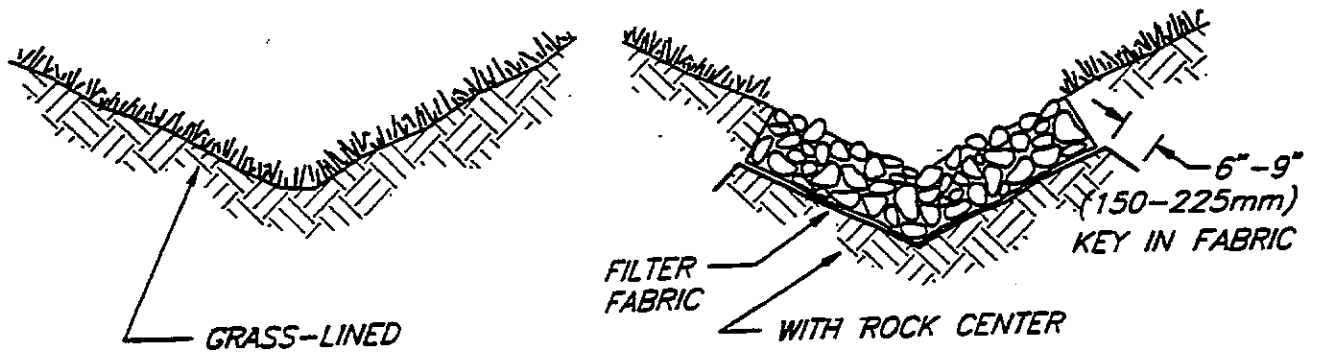
Example Typical for Stormwater Pollution Prevention

APPENDIX L – BMP Summary Table

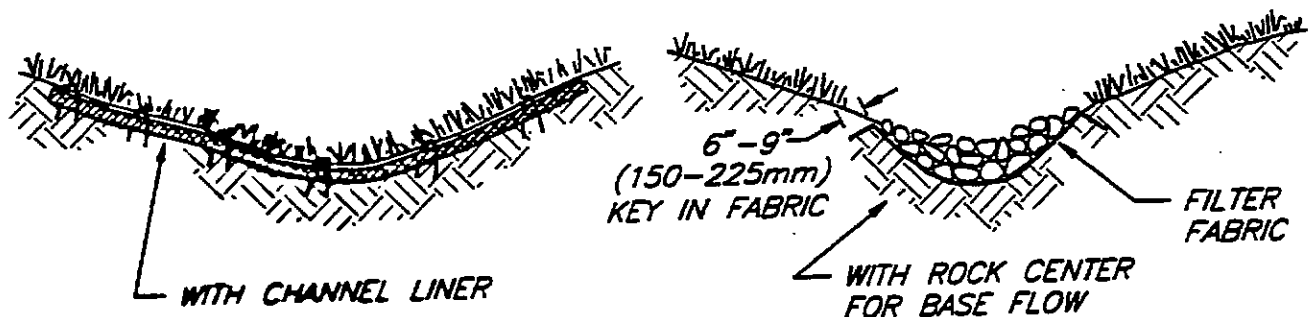
Best Management Practice (BMP)	
Material Storage	<ol style="list-style-type: none"> 1. Salt is stored indoors or securely covered 2. Maintain the integrity of storage containers
Deicing Runways and Pads	<ol style="list-style-type: none"> 1. Evaluate and optimize present chemical application rates 2. Use sand where possible to enhance friction 3. Plow and broom runways prior to application of deicing chemicals 4. Install and calibrate devices to meter the amount of pavement deicer being applied 5. Prioritize mechanical clearing when weather conditions are suitable 6. Use deicers which have less of an environmental impact (e.g. sodium formate and potassium acetate as opposed to urea and glycol). 7. Use ice detection systems 8. Ensure proper handling of deicing materials 9. Use airport traffic flow strategies and departure slot allocation systems
Materials Storage	<ol style="list-style-type: none"> 1. Store materials indoors. 2. Maintain integrity of storage containers 3. Create a centralized storage area for waste materials 4. Provide secondary containment around chemical storage areas 5. Locate storage areas away from high traffic areas and surface waters 6. Clearly label all containers 7. Provide fluid level indicators and maintain records of fluid levels to detect leakage 8. Properly dispose of chemicals that are no longer in use 9. Store and handle reactive, ignitable, or flammable liquids in compliance with applicable local fire codes, local zoning codes, and the National Electric Code. 10. Provide drip pans/pads where chemicals are transferred from one container to another to allow for recycling of spill and leaks. 11. Inspect storage containers 12. Train employees in spill prevention and control
Vehicle and Equipment Storage	<ol style="list-style-type: none"> 1. Store equipment indoors 2. Use drip pans under all vehicles and equipment for the collection of fluids 3. Use absorbents for dry cleanup for spills and leaks 4. Regularly sweep area to minimize debris on the ground

<p>Vehicle and Equipment Maintenance Areas</p>	<ol style="list-style-type: none"> 1. Perform all cleaning operations indoors or under covering when possible. Conduct the cleaning operations in an area with a concrete floor with no floor drainage other than to sanitary sewers or treatment facilities. 2. Park vehicles and equipment indoors or under a roof whenever possible and maintain proper control of oil leaks/spills. 3. Regularly inspect vehicles for leaks and maintenance needs. Use pans to collect leaks.
<p>Waste Management</p>	<ol style="list-style-type: none"> 1. All waste is stored in a cover container in a central location 2. Regular waste pick up occurs 3. Proper disposal of damaged equipment 4. Proper disposal unused chemicals and fluids 5. Create a regular sweeping schedule to prevent build up of debris 6. Train employees on proper waste disposal
<p>Fuel Storage</p>	<ol style="list-style-type: none"> 1. Maintain the integrity of storage containers 2. Use drip pans and absorptive materials beneath aircraft during fueling operations where leaks or spills can occur and where making and breaking hose connections. 3. Use fueling hoses with check valves to prevent hose drainage after filling 4. Provide spill kits and spill response trainings for personnel 5. Use spill and overflow detection devices 6. Clean up spills promptly 7. Store drums indoors when possible 8. Provide secondary containment for above ground storage tanks and drums 9. Clearly label contents 10. Regular monitoring for leaks and spills
<p>Aircraft, ground vehicle, and equipment maintenance areas</p>	<ol style="list-style-type: none"> 1. Prevent and contain spills and drips. 2. Do all cleaning at a centralized station so the solvents stay in one area. 3. Remove any parts that are dipped in liquid slowly to avoid spills. 4. Use drip pans, drain boards, and drying racks to direct drips back into a fluid holding tank for reuse. 5. Confine cleaning activities to designated areas outside drainage ways and away from surface waters. 6. Drain all parts of fluids prior to disposal. 7. Transfer used fluids to the proper container promptly; do not leave full drip pans or other open containers around the shop. Empty and clean drip pan containers.

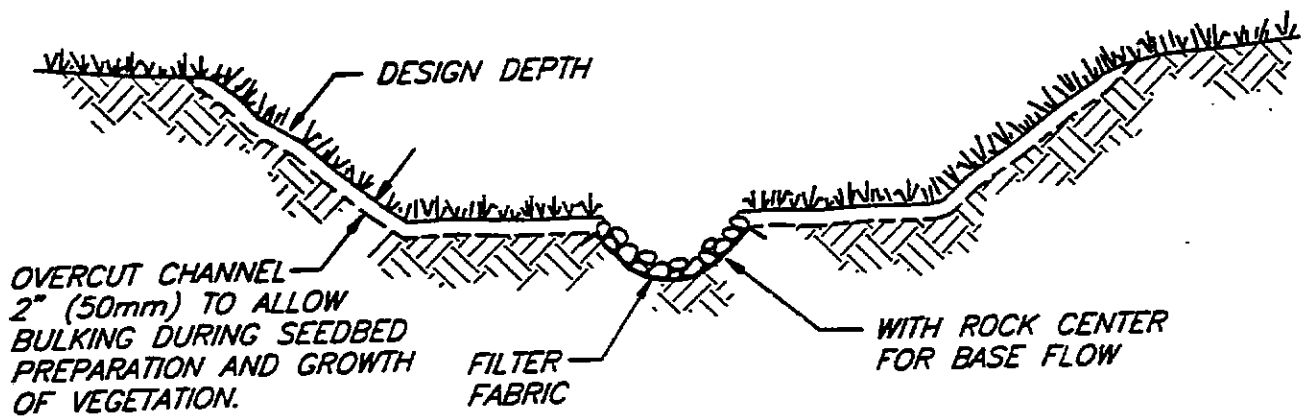
	<ol style="list-style-type: none"> 8. Clean up leaks, drips, and other spills without using large amounts of water. Use absorbents for dry cleanup whenever possible. 9. Prohibit the practice of hosing down an area where the practice would result in the discharge of pollutants to a stormwater system. 10. Prohibit pouring liquid waste into floor drains, sinks, outdoor storm drain outlets or other storm drains or sewer connections. 11. Maintain an organized inventory of materials. 12. Eliminate or reduce the number and amount of hazardous materials and waste by substituting nonhazardous or less hazardous materials. 13. Store batteries and other significant materials inside. 14. Dispose of greasy rags, oil filters, air filters, batteries, spent coolant, and degreasers in compliance with RCRA regulations.
<p>Vehicle and Equipment Maintenance</p>	<ol style="list-style-type: none"> 1. Leaking equipment is kept indoors until repairs can be made
<p>Construction stormwater control</p>	<ol style="list-style-type: none"> 1. Retain as much vegetation in the area as possible 2. Cover inlets of culverts and drains during construction/maintenance activities 3. Use of stormwater velocity dissipaters and retention devices such as riprap, silt fence, and straw wattles to slow water and allow sediments to settle
<p>Vehicle and Equipment Maintenance Areas</p>	<ol style="list-style-type: none"> 1. No discharge of vehicle wash or rinse water to surface waters.



**TYPICAL V-SHAPED CHANNEL
CROSS-SECTION**

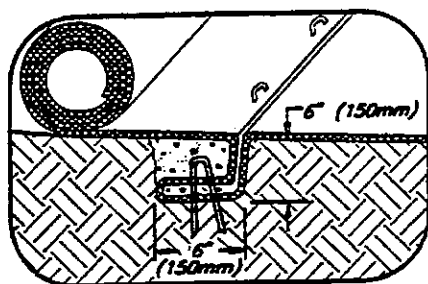
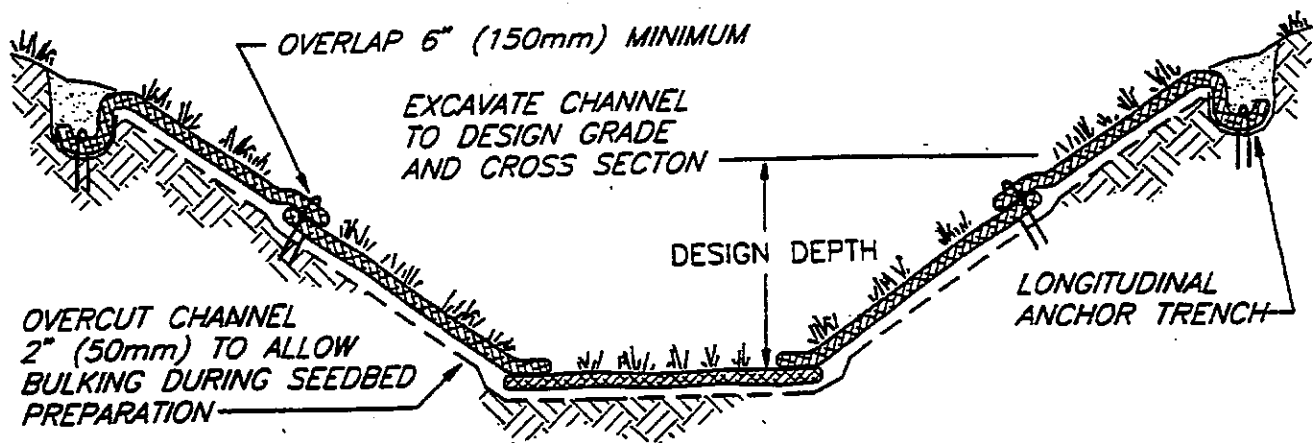


**TYPICAL PARABOLIC CHANNEL
CROSS-SECTION**



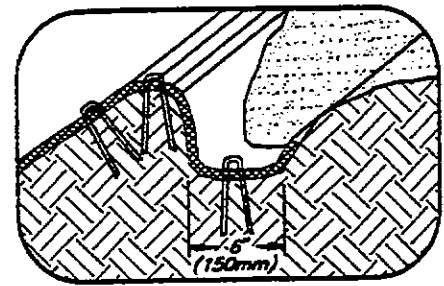
**TYPICAL TRAPEZOIDAL CHANNEL
CROSS-SECTION**

**GRASS-LINED CHANNEL
TYPICAL CROSS SECTIONS**



INTERMITTENT CHECK SLOT

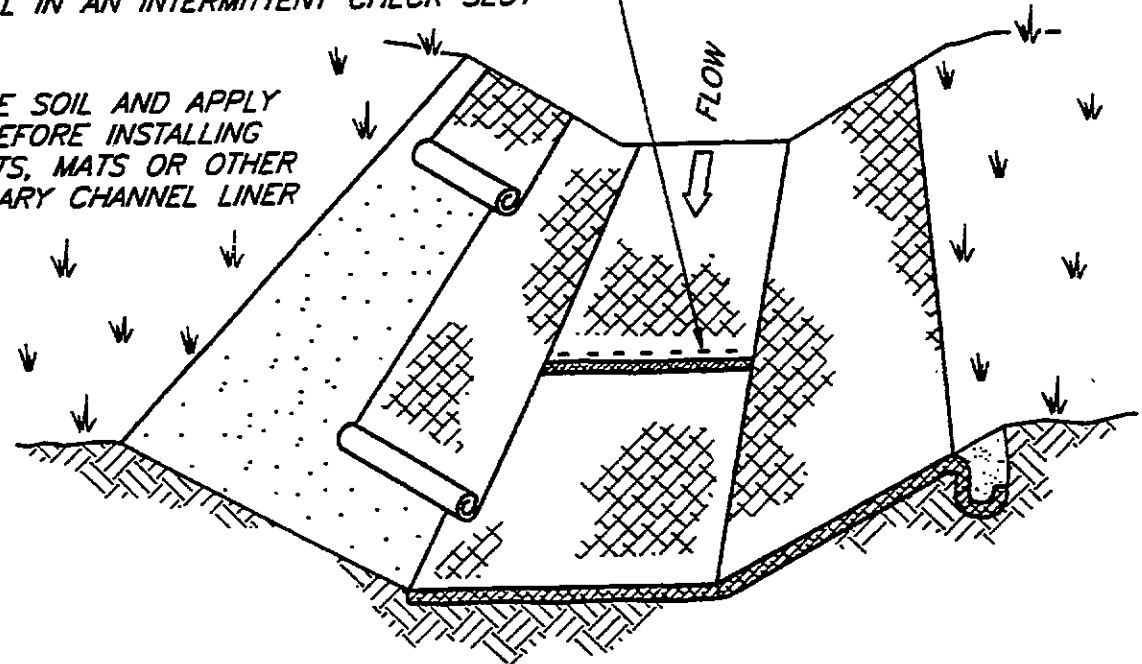
TYPICAL INSTALLATION WITH EROSION CONTROL BLANKETS OR TURF REINFORCEMENT MATS



LONGITUDINAL ANCHOR TRENCH

SHINGLE-LAP SPLICED ENDS OR BEGIN NEW ROLL IN AN INTERMITTENT CHECK SLOT

PREPARE SOIL AND APPLY SEED BEFORE INSTALLING BLANKETS, MATS OR OTHER TEMPORARY CHANNEL LINER SYSTEM

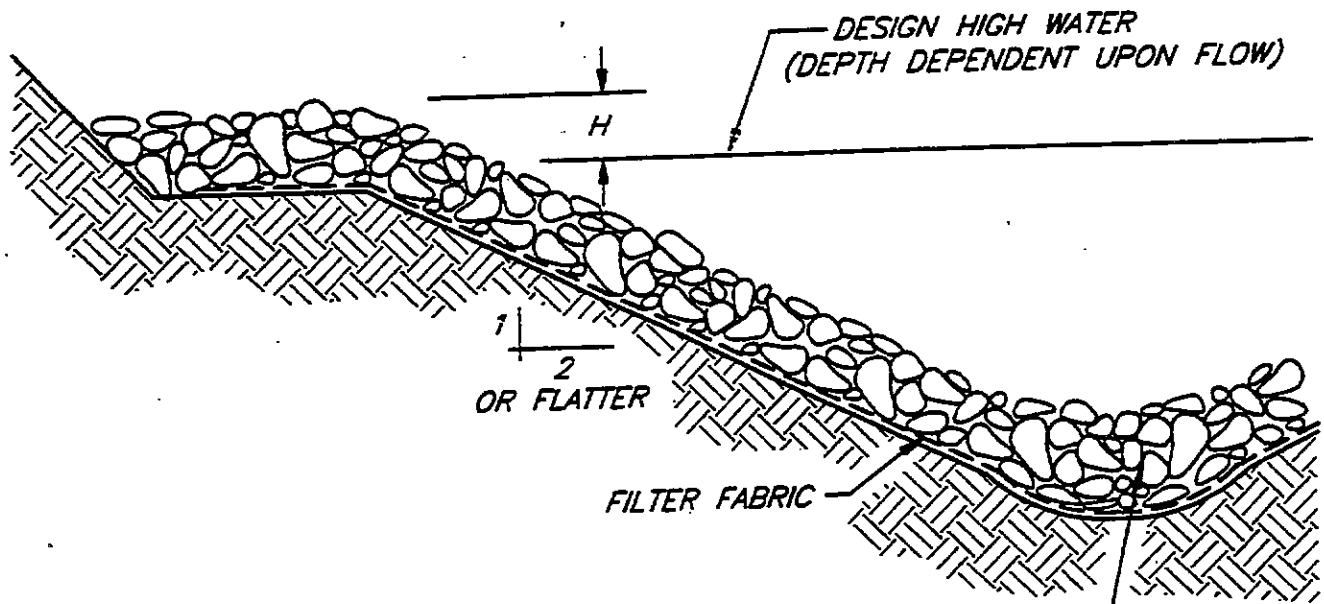


- NOTES:
1. DESIGN VELOCITIES EXCEEDING 2 FT/SEC (0.5m/sec) REQUIRE TEMPORARY BLANKETS, MATS OR SIMILAR LINERS TO PROTECT SEED AND SOIL UNTIL VEGETATION BECOMES ESTABLISHED.
 2. GRASS-LINED CHANNELS WITH DESIGN VELOCITIES EXCEEDING 6 FT/SEC (2m/sec) SHOULD INCLUDE TURF REINFORCEMENT MATS.

NOT TO SCALE

**GRASS-LINED CHANNEL
TYPICAL INSTALLATION**

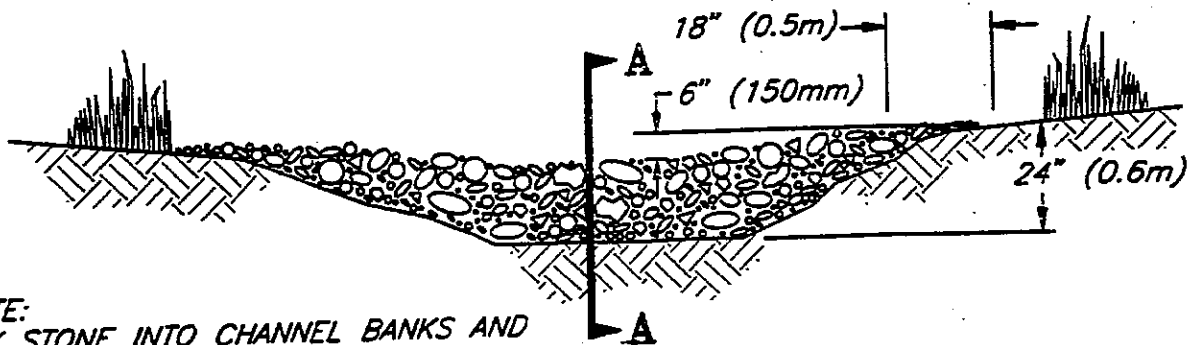
DESIGN HEIGHT (H), WIDTH AND STONE SIZE SHALL
BE DETERMINED BY THE ENGINEER



MINIMUM 6" (150mm) THICK LAYER OF 2" (50mm) MINIMUM
DIAMETER DRAIN ROCK. LARGER STONE SHALL BE USED
DEPENDENT UPON GRADIENT, SOIL TYPE, AND DESIGN FLOW.

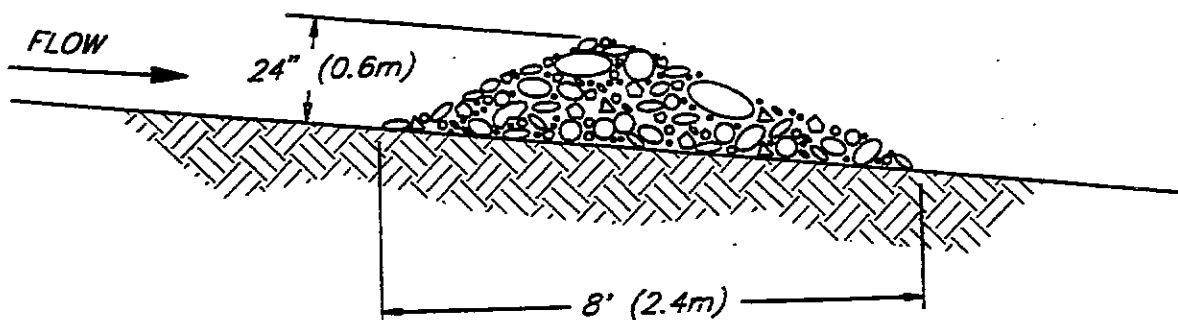
TYPICAL SECTION

**ROCK LINED
CHANNEL**



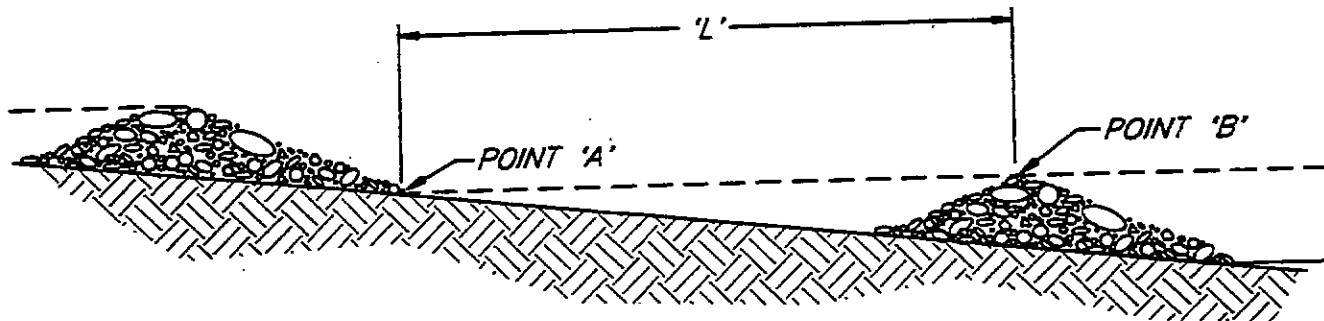
NOTE:
 KEY STONE INTO CHANNEL BANKS AND
 EXTEND IT BEYOND THE ABUTMENTS A
 MINIMUM OF 18" (0.5m) TO PREVENT
 FLOW AROUND DAM.

VIEW LOOKING UPSTREAM



SECTION A - A

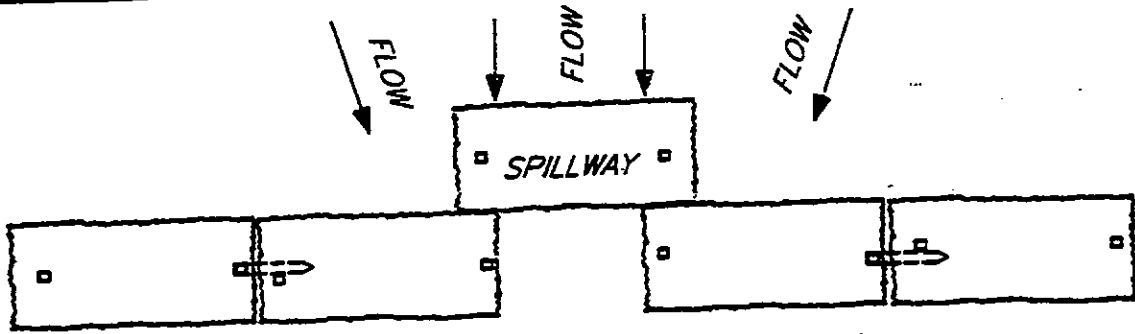
'L' = THE DISTANCE SUCH THAT POINTS 'A' AND
 'B' ARE OF EQUAL ELEVATION.



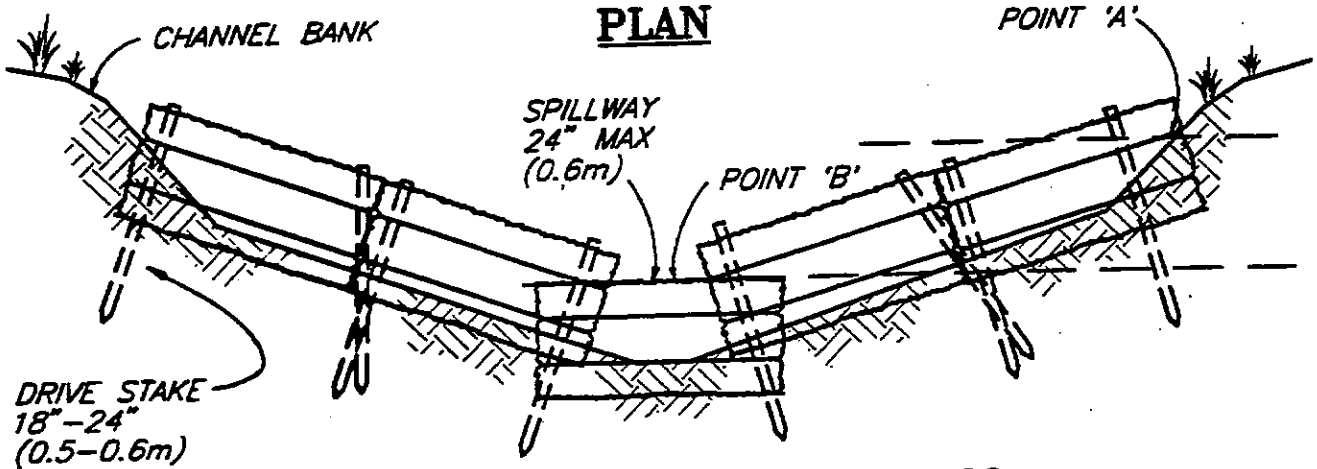
SPACING BETWEEN CHECK DAMS

NOT TO SCALE

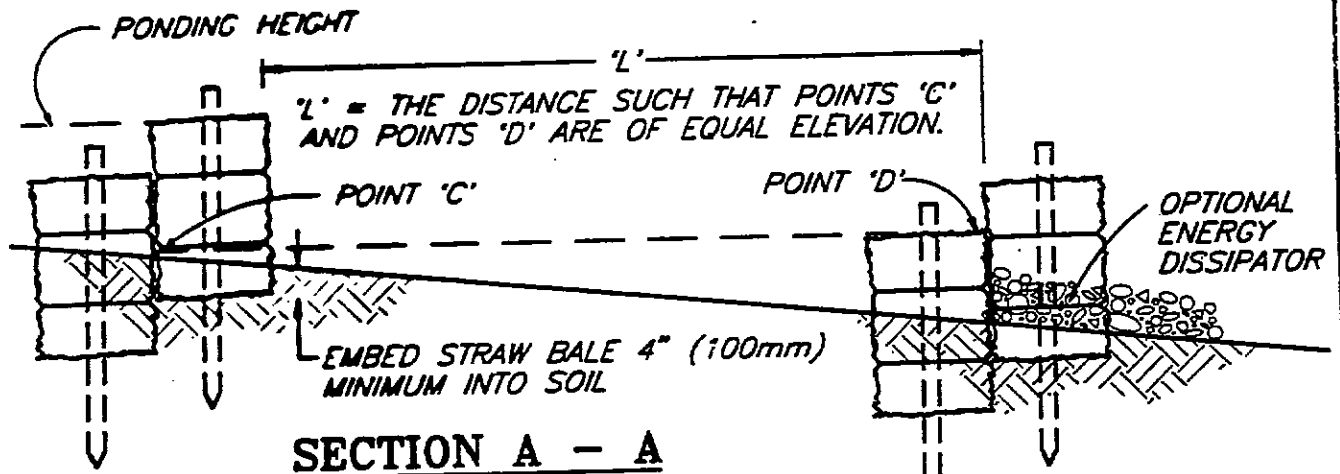
**ROCK
 CHECK DAM**



PLAN



VIEW LOOKING UPSTREAM



SECTION A - A
SPACING BETWEEN CHECK DAMS

NOTES:

1. EMBED BALES 4" (100mm) INTO THE SOIL AND "KEY" BALES INTO THE CHANNEL BANKS.
2. POINT 'A' MUST BE HIGHER THAN POINT 'B': (SPILLWAY HEIGHT)
3. PLACE BALES PERPENDICULAR TO THE FLOW WITH ENDS TIGHTLY ABUTTING.
4. SPILLWAY HEIGHT SHALL NOT EXCEED 24" (0.6m).
5. INSPECT AFTER EACH SIGNIFICANT STORM, MAINTAIN AND REPAIR PROMPTLY.

NOT TO SCALE

**STRAW BALE
CHECK DAM**

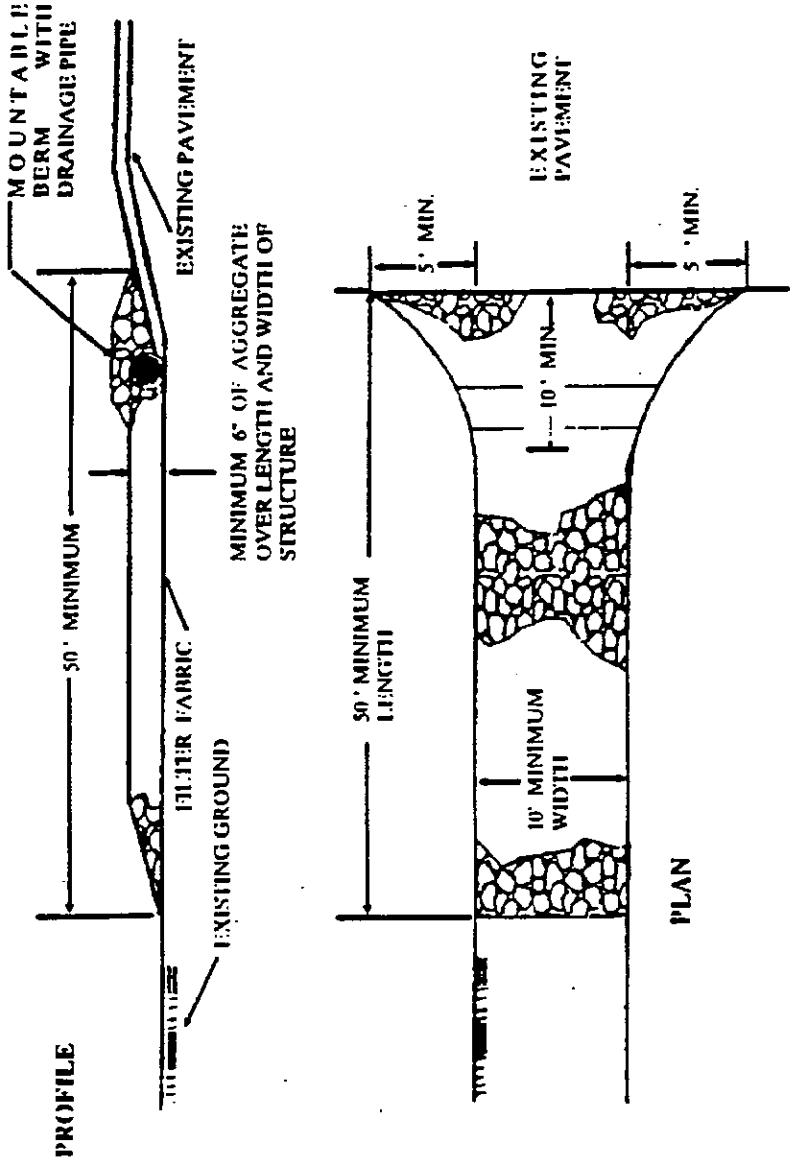


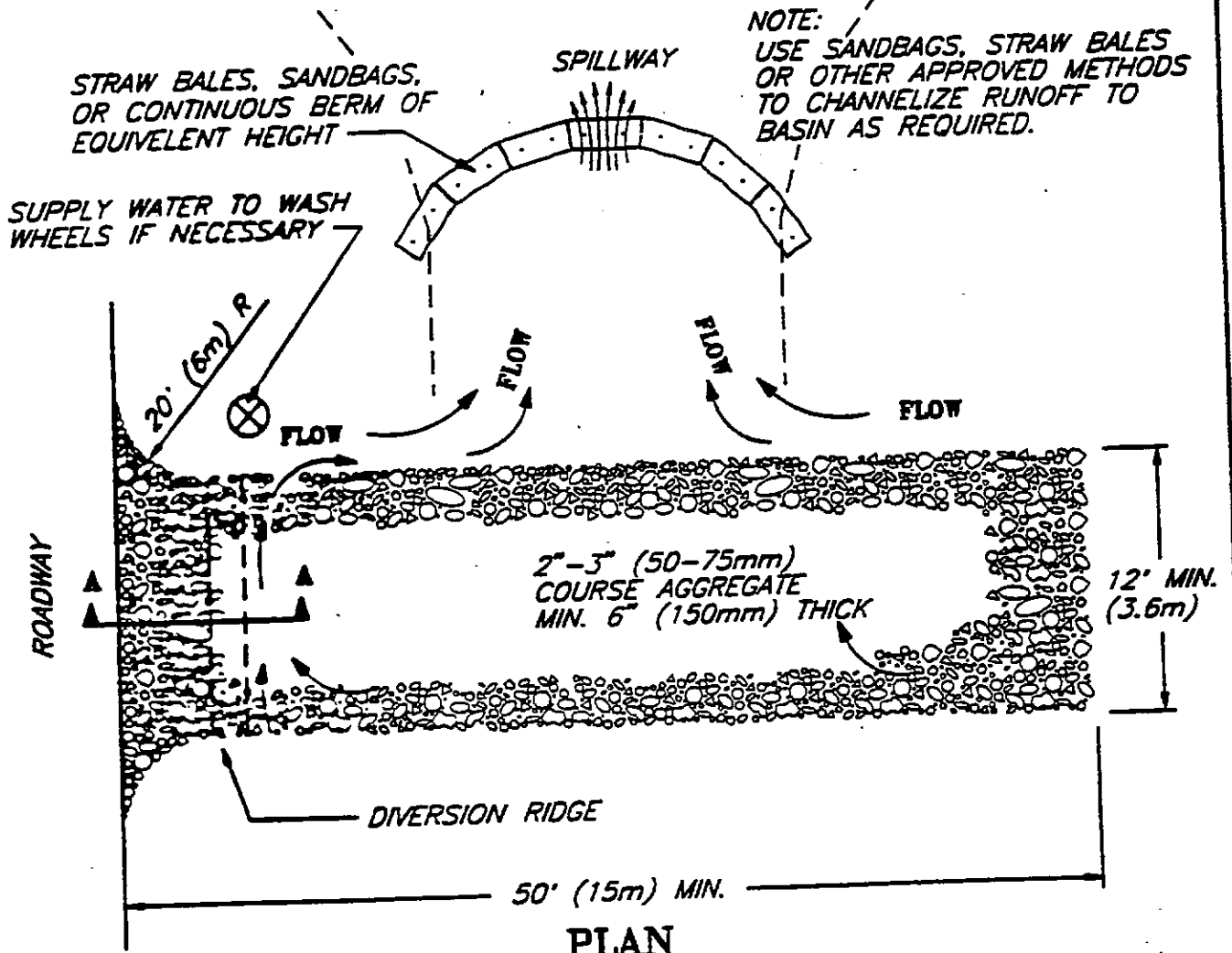
Figure 4-7
Stabilized Construction Exit

DIVERSION RIDGE REQUIRED
WHERE GRADE EXCEEDS 2%

2% OR GREATER



SECTION A - A



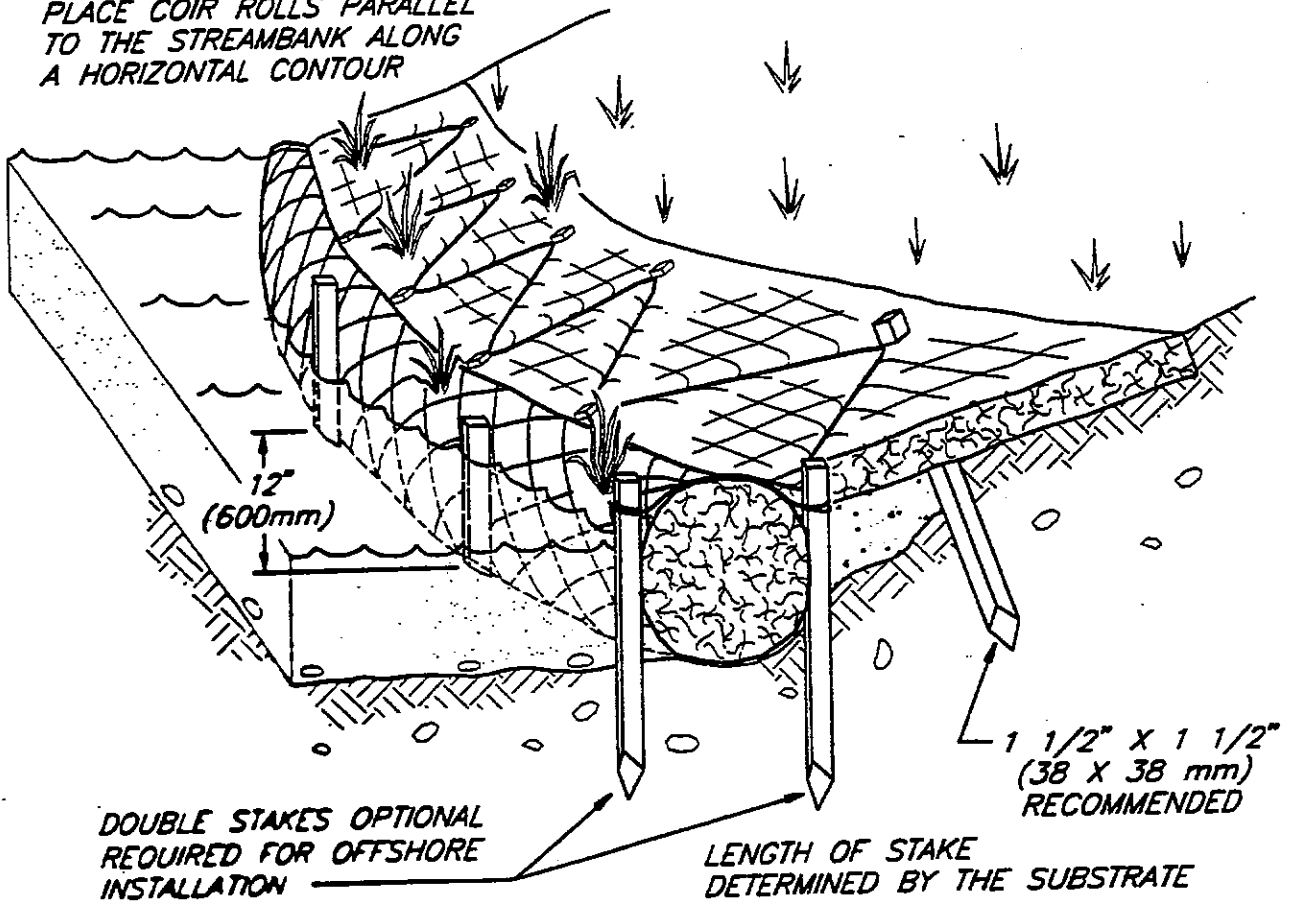
NOTES:

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

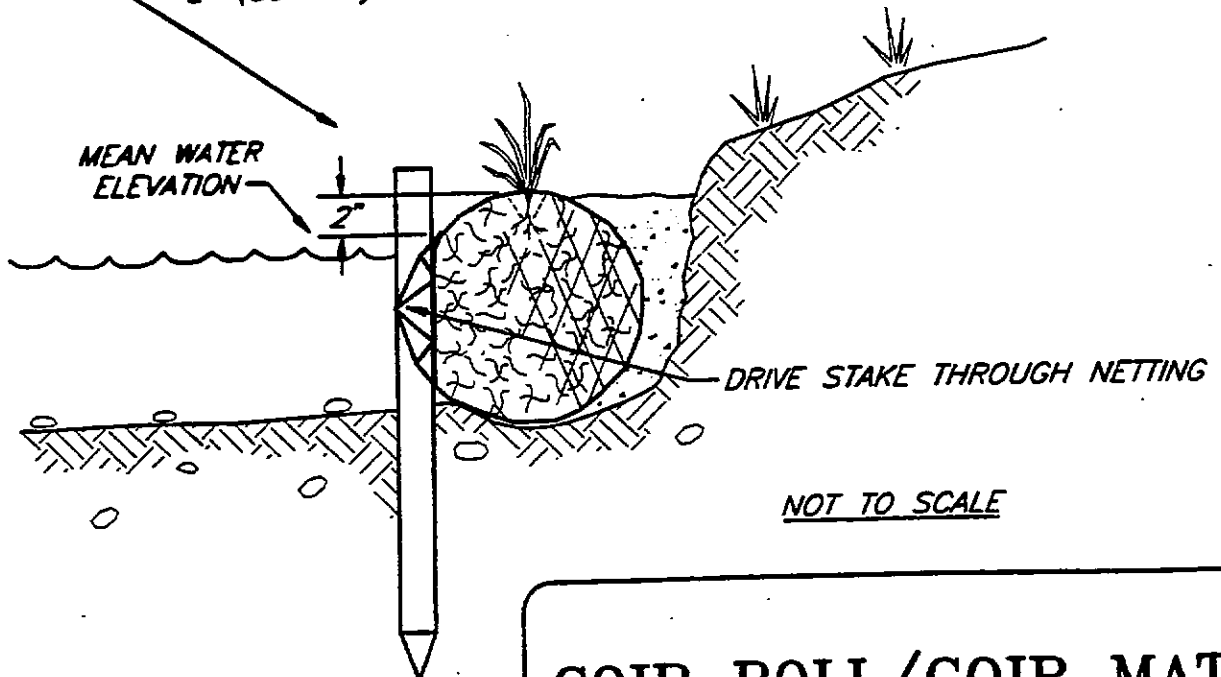
**TEMPORARY
GRAVEL
CONSTRUCTION
ENTRANCE/EXIT**

1994 JOHN McCULLAH

PLACE COIR ROLLS PARALLEL TO THE STREAMBANK ALONG A HORIZONTAL CONTOUR



PLACE COIR ROLL SUCH THAT THE ROLL EXTENDS 2" (50 mm) ABOVE MEAN WATER ELEVATION



COIR ROLL/COIR MATS

GALVANIZED WIRE MESH,
GEOTEXTILE REINFORCEMENT
MATS OR COIR MATS

SIDE VIEW

BIND AND/OR SPIKE
LOGS TOGETHER
ANCHOR ROD 3/4" X 6"
(20mm X 2m)

TYPICAL LOG CRIBBING

SOME BASAL ENDS OF LIVE
BRANCH CUTTINGS SHOULD
REACH UNDISTURBED SOIL
AT THE BACK OF CRIB
STRUCTURE

BACKFILL WITH
ROCK AND SOIL

$W =$ CHANNEL WIDTH

$\frac{W}{2}$ MAXIMUM

MEAN HIGH WATER
PLUS 12" (300mm)

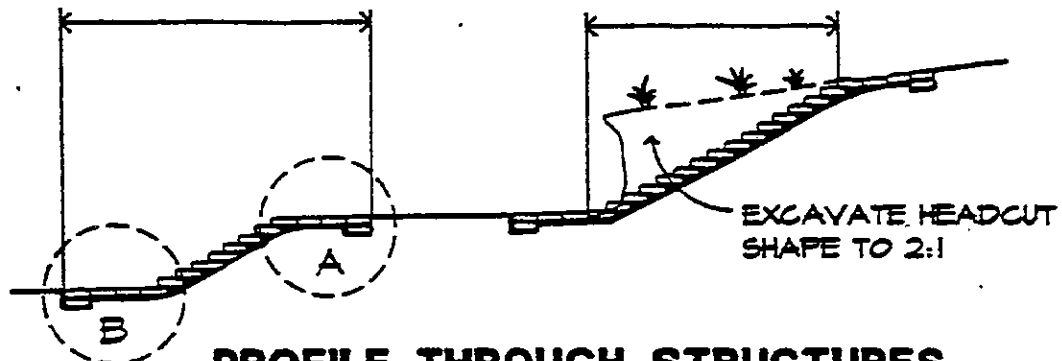
NORMAL
STREAM LEVEL
6" (150mm)

$D =$ EXPECTED DEPTH OF SCOUR
PLUS 2' (0.6m) OR 12" (300mm) MINIMUM

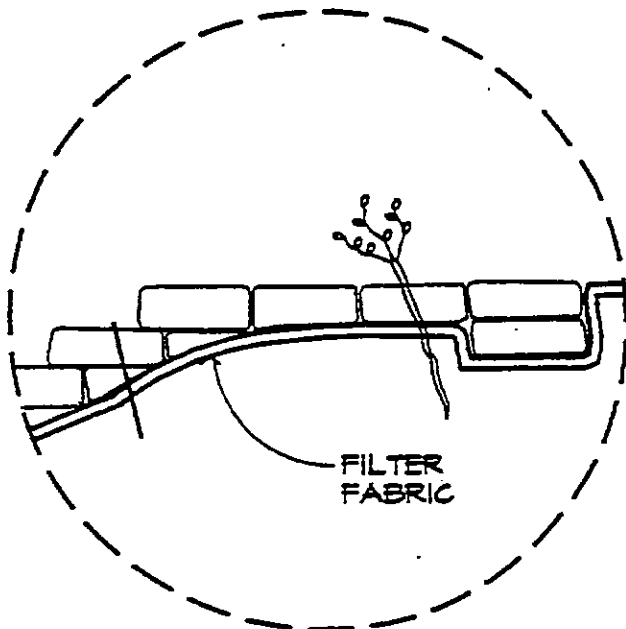
FILTER FABRIC ALONG BASE

TYPICAL GABION DEFLECTOR

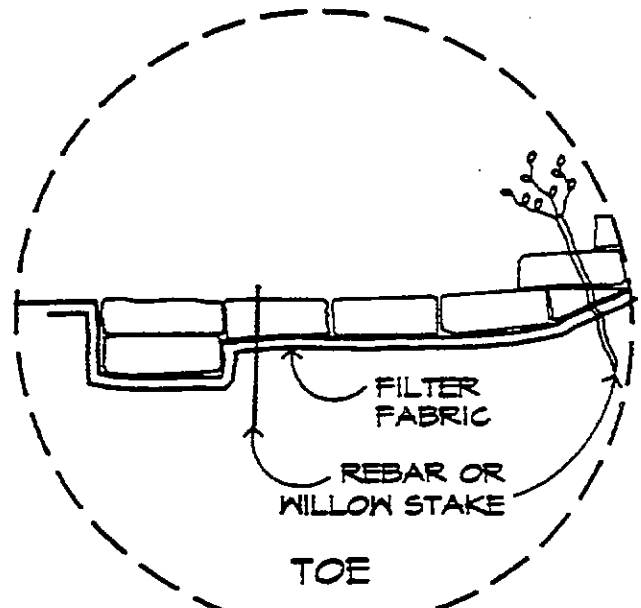
**STREAMBANK
STABILIZATION**



PROFILE THROUGH STRUCTURES

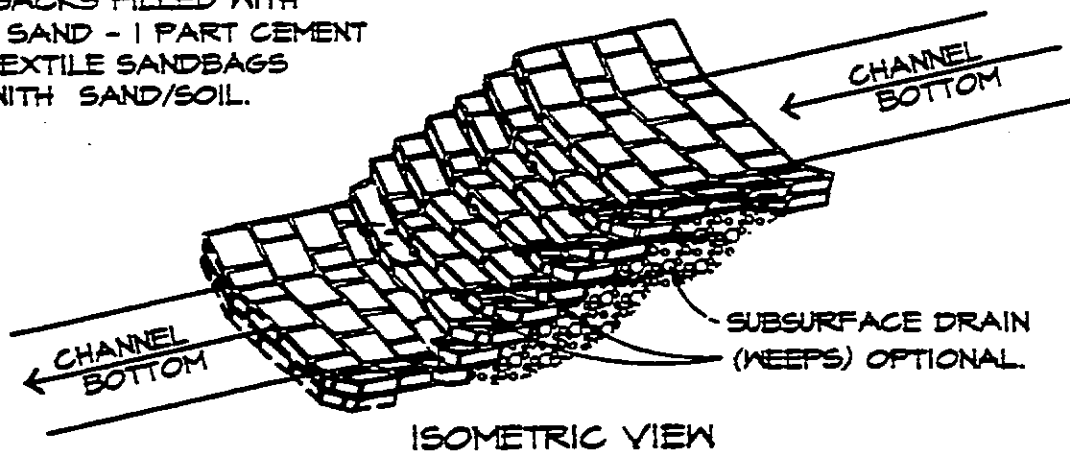


DETAIL - 'A'



DETAIL - 'B'

BURLAP SACKS FILLED WITH 4 PARTS SAND - 1 PART CEMENT OR GEOTEXTILE SANDBAGS FILLED WITH SAND/SOIL.



ISOMETRIC VIEW

SANDBAG HEADCUT STRUCTURE

25:

1. GEOTEXTILE SANDBAGS MAY BE STAKED WITH LIVE WILLOW STAKES, REBAR OR 'SNAP TIE' STAKES SHOULD BE USED WITH CEMENT SANDBAGS.
2. ROCK RIPRAP MAY BE USED IN PLACE OF SANDBAGS.

SANDBAG HEADCUT STRUCTURE

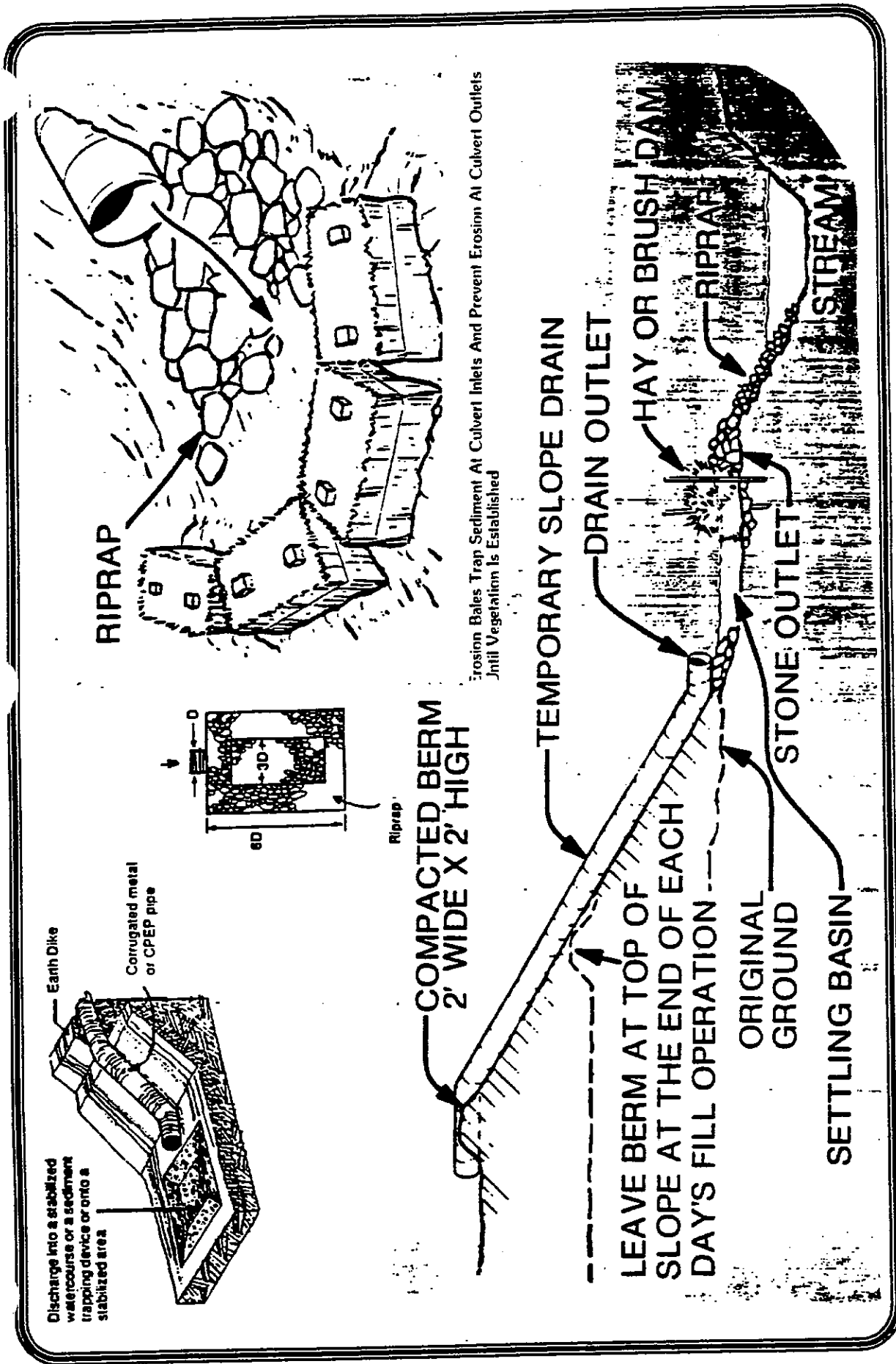
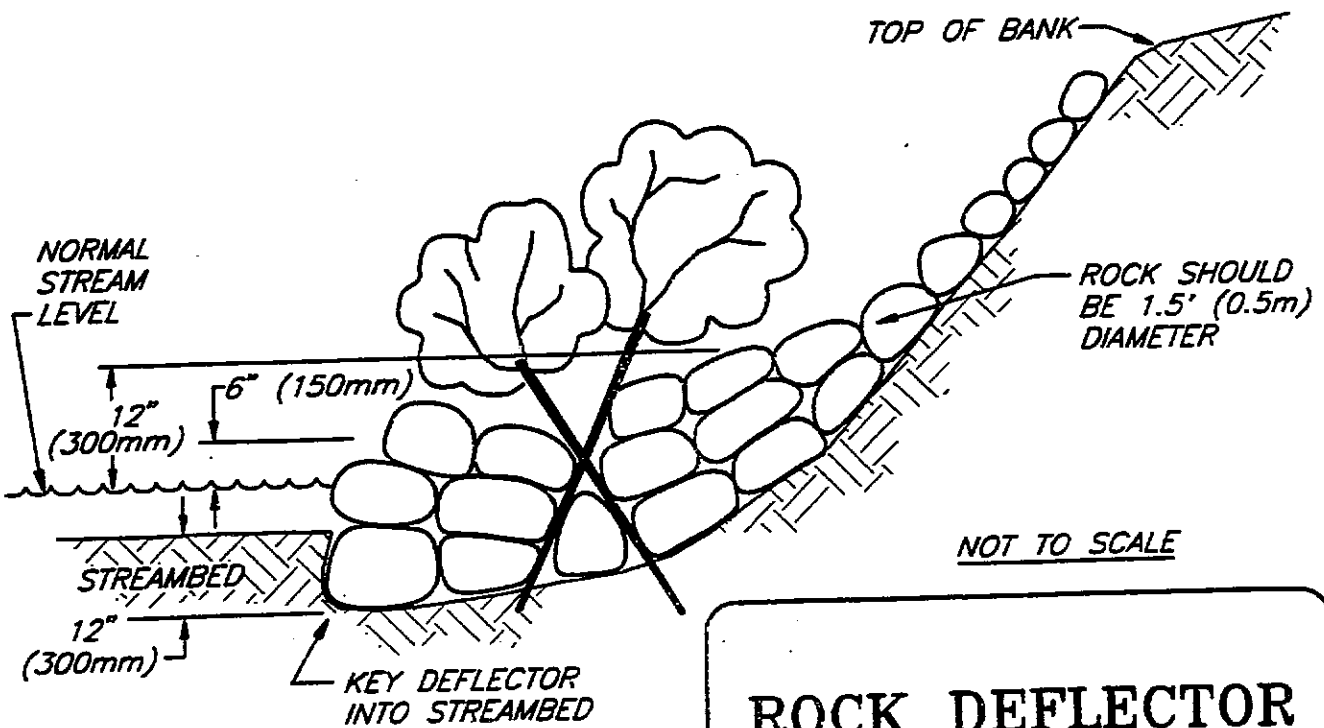
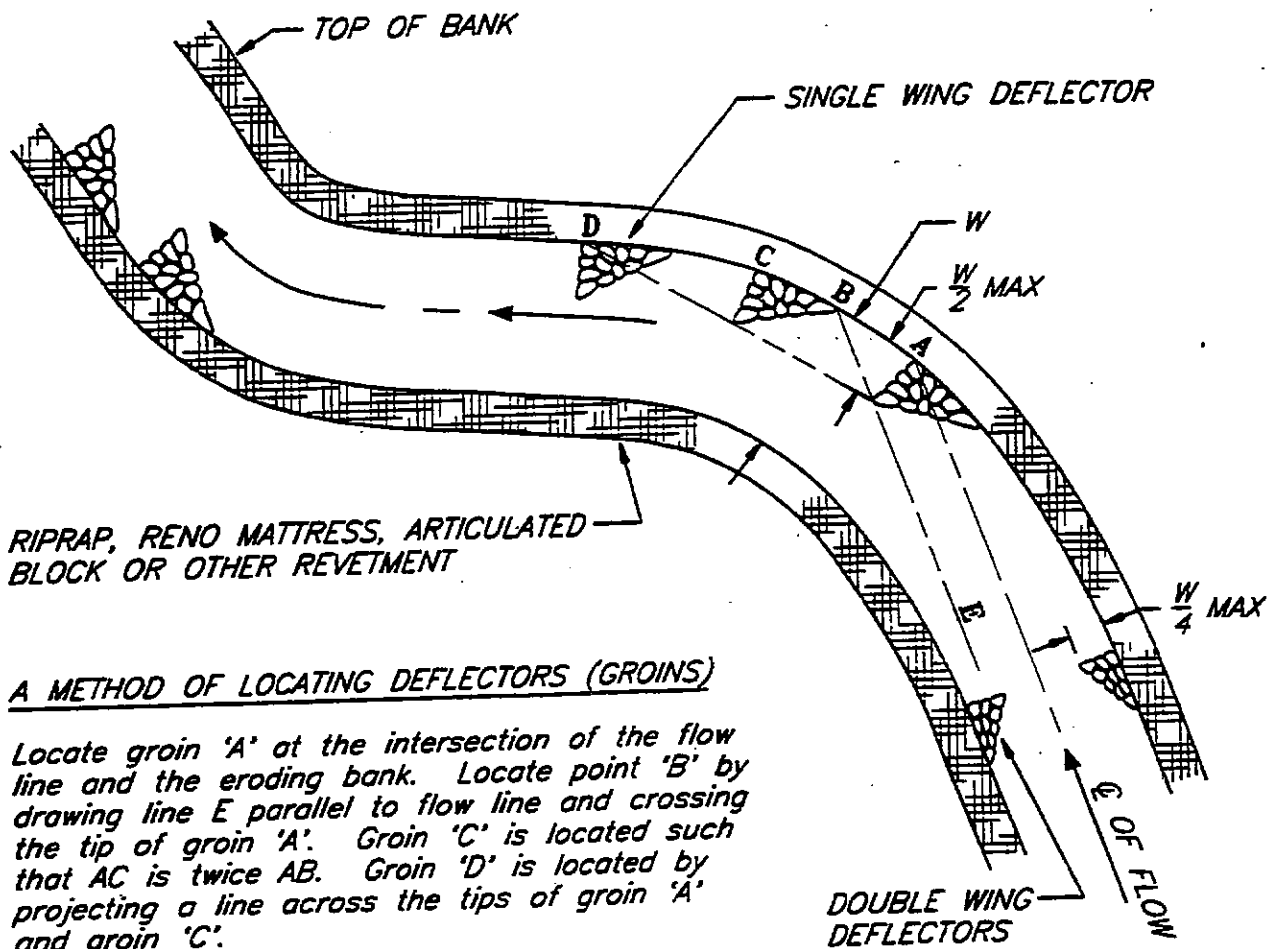
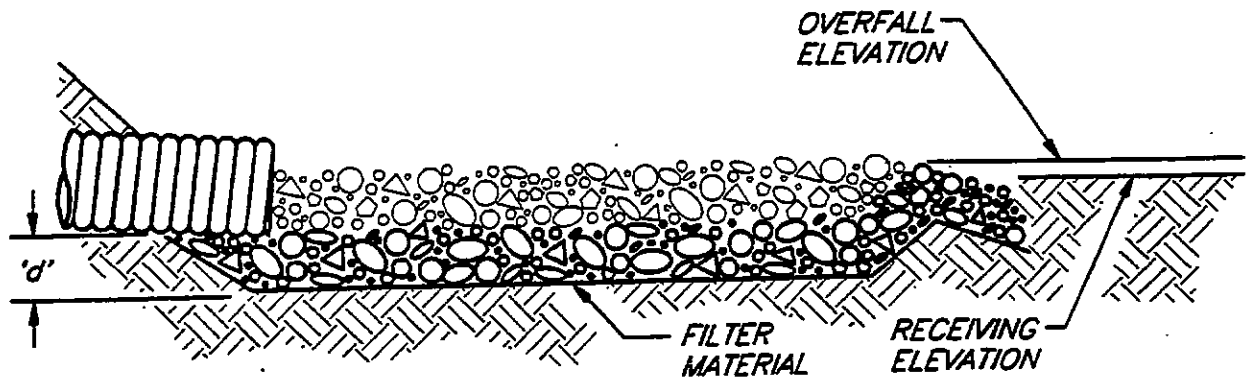


Figure 4-11
Outlet Protection



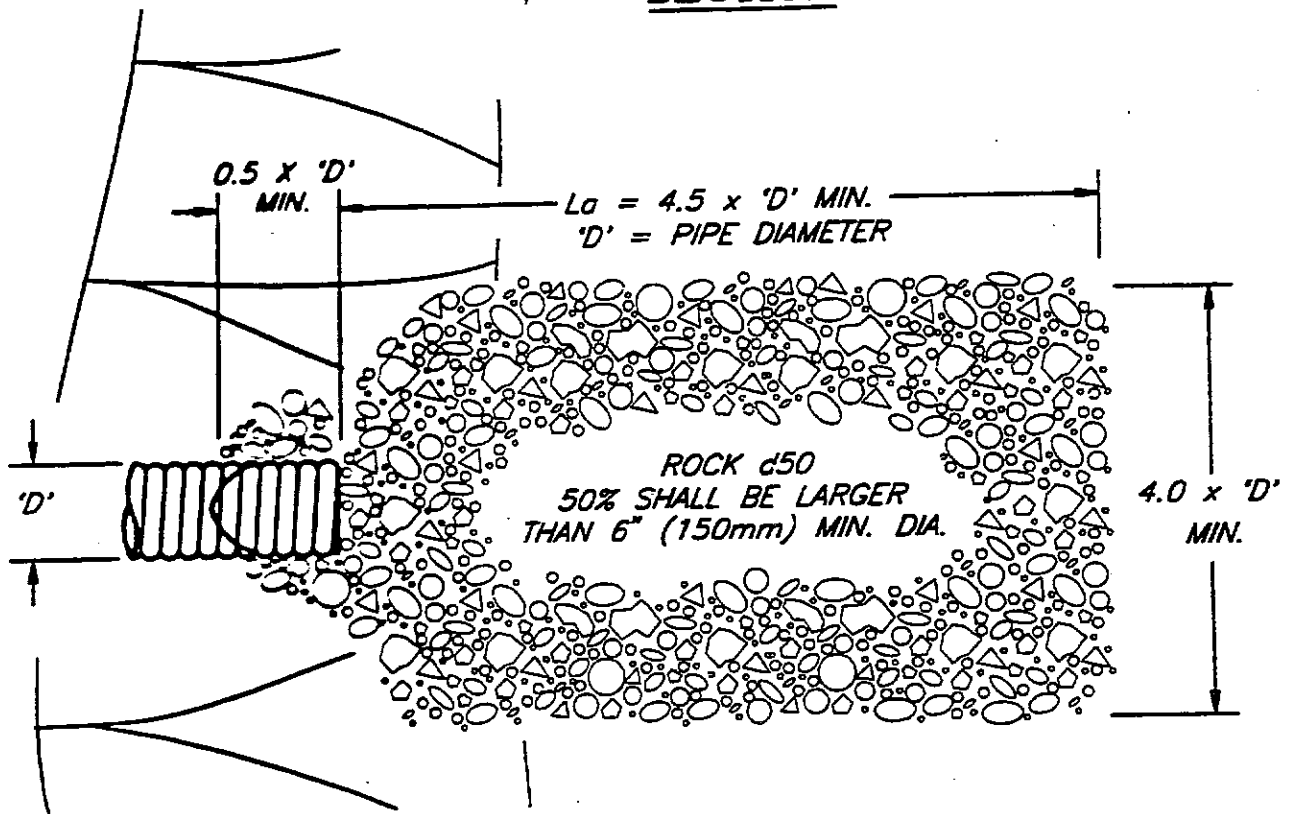
ROCK DEFLECTOR

1996 JOHN McCULLAH



THICKNESS ('d') = 1.5 x MAX. ROCK DIAMETER - 6" (150mm) MIN.

SECTION



PLAN

NOTES:

1. 'La' = LENGTH OF APRON. DISTANCE 'La' SHALL BE OF SUFFICIENT LENGTH TO DISSIPATE ENERGY.
2. APRON SHALL BE SET AT A ZERO GRADE AND ALIGNED STRAIGHT.
3. FILTER MATERIAL SHALL BE FILTER FABRIC OR 6" (150mm) THICK MINIMUM GRADED GRAVEL LAYER.

**ENERGY
DISSIPATOR**



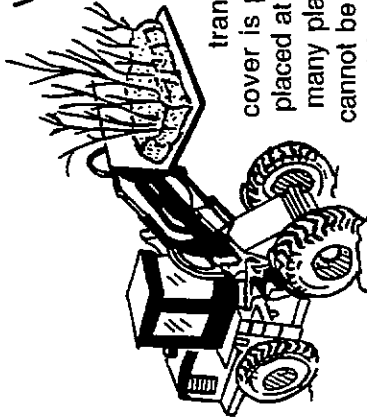
TRANSPLANTING

Transplanting is a revegetation technique that removes a plant, or plants containing roots and shoots from one site to be replanted at another. Transplanting can take several forms generally distinguished by size: vegetation mats, plugs, sprigs and transplants (single plants). All forms require careful selection and handling in order for the transplanting effort to be successful. Refer to *Streambank Revegetation Plant Species Selection List* for plant material suggestions.

Locate a donor site and obtain permission to harvest plants. In cases where plants are going to be destroyed by construction, consider salvaging the plants that would otherwise be lost. The conditions of the donor site need to be relatively similar to those at the transplanting site. The best time to transplant is when plants are dormant. It is essential that the plant materials do not dry out while in transport and after planting. Transplanting efforts can be mechanized.

VEGETATIVE MAT

A vegetative mat is the largest transplant. Dimensions of the mats vary from one to several feet square and may contain woody and/or herbaceous vegetation. The greatest benefit of this transplanting technique is that vegetative cover is provided immediately after the mat is placed at the new location. The mats often contain many plant species, especially native plants that cannot be obtained elsewhere. Often, the cost will be for labor and machinery for moving and installing the mat.

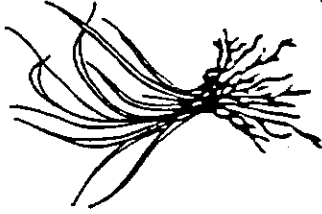


Harvest a vegetative mat by cutting the shoots and root/soil mass into a block. The root/soil mass is cut as deeply as possible. The mat is then lifted from the ground by hand or with mechanized equipment and transported to the planting site.

Prepare the planting site by creating a depression in the soil that will accommodate the dimensions of the mat. The sides of the mat should be covered by soil. If the mat is placed directly on the surface with other mats immediately adjacent to each other, make sure that the edges of the mat are not left exposed to the air which would cause damage to the roots. If needed, soil should be placed in the spaces between mats to cover the roots.

PLUGS

Plugs are smaller than vegetative mats and not necessarily, contain only one plant species. They can be harvested from a donor community using tools and transported easily to the planting site. They are particularly well suited for planting in wetlands, including grass rolls or being divided into sprigs.

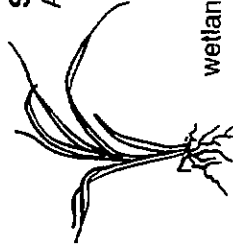


Dig a plug with a shovel. A plug may range from a few inches in diameter. It is important to include as many roots and as much soil as possible with each plug.

Plant plugs so that the new soil level matches the soil level of the donor site. If the planting site is dry, the plug should be planted in the center of a small depression that will catch and retain water. The soil around the plug should be pressed firmly into place.

SPRIGS

A sprig is the smallest transplant unit, consisting of a single shoot and roots. Grasses and sedges are often transplanted as sprigs. Species with a rhizomatous (underground stem) growth form are most suited for sprigging. Sprigs are often planted in wetlands or into coir logs.

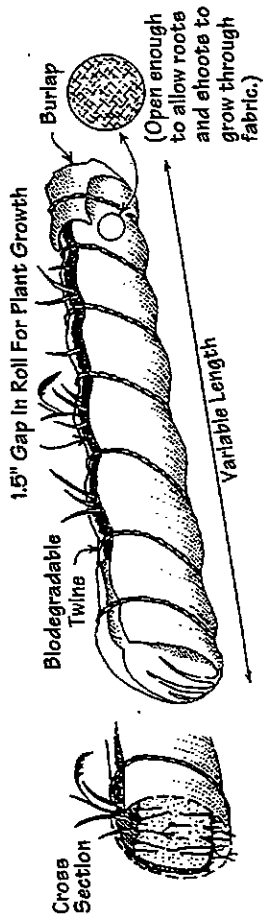


Prepare a sprig from a small plug that contains one plant species. The plug can be separated into sprigs either at the donor site or the planting site. The important point is to keep the plant material moist, removed from direct sunlight and wind while preparing the sprigs and transporting them to the planting site. Harvest only the number of sprigs that can be planted the same day.

Plant a sprig by sticking a shovel in the ground perpendicularly; push it forward to create a small opening; place the sprig in the opening, remove the shovel and then firm the ground around the sprig. Care should be taken to ensure that the entire root system is covered by soil. A more extensive discussion of the sprigging is found in *Beach Wildrye: Planting Guide for Alaska* (Wright, 1994).



GRASS ROLLS

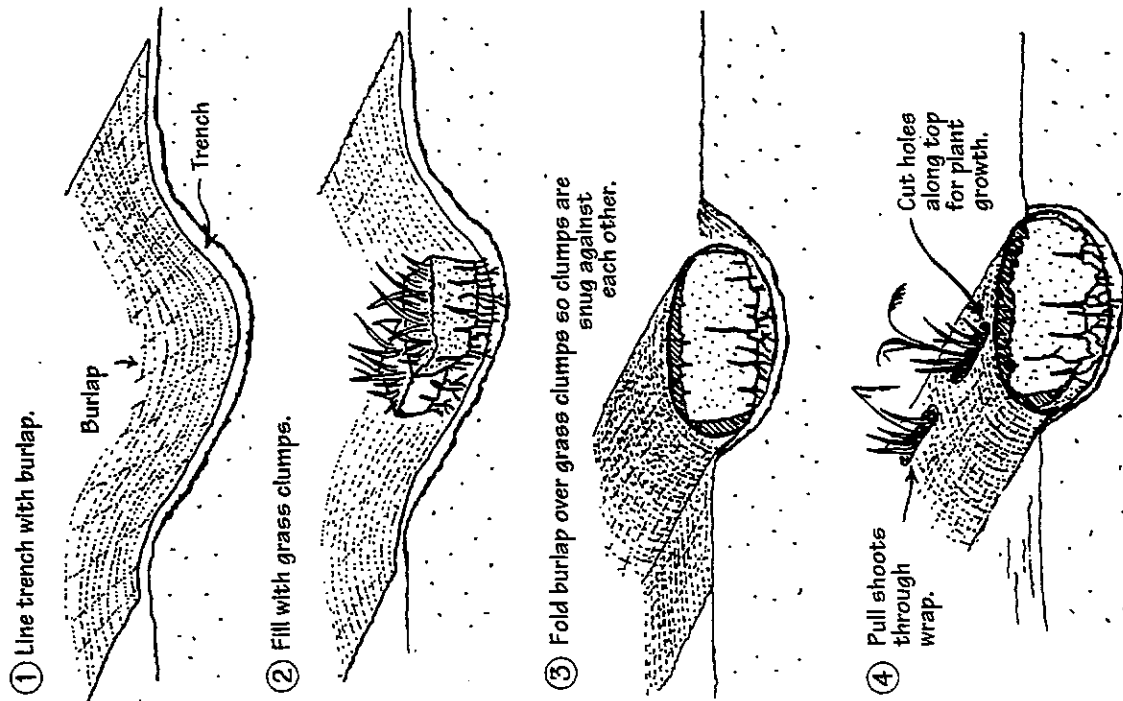


Grass rolls are often used to revegetate shorelines and streambanks where grasses and grass-like plants have been the primary vegetation type and where seeding is impractical due to fluctuating water levels or other site conditions. Clumps of grass sod are placed tightly together, side by side with shoots pointing up, in a sausage like structure and held together with burlap and twine. The roll is then anchored in place. This technique reintroduces herbaceous vegetation to a site while simultaneously providing some structural stability. Ultimately, the sod will form a dense root system along the streambank and provide structural protection to the site. When the grasses die back at the end of each growing season, their leaves hang over the streambank and provide rearing habitat for fish.

Construct a grass roll by laying out a length of burlap; place clumps of sod tightly together in the middle of the burlap. Bluejoint reedgrass, *Calamagrostis canadensis*, is the primary grass used for this technique and should be collected from sites away from streambanks. Beach wildrye, *Leymus mollis*, has also been used for streambank plantings, and although it produces a strong rhizome it does not form the dense sod characteristic of Bluejoint.

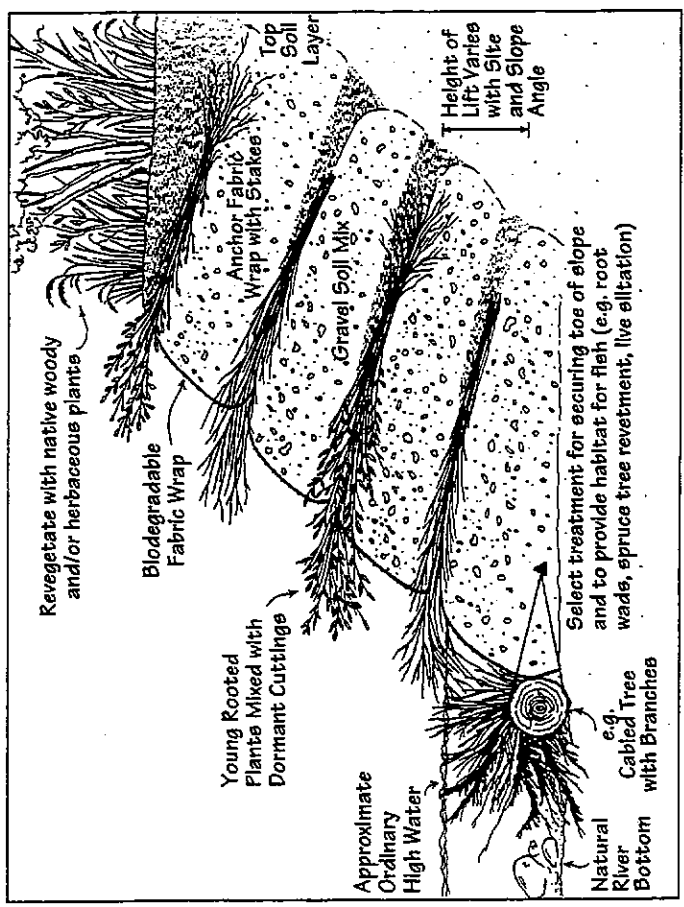
Wrap the sides of the burlap over the sod clumps to make a sausage-like roll. Tie the roll every few inches with twine. Cut holes in the burlap wrap to expose the sod shoots. Try to create the grass roll onsite so that the length of the roll or rolls match the length of the area being planted.

Constructing Grass Rolls





HEDGE BRUSH LAYERING



Hedge brush layering is a revegetation technique which combines layers of plant material, both dormant cuttings and rooted plants, with soil to revegetate and stabilize a streambank. Greater plant diversity can be provided with a hedge brush layer than with a simple brush layer. Rooted plants of species that do not root readily, such as alder, scouler and bebb willow, can be included in the plant layer. A mixture of species may allow the revegetation project to blend with existing vegetation.

Branches and transplants are placed on horizontal benches that follow the contour of the slope and provide reinforcement to the soil. The transplants will add stability quickly as their roots become anchored. Relatively steep slopes can be stabilized with this technique if a biodegradable revegetation fabric is used to hold the soil in place between the plant layers. The front of the wrapped soil layer can be lightly seeded with grasses to increase soil stability while the woody plants become established. Overhanging branches provide fish habitat.

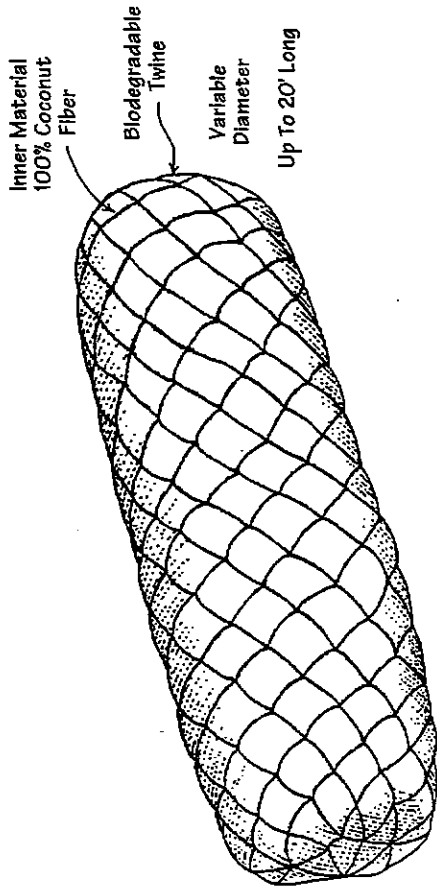
Select plant species suitable for site conditions (see *Stream Revegetation Plant Species Selection List, Shrubs and Trees*). For results dig transplants in spring or late summer and plant them the day. If possible root prune the plants several weeks prior to transplant. Select plants less than 5 to 6 feet tall and root prune the plants to the shovel width. After the plant has been dug for transplanting, trim branches to compensate for root loss.

Collection, storage and planting information is described in the *Dormant Cuttings and Transplanting* sections. A hedge layer, which uses all rooted plants can be planted throughout the growing season from spring through early fall.

Choose a technique to secure the toe of the slope. Begin layering at the bottom of the slope. Along a water body, the first layer is typically installed at the ordinary high water (OHW) level. Brush layers may be installed below OHW to provide cover and fish habitat. These plants probably will not root and become established.

Excavate the first bench two to three feet deep so that it angles slightly down and into the slope (see *Hedge Brush Layering/Brush Layering, Step by Step*). Lay branches and transplants on the bench, slightly crisscrossing them. Place the cut ends of the branches and the roots of the transplants into the slope with the tips or shoots extending beyond the edge of the bench **no more than 1/4 the total branch length**. Plant 20 to 25 stems per yard. Higher density plantings are needed for more erosive sites and if the diameter of the plant material is small. Fill the newly planted bench with desired bank height is reached. The spacing between layers will vary with the erosion potential of the site. Sites with a shallow slope and low erosion potential can have wider spacing than sites with a steep slope and higher erosion potential. This technique can be easily mechanized, layer by layer, if it is installed during construction of a fill slope. On cut slopes and existing banks each layer must be excavated.

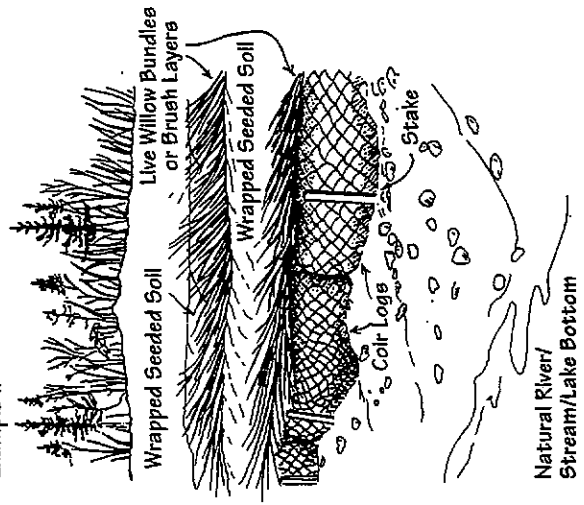
Hedge brush layering is a variation of brush layering (see *Brush Layering*).



Coir logs are constructed of interwoven coconut fibers that are bound together with biodegradable netting. Commercially produced coir logs come in various lengths and diameters. The product needs to be selected specifically for the site. Fiber logs composed of other sturdy biodegradable materials may function equally as well.

Applications for coir logs occur in many streambank, wetland and upland environments. The log provides temporary physical protection to a site while vegetation becomes established and biological protection takes over. The logs can provide a substrate for plant growth, protect plants growing adjacent to the log, can be used as a transition from one revegetation technique to another, and used to secure the toe of a slope. Both the upstream and downstream ends of the coir log(s) need to transition smoothly into a stable streambank to reduce the potential to wash out.

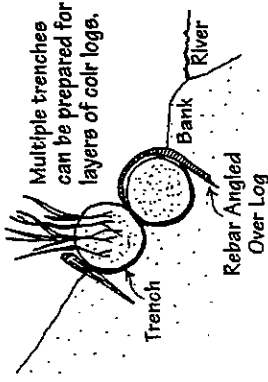
Example 1.



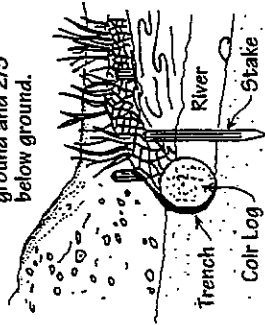
Install the logs to ensure contact with soil along the entire length. In most cases, excavate a shallow trench to partially bury the log. At no time should the coir log span any open space that may occur between rocks, logs or uneven ground. Tie logs together that have been placed end to end and stake into place. Flowing streams, particularly those carrying ice during breakup, could rip the log out of the streambank, if it is not adequately anchored. Wooden stakes, curved rebar and earth anchors have all been used to securely anchor these logs.

Sod or sprig coir logs when they are placed in locations that will provide adequate moisture for plant growth. Small holes can be created in the surface of the logs and sprigs, or small plugs of suitable plant species can be transplanted into the log (see *Streambank Revegetation Plant Species Selection List, Grasses and Sedges*). These plantings should be fertilized (see *Fertilizer section*).

Example 2.
Logs biodegrade as plant roots develop.



Coir Log is 1/3 above ground and 2/3 below ground.



Partially buried coir log with live siltation immediately behind.

Appendix K – SPCC Plan

Spill Prevention Control and Countermeasure Plan

Alaska Department of Transportation and Public Facilities
Anchorage, Alaska

SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN

King Salmon Maintenance Station

King Salmon, Alaska

January 2011

TABLE OF CONTENTS

	Page
Introduction	1
Part 1: Plan Administration	
1.1 Management Approval and Designated Person	3
1.2 Professional Engineer Certification	3
1.3 Location of SPCC Plan	4
1.4 Plan Review	4
1.5 Cross-Reference with SPCC Provisions	5
Part 2: General Facility Information	
2.1 Facility Description	9
2.2 Evaluation of Discharge Potential	11
Part 3: Discharge Prevention – General SPCC Provisions	
3.1 Compliance with Applicable Requirements	12
3.2 Facility Layout Diagram	12
3.3 Spill Reporting	12
3.4 Potential Discharge Volumes and Direction of Flow	12
3.5 Containment and Diversionary Structures	13
3.6 Practicability of Secondary Containment	14
3.7 Inspections, Tests, and Records	14
3.8 Personnel, Training, and Discharge Prevention Procedures	16
3.9 Security	17
Part 4: Discharge Prevention – SPCC Provisions for Onshore Facilities (Excluding Production Facilities)	
4.1 Facility Drainage	18
4.2 Bulk Storage Containers	18
4.3 Transfer Operations, Pumping, and In-Plant Processes	21
Part 5: Discharge Response	
5.1 Response to a Minor Discharge	22
5.2 Response to a Major Discharge	23
5.3 Waste Disposal	24
5.4 Discharge Notification	24

5.5 Cleanup Contractors and Equipment Suppliers	25
---	----

List of Tables

Table 1-1: Plan Review Log	6
Table 1-2: SPCC Cross-Reference	7
Table 2-1: Oil Containers	10
Table 3-1: Potential Discharge Volume and Direction of Flow	13
Table 3-2: Inspection and Testing Program	15
Table 4-1: List of Oil Containers	18
Table 4-2: Scope and Frequency of Bulk Storage Containers Inspections and Tests	20

Appendices

- A: Site Plan and Facility Diagram
- B: Substantial Harm Determination
- C: Facility Inspection Checklists
- D: Record of Containment Dike Drainage
- E: Record of Discharge Prevention Briefings and Training
- F: Calculation of Secondary Containment Capacity
- G: Records of Tank Integrity and Pressure Tests
- H: Emergency Contacts
- I: Discharge Notification Form
- J: Discharge Response Equipment Inventory
- K: Agency Notification Standard Report

LIST OF ACRONYMS AND ABBREVIATIONS

AST	Aboveground Storage Tank
EPA	U.S. Environmental Protection Agency
ADEC	Alaska Department of Environmental Conservation
ADOT&PF	Alaska Department of Transportation and Public Facilities
M&O	Maintenance and Operations
NPDES	National Pollutant Discharge Elimination System
PE	Professional Engineer
SPCC	Spill Prevention, Control, and Countermeasure
STI	Steel Tank Institute
SWPPP	Stormwater Pollution Prevention Plan
UST	Underground Storage Tank

INTRODUCTION

Purpose

The purpose of this Spill Prevention, Control, and Countermeasure (SPCC) Plan is to describe measures implemented by Alaska Department of Transportation and Public Facilities (ADOT&PF) to prevent oil discharges from occurring, and to prepare ADOT&PF to respond in a safe, effective, and timely manner to mitigate the impacts of a discharge at the King Salmon Airport and Maintenance Station.

This Plan has been prepared to meet the requirements of Title 40, *Code of Federal Regulations*, Part 112 (40 CFR part 112), and supersedes the plan developed in June 1998 to meet provisions in effect since 1974.

In addition to fulfilling requirements of 40 CFR part 112, this SPCC Plan is used as a reference for oil storage information and testing records, as a tool to communicate practices on preventing and responding to discharges with employees, as a guide to facility inspections, and as a resource during emergency response. It is the policy of ADOT&PF to prevent the discharge of oil and hazardous substances and to provide for prompt and coordinated response to contain and cleanup spills, should they occur.

ADOT&PF has determined that this facility does not pose a risk of substantial harm under 40 CFR part 112, as recorded in the "Substantial Harm Determination" included in Appendix B of this Plan.

This Plan has been developed for ADOT&PF above ground storage tanks (ASTs) at the King Salmon Maintenance Facility and provides guidance on activities that ADOT&PF must perform to comply with the SPCC rule:

- Complete monthly and annual site inspections as outlined in the Inspection, Tests, and Records section of this Plan (Section 3.7) using the inspection checklists included in Appendix C.
- Perform preventive maintenance of equipment, secondary containment systems, and discharge prevention systems described in this Plan as needed to keep them in proper operating conditions.
- Conduct annual employee training as outlined in the Personnel, Training, and Spill Prevention Procedures section of this Plan (Section 3.8) and document them on the log included in Appendix E.
- If either of the following occurs, submit the SPCC Plan to the EPA Region 10 Regional Administrator (RA) and the Alaska Department of Environmental Conservation (ADEC), along with other information as detailed in Section 5.4 of this Plan:

- The facility discharges more than 1,000 gallons of oil into or upon the navigable waters of the U.S. or adjoining shorelines in a single spill event; or
- The facility discharges oil in quantity greater than 42 gallons in each of two spill events within any 12-month period.

- Review the SPCC Plan at least once every five (5) years and amend it to include more effective prevention and control technology, if such technology will significantly reduce the likelihood of a spill event and has been proven effective in the field at the time of the review. Plan amendments, other than administrative changes discussed above, must be recertified by a Professional Engineer on the certification page in Section 1.2 of this Plan.

- Amend the SPCC Plan within six (6) months whenever there is a change in facility design, construction, operation, or maintenance that materially affects the facility's spill potential. The revised Plan must be recertified by a Professional Engineer (PE).

- Review the Plan on an annual basis. Update the Plan to reflect any "administrative changes" that are applicable, such as personnel changes or revisions to contact information, such as phone numbers. Administrative changes must be documented in the Plan review log of Section 1.4 of this Plan, but do not have to be certified by a PE.

Part 1: Plan Administration

1.1 Management Approval and Designated Person (40 CFR 112.7)

ADOT &PF is committed to preventing discharges of oil to navigable waters and the environment, and to maintaining the highest standards for spill prevention control and countermeasures through the implementation and regular review and amendment to the Plan. This SPCC Plan has the full approval ADOT&PF. ADOT&PF has committed the necessary resources to implement the measures described in this Plan.


The Facility Operator is the Designated Person Accountable for Oil Spill Prevention at the facility and has the authority to commit the necessary resources to implement this Plan.


Authorized Facility Representative (facility response coordinator)	Jay Knight
Signature: 	King Salmon Airport Manager
Title:	
Date: 1-27-11	

1.2 Professional Engineer Certification (40 CFR 112.3(d))

The undersigned Registered Professional Engineer is familiar with the requirements of Part 112 of Title 40 of the *Code of Federal Regulations* (40 CFR part 112) and has visited and examined the facility, or has supervised examination of the facility by appropriately qualified personnel. The undersigned Registered Professional Engineer attests that this Spill Prevention, Control, and Countermeasure Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards and the requirements of 40 CFR part 112; that procedures for required inspections and testing have been established; and that this Plan is adequate for the facility. [40 CFR 112.3(d)]

This certification in no way relieves the owner or operator of the facility of his/her duty to prepare and fully implement this SPCC Plan in accordance with the requirements of 40 CFR part 112. This Plan is valid only to the extent that the facility owner or operator maintains, tests, and inspects equipment, containment, and other devices as prescribed in this Plan.

Signature: 	Professional Engineer Registration Number:
Name: Jennifer Reed	Title: Chief Engineer
Company: ADOT	Date: 1/27/11



1.3 Location of SPCC Plan (40 CFR 112.3(e))

In accordance with 40 CFR 112.3(e), a complete copy of this SPCC Plan is maintained at the King Salmon Maintenance facility in the office building as part of the Storm Water Pollution Prevention Plan (SWPPP), located at:

Mile Post 1 of the Alaska Peninsula Highway/ P.O. Box 65
King Salmon, Alaska, 99613

The front office is attended whenever the facility is operating.

1.4 Plan Review (40 CFR 112.3 and 112.5)

1.4.1 Changes in Facility Configuration

In accordance with 40 CFR 112.5(a), ADOT&PF periodically reviews and evaluates this SPCC Plan for any change in the facility design, construction, operation, or maintenance that materially affects the facility's potential for an oil discharge, including, but not limited to:

- commissioning of containers;
- reconstruction, replacement, or installation of piping systems;
- construction or demolition that might alter secondary containment structures; or
- changes of product or service, revisions to standard operation, modification of testing/inspection procedures, and use of new or modified industry standards or maintenance procedures.

Amendments to the Plan made to address changes of this nature are referred to as technical amendments, and must be certified by a PE. Non-technical amendments can be done (and must be documented in this section) by the facility owner and/or operator. Non-technical amendments include the following:

- change in the name or contact information (i.e., telephone numbers) of individuals responsible for the implementation of this Plan; or
- change in the name or contact information of spill response or cleanup contractors.

ADOT&PF must make the needed revisions to the SPCC Plan as soon as possible, but no later than six months after the change occurs. The Plan must be implemented as soon as possible following any technical amendment, but *no later than six months* from the date of the amendment. The Facility Manager is responsible for initiating revisions with Maintenance and Operations (M&O) Environmental Analyst who will oversee amendments to the SPCC Plan.

1.4.2 Scheduled Plan Reviews

In accordance with 40 CFR 112.5(b), DOT&PF reviews this SPCC Plan at least once every five years. Revisions to the Plan, if needed, are made within six months of the five-year review. A registered Professional Engineer certifies any technical amendment to the Plan, as described

above, in accordance with 40 CFR 112.3(d). The last SPCC review occurred in *June 1998*. This Plan is dated *January 2011*. The next plan review is therefore scheduled to take place on or prior to *January 2016*.

1.4.3 Record of Plan Reviews

Scheduled reviews and Plan amendments are recorded in the Plan Review Log (Table 1-1). This log must be completed even if no amendment is made to the Plan as a result of the review. Unless a technical or administrative change prompts an earlier review of the Plan, the next scheduled review of this Plan must occur by *January 2016*.

1.5 Cross-Reference with SPCC Provisions (40 CFR 112.7)

This SPCC Plan does not follow the exact order presented in 40 CFR part 112. Section headings identify, where appropriate, the relevant section(s) of the SPCC rule. Table 1-2 presents a cross-reference of Plan sections relative to applicable parts of 40 CFR part 112.

Table 1-1: Plan Review Log

By	Date	Activity	PE certification required?	Comments

* Previous PE certifications of this Plan are summarized below.

Date	Scope	PE Name	Licensing State and Registration No.
June 1998	Previous SPCC for the facility	Lorie M. Dilley, P.E., C.P.G.	Alaska CE 9256

Table 1-2: SPCC Cross-Reference

Provision	Plan Section	Page
112.3(d)	Professional Engineer Certification	3
112.3(e)	Location of SPCC Plan	4
112.5	Plan Review	4, 6 Table 1-1
112.7	Management Approval	3
112.7	Cross-Reference with SPCC Rule	Table 1-2, page 7
112.7(a)(3)	Part 2: General Facility Information Appendix A: Site Plan and Facility Diagram	9 Appendix A
112.7(a)(4)	5.4 Discharge Notification	24 Appendix I Appendix K
112.7(a)(5)	Part 5: Discharge Response	22
112.7(b)	3.4 Potential Discharge Volumes and Direction of Flow	13
112.7(c)	3.5 Containment and Diversionary Structures	13
112.7(d)	3.6 Practicability of Secondary Containment	14
112.7(e)	3.7 Inspections, Tests, and Records	14 Appendix B
112.7(f)	3.8 Personnel, Training and Discharge Prevention Procedures	16
112.7(g)	3.9 Security	17
112.8(b)	4.1 Facility Drainage	18
112.8(c)(1)	4.2.1 Construction	19
112.8(c)(2)	4.2.2 Secondary Containment	19
112.8(c)(4)	4.2.4 Corrosion Protection	19
112.8(c)(6)	4.2.6 Inspection Appendix B - Facility Inspection Checklists	19 Appendix C

ADOT&PF King Salmon Maintenance Station SPCC Plan, King Salmon, Alaska

Provision	Plan Section	Page
112.8(c)(8)	4.2.8 Overfill Prevention System	20
112.8(c)(10)	4.2.10 Visible Discharges	20
112.8(d)	4.3 Transfer Operations, Pumping and In-Plant Processes	21
112.20(e)	Certification of Substantial Harm Determination	Appendix B

* Only selected excerpts of relevant rule text are provided. For a complete list of SPCC requirements, refer to the full text of 40 CFR part 112.

Part 2: General Facility Information

Name:	Alaska Department of Transportation and Public Facilities, King Salmon Maintenance Station
Address:	P.O. Box 65 King Salmon, Alaska 99613 (907) 246-3325
Type:	Maintenance Facility
Date of Initial Operations:	December 1997
Owner/Operator:	Alaska Department of Transportation and Public Facilities P.O. Box 196900 4111 Aviation Drive Anchorage, Alaska 99519
Primary contact:	Jay Knight, Airport Manager Work: (907) 246-3325 Cell (24 hours): (907) 439-1129

2.1 Facility Description (40 CFR 112.7(a)(3))

2.1.1 Location and Activities

The King Salmon Maintenance Station includes the Maintenance and Operations (M&O) building/ARFF building, sand storage buildings, and vehicle and equipment storage buildings. A vicinity map and site map are presented in Figures 1 and 2. The station stores equipment and resources necessary for airport maintenance, airport fire response, and maintenance of state roads. The aboveground storage tanks (AST) are used to store and dispense fuel to facility vehicles and to heat the facility. Used oil and lubricant tanks and a hydraulic fluid reservoir are also located indoors, on pallets in 55 gallon drums and 110 gallon wall mounted lubricant dispenser with a pallet for secondary containment. Outside activities include equipment fueling, runway maintenance, and deicing and sanding activities.

2.1.2 Oil Storage

Oil storage at the facility consists of two ASTs: 4,000 gallon diesel fuel tank as well as a 3,000 gallon fuel tank for building heating, both located next to the ARFF/Maintenance a. Both tanks contain #1 diesel fuel.

The capacities of oil containers present at the site are listed below and locations are indicated on the facility diagram in Figure A-2. All containers with capacity of 55 gallons or more are included. The capacity of the oil/water separator is not included in the total storage capacity for the facility since it is used to treat storm water and as a means of secondary containment for areas of the facility with potential for an oil discharge.

Table 2-1: Oil Containers

ID	Storage capacity	Content	Description
Fixed Storage			
1	4,000 gallons	Diesel	Double walled aboveground horizontal tank elevated on built-in saddles
2	3,000 gallons	Diesel	Double walled aboveground horizontal tank elevated on built-in saddles
3	110	Lubricant dispenser	Single walled, wall mounted lubricant dispenser with pallet secondary containment.
4	55 gallons	Waste oil, oil, hydraulic fluid	Single walled 55 gallon drums stored indoors and on pallets

Total Oil Storage: 7,110 gallons + drums

Other containers: (1) 45-gallon oil/water separator

Note: The oil/water separator is used treat facility drainage (i.e., wastewater) prior to discharge of shop waste water into the adjacent vegetated ditch. Discharge from the facility includes storm water from vehicles, fire prevention fluids and waste water associated with vehicle maintenance . No external oil tanks are associated with the oil/water separator. This equipment is used to meet certain secondary containment requirements under 40 CFR part 112, as described later in this Plan. Thus, the capacity of the oil/water separator is not counted towards the facility total storage capacity.

2.2 Evaluation of Discharge Potential

2.2.1 Distance to Navigable Waters and Adjoining Shorelines and Flow Paths

The nearest navigable water body that would be impacted by a spill from this facility is the Naknek River, approximately 100 feet (straight line) from the end of the southeastern portion of the 12/30 runway and safety area. At this location of the airport stormwater leaves the airport via sheet flow (see watershed E on Figure 2 in Appendix A). There is no oil storage at this location but the potential for equipment leak is possible as well as stormwater discharges from deicing practices. At the south end of the 18/36 runway the Naknek River is 500 feet from the safety area. At this location of the airport stormwater leaves the airport via sheet flow (see watershed B on Figure 2 in Appendix A). There is no oil storage at this location but the potential for equipment leak is possible as well as stormwater discharges from deicing practices. The maintenance facility is part of watershed A, a release from the facility would flow south and west to the vegetated ditch adjacent to the maintenance facility. A spill at the northwestern end of the 12/30 runway could enter Eskimo Creek via sheet flow which drains into Naknek River approximately 0.2 miles away (see watershed F on Figure 2 in appendix A). There is no oil storage at this location but the potential for equipment leak is possible as well as stormwater discharges from deicing practices.

2.2.2 Discharge History

This facility has not had a documented spill since it opened in 1972. If this facility has a greater than 1,000 gallon release to the water, or two federally reportable spills in a 12 month period, then the SPCC Plan must be submitted to the EPA Regional Administrator and ADEC.

PART 3: Discharge Prevention - General SPCC Provisions

The following measures are implemented to prevent oil discharges during the handling, use, or transfer of oil products at the facility. Oil-handling employees have received training in the proper implementation of these measures.

3.1 Compliance with Applicable Requirements (40 CFR 112.7(a)(2))

This facility uses an oil/water separator as part of its drainage system to contain oil discharged. The separator provides environmental protection equivalent to the requirements under 112.8(b)(3) to use ponds, lagoons, or catchment basins to retain oil at the facility in the event of an uncontrolled discharge. As described in Section 3.5 of this Plan, the operational and emergency oil storage capacity of the oil/water separator is sufficient to handle the quantity of oil expected to be discharged from tank overfills or transfer operations.

3.2 Facility Layout Diagram (40 CFR 112.7(a)(3))

Figure A-1 in Appendix A shows the general location of the facility on a U.S. Geological Survey topographic map. Figure A-2 in Appendix A presents a layout of the facility and the location of storage tanks and drums. The diagram also shows the location of storm water drain inlets and the direction of surface water runoff. As required under 40 CFR 112.7(a)(3), the facility diagram indicates the location of ASTs.

3.3 Spill Reporting (40 CFR 112.7(a)(4))

The discharge notification form included in Appendix I will be completed upon immediate detection of a discharge and prior to reporting a spill to the proper notification contacts.

3.4 Potential Discharge Volumes and Direction of Flow (40 CFR 112.7(b))

Table 3-1 presents expected volume, discharge rate, general direction of flow in the event of equipment failure, and means of secondary containment for different parts of the facility where oil is stored, used, or handled.

Table 3-1: Potential Discharge Volumes and Direction of Flow

Potential Event	Maximum volume released (gallons)	Maximum discharge rate	Direction of Flow	Secondary Containment
Fuel Tank – Maintenance Facility				
Failure of aboveground tank (collapse or puncture below product level)	4,000	Gradual to instantaneous	South to drainage ditch	Double walled construction
Tank overfill	1 to 55	55 gal/min	South to drainage ditch	Double walled construction
Pipe failure	4,000	10 gal/min	South to drainage ditch	Double walled construction
Leaking pipe or valve packing	4,000	3 gal/min	South to drainage ditch	Double walled construction
Fuel Tank – Maintenance Building				
Failure of aboveground tank (collapse or puncture below product level)	3,000	Gradual to instantaneous	South to drainage ditch	Double walled construction
Tank overfill	1-55	55 gal/min	South to drainage ditch	Double walled construction
Pipe failure	3,000	32 gal/min	South to drainage ditch	Double walled construction
Leaking pipe or valve packing	3,000	3-8 gal/min	South to drainage ditch	Double walled construction
Hydraulic Fluid Dispenser – Maintenance Building				
Failure of Dispenser	110	Gradual to instantaneous	Stored indoors	Pallet and oil/water separator
Overfill	1-10	10 gal/min	Stored indoors	Pallet and oil/water separator
Maintenance Building				
Leak or failure of drum	1 to 55	Gradual to instantaneous	North and west to isolated low area	Stored indoors
Other Areas				

3.5 Containment and Diversionary Structures (40 CFR 112.7(c))

Methods of secondary containment at this facility include a combination of structures drainage systems (e.g., oil/water separator), and land-based spill response (e.g., drain covers, sorbents) to prevent oil from reaching navigable waters and adjoining shorelines:

For bulk storage containers (refer to Section 4.2.2 of this Plan):

- **Double-wall tank construction.**
- **Sorbent material.** Spill cleanup kits that include absorbent material and booms are stored in the maintenance building and the Red River Facility located on the airport and owned by the U.S. Air Force. The inventory is checked regularly to ensure that used material is replenished.
- **Oil/water separator.** The oil/water separator is designed to separate and retain oil at the facility. The oil/water separator has a static holding capacity of 45 gallons and a design flow rate of 25 gallons per minute. The maximum amount of oil potentially discharged within the shop is 110 gallons. Best Management Practices are used to minimize the amount of solids and oil that flow into the oil/water separator. Facility personnel are instructed to avoid and address small spills using sorbents to minimize runoff of oil into the oil/water separator. The oil/water separator is inspected monthly as part of the scheduled inspection to check the level of water within the separator and measure the depth of bottom sludges and floating oils. Floating oil is removed when it reaches a thickness of 2 inches.

3.6 Practicability of Secondary Containment (40 CFR 112.7(d))

ADOT&PF management has determined that secondary containment is practicable at this facility.

3.7 Inspections, Tests, and Records (40 CFR 112.7(e))

As required by the SPCC rule, ADOT&PF performs the inspections, tests, and evaluations listed in the following table. Table 3-2 summarizes the various types of inspections and tests performed at the facility. The inspections and tests are described later in this section, and in the respective sections that describe different parts of the facility (e.g., Section 4.2.6 for bulk storage containers).

Table 3-2: Inspection and Testing Program

Facility Component	Action	Frequency/Circumstances
Aboveground container	Test container integrity. Combine visual inspection with another testing technique (non-destructive shell testing). Inspect outside of container for signs of deterioration and discharges.	Following a regular schedule (monthly, annual, and during scheduled inspections) and whenever material repairs are made.
Container supports and foundation	Inspect container's supports and foundations.	Following a regular schedule (monthly, annual, and during scheduled inspections) and whenever material repairs are made.
Liquid level sensing devices (overflow)	Test for proper operation.	Monthly

3.7.1 Daily Inspection

A DOT&PF employee performs a complete walk-through of the facility each day. This daily visual inspection involves: (1) looking for tank/piping damage or leakage, stained or discolored soils; (2) observing shop drains, ditches, and low lying areas.

3.7.2 Monthly Inspection

The checklist provided in Appendix C is used for monthly inspections by ADOT&PF personnel. The monthly inspections cover the following key elements:

- Observing the exterior of aboveground storage tanks, pipes, and other equipment for signs of deterioration, leaks, corrosion, and thinning.
- Observing the exterior of portable containers for signs of deterioration or leaks.
- Observing tank foundations and supports for signs of instability or excessive settlement.
- Observing the tank fill and discharge pipes for signs of poor connection that could cause a discharge, and tank vent for obstructions and proper operation.
- Verifying the proper functioning of overflow prevention systems.
- Checking the inventory of spill response kits.
- Observing the effluent and measuring the quantity of accumulated oil within the oil/water separator.

All problems regarding tanks, piping, containment, or spill response kits must immediately be reported to the Airport Manager. Visible oil leaks from tank walls, piping, or other components must be repaired as soon as possible to prevent a larger spill or a discharge to navigable waters or adjoining shorelines. Pooled oil is removed immediately upon discovery.

Written monthly inspection records are signed by the Airport Manager and maintained with this SPCC Plan for a period of three years.

3.7.3 Annual Inspection

Facility personnel perform a more thorough inspection of facility equipment on an annual basis. This annual inspection complements the monthly inspection described above and is performed in July of each year using the checklist provided in Appendix C of this Plan.

The inspection is will preferably take place after a large storm event to observe drainage ditches and oil/water separator functioning.

Written annual inspection records are signed by the Airport Manager and maintained with this SPCC Plan for a period of three years.

3.7.4 Periodic Integrity Testing

In addition to the above monthly and annual inspections by facility personnel, all tanks are periodically evaluated by an outside certified tank inspector following the Steel Tank Institute (STI) *Standard for the Inspection of Aboveground Storage Tanks*, SP-001, 2005 version, as described in Section 4.2.6 of this Plan.

3.8 Personnel, Training, and Discharge Prevention Procedures (40 CFR 112.7(f))

The Airport Manager is the facility designee and is responsible for oil discharge prevention, control, and response preparedness activities at this facility.

ADOT&PF management has instructed facility personnel in the operation and maintenance of oil pollution prevention equipment, discharge procedure protocols, applicable pollution control laws, rules and regulations, general facility operations, and the content of this SPCC Plan. Any new facility personnel are provided with this same training.

Annual discharge prevention briefings are held by the Airport Manager for all facility personnel involved in oil operations. The briefings are aimed at ensuring continued understanding and adherence to the discharge prevention procedures presented in the SPCC Plan. The briefings also highlight and describe known discharge events or failures, malfunctioning components, and recently implemented precautionary measures and best practices. Facility operators and other personnel will have the opportunity during the briefings to share recommendations concerning health, safety, and environmental issues encountered during facility operations.

Future training exercises will be periodically held to prepare for possible discharge responses.

Records of the briefings and discharge prevention training are kept on the form shown in Appendix E and maintained with this SPCC Plan for a period of three years.

3.9 Security (40 CFR 112.7(g))

Security issues addressed in the SPCC regulations include vandalism, accidental damage from vehicles or foot traffic, unauthorized or inappropriate access, and safety precautions for equipment that is not in service. Accordingly, security measures should be implemented to control access, emphasize operational safety, and enhance spill prevention efforts. Specific features referenced in the regulations consist of fences, locks, and lighting. Security measures include:

- Posts and ballards
- Lighting
- Locks for dispensing devices during unmanned hours
- Emergency shut off devices
- Signs and labels

When tanks are in non-operating or standby status, valves that allow outward flow of fuel are to be securely closed in non-operating status.

PART 4: Discharge Prevention – SPCC Provisions for Onshore Facilities (Excluding Production Facilities)

4.1 Facility Drainage (40 CFR 112.8(b))

Any potential discharge from ASTs and discharges occurring during fueling/maintenance operations will be contained by the oil/water separator, drainage ditches or low lying area. The maintenance station is approximately 0.2 miles from surface waters which allows buffering capacity for spills. The facility includes an oil/water separator, which is used as containment for spill sources on paved and indoor areas. This separator provides environmental protection equivalent to ponds, lagoons, or catchments basins required under 40 CFR 112.8(b)(3) and (4), as allowed in 40 CFR 112.7(a)(2). Discharges outside the containment area, such as those occurring in the fuel dispensing area or while unloading heating oil, will flow by gravity into the adjacent vegetated ditch where oil can be retained until it can be pumped out.

4.2 Bulk Storage Containers (40 CFR 112.8(c))

Table 4-1 summarizes the construction, volume, and content of bulk storage containers at Bethel Maintenance facility.

Table 4-1: List of Oil Containers

Tank	Location	Type (Construction Standard)	Capacity (gallons)	Content	Discharge Prevention & Containment
#1	Maintenance Facility	UL listed Above Ground Fire Guard Secondary Containment Storage Tank	4,000	Diesel	Concrete dike. Liquid level gauge.
#2	Maintenance Facility	UL listed Above Ground Fire Guard Secondary Containment Storage Tank	3,000	Diesel	Concrete dike. Liquid level gauge.
#3	Maintenance Facility	Lubricant Dispenser	110	Vehicle Lubricants	Secondary pallet containment, stored indoors, oil/water separator in drains.
	Inside Maintenance Building	Steel drums	55	Motor oil and used oil	Spill pallets with built-in containment capacity. Building also serves as containment since floor drains flow into oil/water separator

4.2.1 Construction (40 CFR 112.8 (c)(1))

All oil tanks used at this facility are constructed of steel, in accordance with industry specifications as described above. The design and construction of all bulk storage containers are compatible with the characteristics of the oil product they contain, and with temperature and pressure conditions.

Piping between fixed aboveground bulk storage tanks is made of steel and placed aboveground on appropriate supports designed to minimize erosion and stress.

4.2.2 Secondary Containment (40 CFR 112.8(c)(2))

All ASTs are double walled tanks with overfill protection and liquid level gauges. In the event of a spill oil will flow to low vegetated areas isolated from surface waters until it is able to be retrieved.

The 55-gallon drums are stored indoors when possible and the drain system and oil water separators in the SEF and warm storage buildings serve as a source of secondary containment.

4.2.3 Corrosion Protection (40 CFR 112.8(c)(4))

All tanks are coated with White Chemline Polyurethane to prevent corrosion. Tanks are monitored and inspected regularly for leaks and wear. All piping is above ground and is made of black iron.

4.2.4 Inspections and Tests (40 CFR 112.8(c)(6))

Visual inspections of ASTs by facility personnel are performed according to the procedure described in this SPCC Plan. Leaks from tank seams, gaskets, rivets, and bolts are promptly corrected. Records of inspections and tests are signed by the inspector and kept at the facility for at least three years.

Annual inspections by certified and contracted individuals are conducted and records of certified tank inspections are kept at the facility for at least three years. Shell test comparison records are retained for the life of the tanks.

Table 4-2 summarizes inspections and tests performed on bulk storage containers ("EE" indicates that an environmentally equivalent measure is implemented in place of the inspection/test, as discussed in Section 3.1 of this Plan).

Table 4-2: Scope and Frequency of Bulk Storage Containers Inspections and Tests

Inspection/Test	Tank ID							Drums
	#1	#2	#3	#4	#5	#6	#7	
Visual inspection by facility personnel (as per checklist of Appendix C)	M A	M A	M A					M A
External inspection by certified inspector (as per STI Standard SP-001)	20 yr	20 yr	20 yr					EE
Internal inspection by certified inspector (as per STI Standard SP-001)	20 yr*	20 yr*	20 yr*					EE
Tank tightness test meeting requirements of 40 CFR 280								

Legend: M: Monthly
A: Annual
EE: Inspection not required given use of environmentally equivalent measure (refer to Section 3.1 of this Plan).
* Or earlier, as recommended by the certified inspector based on findings from an external inspection.
† Internal inspection may be recommended by the certified inspector based on findings from the external inspection.

The frequency above is based on implementation of a scheduled inspection/testing program. To initiate the program, ASTs will be inspected by the following dates:

- All tanks will be visually inspected monthly beginning April 2011.
- All tanks must be undergo an external inspection on or before April 2012

4.2.6 Overfill Prevention Systems (40 CFR 112.8(c)(8))

All tanks are equipped with a liquid level gauge. General secondary containment is provided in the event of overfills, as described in this Plan.

Facility personnel are present, when possible, throughout the filling operations to monitor the product level in the tanks, when possible.

4.2.7 Visible Discharges (40 CFR 112.8(c)(10))

Visible discharges from any container or appurtenance – including seams, gaskets, piping, pumps, valves, rivets, and bolts – are quickly corrected upon discovery.

Oil is promptly removed and disposed of according to the waste disposal method described in Part 5 of this Plan.

4.3 Transfer Operations, Pumping, and In-Plant Processes (40 CFR 112.8(d))

Transfer operations at this facility include:

- The filling of oil to storage tanks.
- The filling of operations vehicles.

All piping at this facility is aboveground and cathodically protected against corrosion and is provided with a protective wrapping and coating. All pipes are visually inspected on a monthly basis. Inspection includes aboveground valves, piping, appurtenances, expansion joints, valve glands and bodies, catch pans, pipeline supports, locking of valves, and metal surfaces. Observations are noted on the monthly inspection checklist provided in this Plan. If corrosion damage is found, additional examination and corrective action must be taken as deemed appropriate considering the magnitude of the damage.

Lines that are not in service or are on standby for an extended period of time are capped or blank-flanged and marked as to their origin.

All pipe supports are designed to minimize abrasion and corrosion and to allow for expansion and contraction. Pipe supports are visually inspected during the monthly inspection of the facility.

Warning signs are posted at appropriate locations throughout the facility to prevent vehicles from damaging aboveground piping and appurtenances.

Part 5: Discharge Response

This section describes the response and cleanup procedures in the event of an oil discharge. The uncontrolled discharge of oil to groundwater, surface water, or soil is prohibited by state and federal laws. Immediate action must be taken to control, contain, and recover discharged product.

In general, the following steps are taken:

- Eliminate potential spark sources;
- If possible and safe to do so, identify and shut down source of the discharge to stop the flow;
- Contain the discharge with sorbents, berms, fences, trenches, sandbags, or other material;
- Contact the Airport Manager or his/her alternate;
- Contact regulatory authorities and the response organization; and
- Collect and dispose of recovered products according to regulation.

For the purpose of establishing appropriate response procedures, this SPCC Plan classifies discharges as either “minor” or “major,” depending on the volume and characteristics of the material released.

A list of Emergency Contacts is provided in Appendix H. The list is also posted at prominent locations throughout the facility. A list of discharge response material kept at the facility is included in Appendix J.

5.1 Response to a Minor Discharge

A “minor” discharge is defined as one that poses no significant harm (or threat) to human health and safety or to the environment. Minor discharges are generally those where:

- The quantity of product discharged is small (e.g., may involve less than 10 gallons of oil);
- Discharged material is easily stopped and controlled at the time of the discharge;
- Discharge is localized near the source;
- Discharged material is not likely to reach water;
- There is little risk to human health or safety; and
- There is little risk of fire or explosion.

Minor discharges can usually be cleaned up by ADOT&PF personnel. The following guidelines apply:

- Immediately notify the Airport Manager.
- Under the direction of the Airport Manager, contain the discharge with discharge response materials and equipment. Place discharge debris in properly labeled waste containers.
- The Airport Manager will complete the discharge notification form (Appendix I) and attach a copy to this SPCC Plan.
- If the discharge involves between 1 and 10 gallons of oil, the Airport Manager will notify the ADEC in writing within 10 days.
- If the discharge involves between 10 and 55 gallons of oil, the Airport Manager will notify the ADEC within 48 hours.
- If the discharge involves more than 55 gallons of oil, the Airport Manager will notify the ADEC immediately.

5.2 Response to a Major Discharge

A “major” discharge is defined as one that may not be safely controlled or cleaned up by facility personnel, such as when:

- The discharge is large enough to spread beyond the immediate discharge area;
- The discharged material enters water;
- The discharge requires special equipment or training to clean up;
- The discharged material poses a hazard to human health or safety; or
- There is a danger of fire or explosion.

In the event of a major discharge, the following guidelines apply:

- All workers must immediately evacuate the discharge site via the designated exit routes and move to the designated staging areas at a safe distance from the discharge. Exit routes are included on the facility diagram and posted in the maintenance building, in the office building, and on the outside wall of the outside shed that contains the spill response equipment.
- If the Airport Manager is not present at the facility, the senior on-site person notifies the Airport Manager of the discharge and has authority to initiate notification and response. Certain notifications are dependent on the circumstances and type of discharge.
- The Airport Manager (or senior on-site person) must call for medical assistance if workers are injured.
- The Airport Manager (or senior on-site person) must notify the Fire Department or Police Department.
- The Airport Manager (or senior on-site person) must call the spill response and cleanup contractors listed in the Emergency Contacts list in Appendix H.

- The Airport Manager (or senior on-site person) must immediately contact the ADEC.
- The Airport Manager (or senior on-site person) must record the call on the Discharge Notification form in Appendix I and attach a copy to this SPCC Plan.
- The Airport Manager (or senior on-site person) coordinates cleanup and obtains assistance from a cleanup contractor or other response organization as necessary.

If the Airport Manager is not available at the time of the discharge, then the next highest person in seniority assumes responsibility for coordinating response activities.

5.3 Waste Disposal

Wastes resulting from a minor discharge response will be containerized in impervious bags, drums, or buckets. The facility manager will characterize the waste for proper disposal and ensure that it is removed from the facility by a licensed waste hauler within two weeks.

Wastes resulting from a major discharge response will be removed and disposed of by a cleanup contractor, unless the event is manageable by DOT&PF staff.

5.4 Discharge Notification

Any size discharge (i.e., one that creates a sheen, emulsion, or sludge) that affects or threatens to affect navigable waters or adjoining shorelines must be reported immediately to the National Response Center (1-800-424-8802). The Center is staffed 24 hours a day.

A summary sheet is included in Appendix I to facilitate reporting. The person reporting the discharge must provide the following information:

- Name, location, organization, and telephone number
- Name and address of the party responsible for the incident
- Date and time of the incident
- Location of the incident
- Source and cause of the release or discharge
- Types of material(s) released or discharged
- Quantity of materials released or discharged
- Danger or threat posed by the release or discharge
- Number and types of injuries (if any)
- Media affected or threatened by the discharge (i.e., water, land, air)
- Weather conditions at the incident location
- Any other information that may help emergency personnel respond to the incident

Contact information for reporting a discharge to the appropriate authorities is listed in Appendix H and is also posted in prominent locations throughout the facility (e.g. in the maintenance building and the ARFF building).

In addition to the above reporting, 40 CFR 112.4 requires that information be submitted to the United States Environmental Protection Agency (EPA) Regional Administrator and the appropriate state agency in charge of oil pollution control activities (see contact information in Appendix H) whenever the facility discharges (as defined in 40 CFR 112.1(b)) *more than 1,000 gallons of oil in a single event*, or discharges (as defined in 40 CFR 112.1(b)) *more than 42 gallons of oil in each of two discharge incidents within a 12-month period*. The following information must be submitted to the EPA Regional Administrator and to MADEP within 60 days:

- Name of the facility;
- Name of the owner/operator;
- Location of the facility;
- Maximum storage or handling capacity and normal daily throughput;
- Corrective action and countermeasures taken, including a description of equipment repairs and replacements;
- Description of facility, including maps, flow diagrams, and topographical maps;
- Cause of the discharge(s) to navigable waters and adjoining shorelines, including a failure analysis of the system and subsystem in which the failure occurred;
- Additional preventive measures taken or contemplated to minimize possibility of recurrence; and
- Other pertinent information requested by the Regional Administrator.

A standard report for submitting the information to the EPA Regional Administrator and to ADEC is included in Appendix K of this Plan.

5.5 Cleanup Contractors and Equipment Suppliers

Contact information for specialized spill response and cleanup contractors are provided in Appendix H. These contractors have the necessary equipment to respond to a discharge of oil.

Spill kits are located inside the maintenance building. The inventory of response supplies and equipment is provided in Appendix J of this Plan. The inventory is verified on a monthly basis. Spill kits supplies may vary depending the needs of the facility.

Appendix A Site Plan and Facility Diagram

Figure A-1: Site Plan.

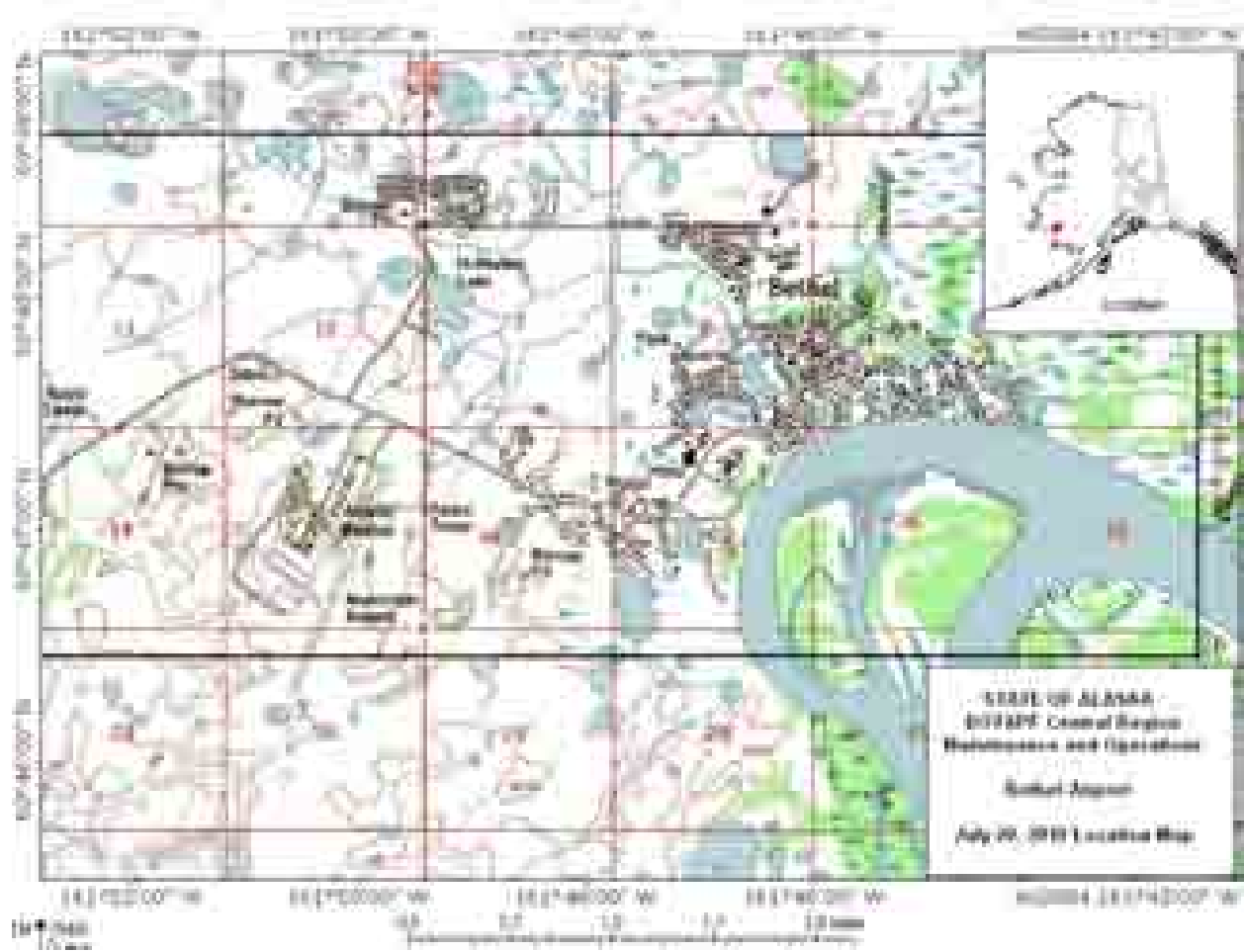
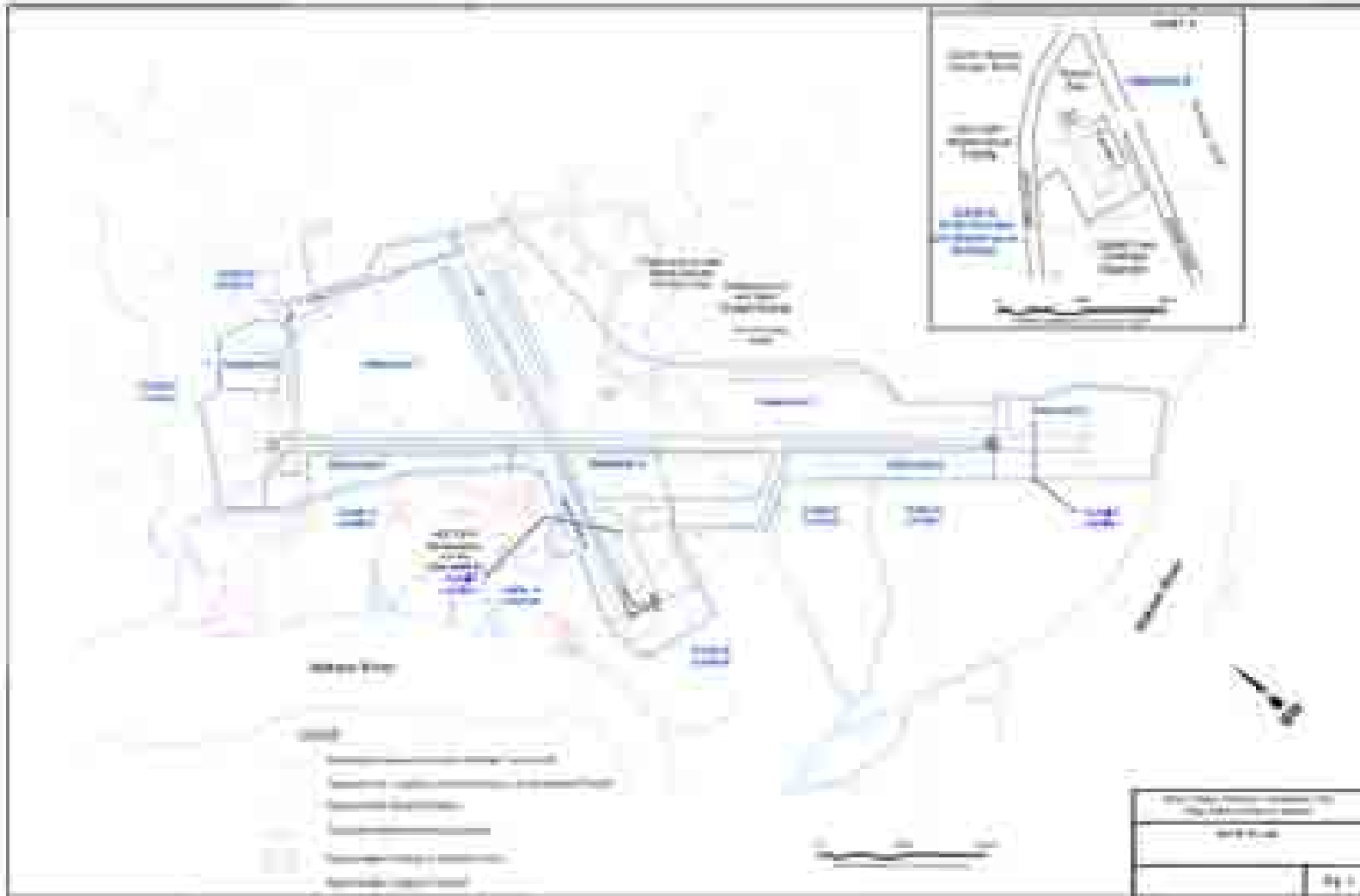


Figure A-2: Facility Diagram.



Appendix B Substantial Harm Determination

Facility Name: King Salmon Airport and Maintenance Station
Facility Address: P.O. Box 65
King Salmon, Alaska 99613

1. Does the facility transfer oil over water to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?
Yes No
2. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground storage tank area?
Yes No
3. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in 40 CFR part 112 Appendix C, Attachment C-III or a comparable formula) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments?
Yes No
4. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in 40 CFR part 112 Appendix C, Attachment C-III or a comparable formula) such that a discharge from the facility would shut down a public drinking water intake?
Yes No
5. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?
Yes No

Certification

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Signature  Title King Salmon Airport Manager
Jay Knight Name (type or print) Date 1-27-11

APPENDIX C

Facility Inspection Checklists

The following checklists are to be used for monthly and annual facility-conducted inspections. Completed checklists must be signed by the inspector and maintained at the facility, with this SPCC Plan, for at least three years.

Monthly Inspection Checklist

This inspection record must be completed *each month* except the month in which an annual inspection is performed. Provide further description and comments, if necessary, on a separate sheet of paper and attach to this sheet. *Any item that receives “yes” as an answer must be described and addressed immediately.

	Y*	N	Description & Comments
Storage tanks			
<i>Tank surfaces show signs of leakage</i>			
<i>Tanks are damaged, rusted or deteriorated</i>			
<i>Bolts, rivets, or seams are damaged</i>			
<i>Tank supports are deteriorated or buckled</i>			
<i>Tank foundations have eroded or settled</i>			
<i>Level gauges or alarms are inoperative</i>			
<i>Vents are obstructed</i>			
<i>Secondary containment is damaged or stained</i>			
<i>Water/product in interstice of double-walled tank</i>			
<i>Dike drainage valve is open or is not locked</i>			
Piping			
<i>Valve seals, gaskets, or other appurtenances are leaking</i>			
<i>Pipelines or supports are damaged or deteriorated</i>			
<i>Joints, valves and other appurtenances are leaking</i>			
<i>Buried piping is exposed</i>			
Oil/water separator			
<i>Oil/water separator > 2 inches of accumulated oil</i>			
<i>Oil/water separator effluent has a sheen</i>			
Security			
<i>Fencing, gates, or lighting is non-functional</i>			
<i>Pumps and valves are locked if not in use</i>			
Response Equipment			
<i>Response equipment inventory is complete</i>			

Date: _____

Signature: _____

Annual Facility Inspection Checklist

This inspection record must be completed *each year*. If any response requires further elaboration, provide comments in Description & Comments space provided. Further description and comments, if necessary, must be provided on a separate sheet of paper and attached to this sheet. *Any item that receives “yes” as an answer must be described and addressed immediately.

	Y*	N	Description & Comments
Storage tanks			
<i>Tank #1</i>			
<i>Tank surfaces show signs of leakage</i>			
<i>Tank is damaged, rusted or deteriorated</i>			
<i>Bolts, rivets or seams are damaged</i>			
<i>Tank supports are deteriorated or buckled</i>			
<i>Tank foundations have eroded or settled</i>			
<i>Level gauges or alarms are inoperative</i>			
<i>Vents are obstructed</i>			
<i>Tank #2</i>			
<i>Tank surfaces show signs of leakage</i>			
<i>Tank is damaged, rusted, or deteriorated</i>			
<i>Bolts, rivets, or seams are damaged</i>			
<i>Tank supports are deteriorated or buckled</i>			
<i>Tank foundations have eroded or settled</i>			
<i>Level gauges or alarms are inoperative</i>			
<i>Vents are obstructed</i>			
Piping			
<i>Valve seals or gaskets are leaking</i>			
<i>Pipelines or supports are damaged or deteriorated</i>			
<i>Joints, valves and other appurtenances are leaking</i>			
<i>Buried piping is exposed</i>			
<i>Out-of-service pipes are not capped</i>			
<i>Warning signs are missing or damaged</i>			
Oil/water separator			
<i>Oil/water separator > 2 inches of accumulated oil</i>			
<i>Oil/water separator effluent has a sheen</i>			
Security			
<i>Fencing, gates, or lighting is non-functional</i>			
<i>Pumps and valves are not locked (and not in use)</i>			
Response equipment			
<i>Response equipment inventory is incomplete</i>			

Annual reminders:

- Hold SPCC Briefing for all oil-handling personnel (and update briefing log in the Plan);
- Check contact information for key employees and response/cleanup contractors and update them in the Plan as needed;

Additional Remarks:

Date: _____

Signature: _____

APPENDIX D

Record of Annual Discharge Prevention Briefings and Training

Briefings will be scheduled and conducted by the Airport Manager for operating personnel at regular intervals to ensure adequate understanding of this SPCC Plan. The briefings will also highlight and describe known discharge events or failures, malfunctioning components, and recently implemented precautionary measures and best practices. Personnel will also be instructed in operation and maintenance of equipment to prevent the discharge of oil, and in applicable pollution laws, rules, and regulations. Airport Manager and other personnel will have an opportunity during the briefings to share recommendations concerning health, safety, and environmental issues encountered during facility operations.

Date	Subjects Covered	Employees in Attendance	Instructor(s)

APPENDIX G

Records of Tank Integrity and Pressure Tests

Attach copies of official records of tank integrity and pressure tests.

APPENDIX H Emergency Contacts

Designated person responsible for spill prevention: *Jay Knight, Airport Manager*
907-246-3325

EMERGENCY TELEPHONE NUMBERS:

Facility

Jay Knight, Airport Manager 907-246-3325 or
cell 907-439-1129

Local Emergency Response

Bristol Bay Fire Department and Police 911 or
907-246-4465

Bristol Bay Borough Police Department 911 or 907-246-
4222

Bristol Bay Area Health Corporation 907-246-3322

Response/Cleanup Contractors

Bristol Bay Contractors 907-246-3360

Notification

Alaska Department of Environmental Conservation 907-465-5250 or
800-478-9300 (24
hour number)

National Response Center 800-424-8802 (24
hour number)

United States Environmental Protection Agency, Region 10 206-553-1263 (24
hour emergency
number)

APPENDIX I Discharge Notification Form

Part A: Discharge Information		
General information when reporting a spill to outside authorities:		
Name:	King Salmon Airport	
Address:	P.O Box 65 King Salmon, AK, 99613	
Telephone:	907-246-3325	
Owner/Operator:	Alaska DOT&PF 4111 Aviation Ave Anchorage, Alaska 99519	
Primary Contact:	Jay Knight, Airport Manager Work: 907-246-3325 Cell (24 hrs): 907-439-1129	
Type of oil:	Discharge Date and Time:	
Quantity released:	Discovery Date and Time:	
Quantity released to a waterbody:	Discharge Duration:	
Location/Source:		
Actions taken to stop, remove, and mitigate impacts of the discharge:		
Affected media:		
G air	G storm water sewer/POTW	
G water	G dike/berm/oil-water separator	
G soil	G other: _____	
Notification person:	Telephone contact: Business: 24-hr:	
Nature of discharges, environmental/health effects, and damages:		
Injuries, fatalities or evacuation required?		
Part B: Notification Checklist		
	Date and time	Name of person receiving call
Discharge in any amount		
Jay Knight, Airport Manager and Response Coordinator 907-246-3325/ 907-439-1129		
Discharge in amount exceeding 10 gallons and <i>not affecting a waterbody or groundwater</i>		
Bristol Bay Fire Department 911 or 907-246-4465		

Alaska Department of Environmental Conservation 907-465-5250 or 800-478-9300 (24 hour number)		
Discharge in any amount and affecting (or threatening to affect) a waterbody		
Bristol Bay Fire Department 911 or 907-246-4465		
Alaska Department of Environmental Conservation 907-465-5250 or 800-478-9300 (24 hour number)		
National Response Center (800) 424-8802		

APPENDIX J

Discharge Response Equipment Inventory

The discharge response equipment inventory is verified during the monthly inspection and must be replenished as needed.

Maintenance Building

Maintenance Facility: Located in Utility room

- Suits
- Absorbents
- Squeegees
- Broom
- Gloves
- Kitty litter is available around the shop

Cold Storage – Red River Facility (on the airport)

- Straw wattles
- Absorbent pads

APPENDIX K Agency Notification Standard Report

Information contained in this report, and any supporting documentation, must be submitted to the EPA Region 1 Regional Administrator, and to MADEP, within 60 days of the qualifying discharge incident.

Facility:	<i>King Salmon Airport</i>
Owner/operator:	<i>Alaska DOT&PF 4111 Aviation Av Anchorage, Alaska 99519</i>
Name of person filing report:	
Location:	<i>PO Box 65 King Salmon, Alaska, 99613</i>
Maximum storage capacity:	<i>7,000 gallons</i>
Nature of qualifying incident(s):	
<p>Discharge to navigable waters or adjoining shorelines exceeding 1,000 gallons Second discharge exceeding 42 gallons within a 12-month period.</p>	

Description of facility (attach maps, flow diagrams, and topographical maps):

The King Salmon Airport is located just southeast of King Salmon, AK (Appendix A). The facility consists of one main 8,901-foot-long asphalt-surfaced runway (12/30) and a shorter 4,018-foot long asphalt-surfaced runway (18/36). There is also a 4,000-foot-long seaplane landing area designated NW/SE located on the Naknek River just south of the runways. There are 7 paved taxiways connecting the runways to several aprons: the 2 longer taxiways are 1,060 feet and 1,650 feet long, while the remaining 5 taxiways are between 385 feet and 650 feet in length. Leased areas are located along the 3 aprons. Outside activities include equipment fueling, runway maintenance, and deicing and sanding activities. Diesel fuel for equipment fueling is located in a 4,000 gallon aboveground storage tank (AST) located to the north of the Maintenance & Operations (M&O) building on a gravel surfaced area. Diesel fuel for heating the M&O building is located adjacent to the fueling tank in a 3,000 gallon AST. Pelletized urea and sand are stored indoors and the potassium acetate is stored in above ground storage tanks northeast of the runways (see Appendix A). Runway maintenance is limited to repainting runway markings (once a year) and sealing stress cracks in the asphalt surface (as necessary). These activities are performed in accordance with DOT&PF procedures and require dry weather. Deicing activities include mechanical plowing and the application of sand, urea, and potassium acetate on runways, taxiways, and aprons. Equipment maintenance takes place indoors in the Maintenance & Operations building, which has concrete floors and is located southwest of the runway intersection.

Drainage patterns for the King Salmon Airport are shown on figure(s) in Appendix A. There are 8 drainage areas at the King Salmon airport, which are designated as Watersheds A-H in Appendix A. Seven of these drainage areas have distinct outfalls and are designated as Outfalls A-H.

In general, storm water runoff from runways, taxiways, and aprons drains into grassy swales which parallel the runways. The storm water then either drains to isolated low vegetated areas or into one of several small unnamed creeks that eventually drain into the Naknek River. Flow in the vicinity of the maintenance building is part of Watershed A and is conveyed via sheet flow towards the south into a vegetated drainage ditch which flows to Outfall A.

Agency Notification Standard Report (cont'd)

Cause of the discharge(s), including a failure analysis of the system and subsystems in which the failure occurred:

Corrective actions and countermeasures taken, including a description of equipment repairs and replacements:

Additional preventive measures taken or contemplated to minimize possibility of recurrence:

Other pertinent information:

Appendix L –Best Management Practices and Typical

Best Management Practices – Summary Table

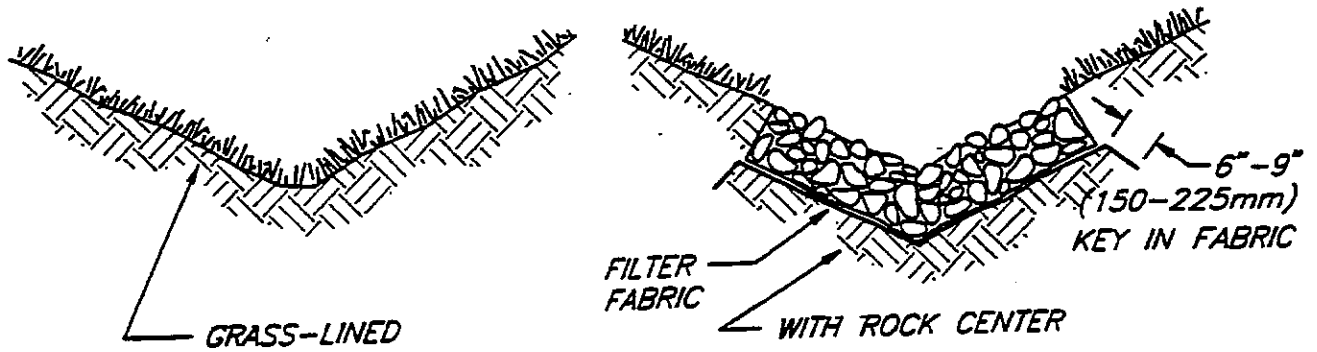
Example Typical for Stormwater Pollution Prevention

APPENDIX L – BMP Summary Table

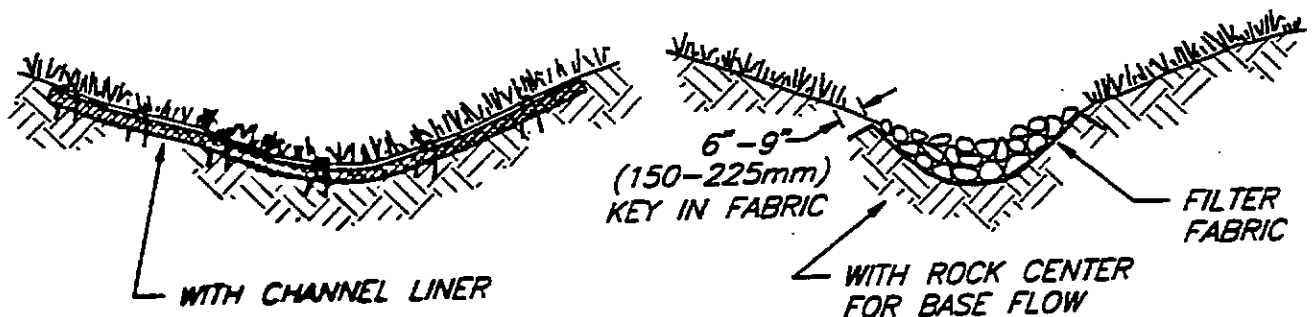
Best Management Practice (BMP)	
Material Storage	<ol style="list-style-type: none"> 1. Salt is stored indoors or securely covered 2. Maintain the integrity of storage containers
Deicing Runways and Pads	<ol style="list-style-type: none"> 1. Evaluate and optimize present chemical application rates 2. Use sand where possible to enhance friction 3. Plow and broom runways prior to application of deicing chemicals 4. Install and calibrate devices to meter the amount of pavement deicer being applied 5. Prioritize mechanical clearing when weather conditions are suitable 6. Use deicers which have less of an environmental impact (e.g. sodium formate and potassium acetate as opposed to urea and glycol). 7. Use ice detection systems 8. Ensure proper handling of deicing materials 9. Use airport traffic flow strategies and departure slot allocation systems
Materials Storage	<ol style="list-style-type: none"> 1. Store materials indoors. 2. Maintain integrity of storage containers 3. Create a centralized storage area for waste materials 4. Provide secondary containment around chemical storage areas 5. Locate storage areas away from high traffic areas and surface waters 6. Clearly label all containers 7. Provide fluid level indicators and maintain records of fluid levels to detect leakage 8. Properly dispose of chemicals that are no longer in use 9. Store and handle reactive, ignitable, or flammable liquids in compliance with applicable local fire codes, local zoning codes, and the National Electric Code. 10. Provide drip pans/pads where chemicals are transferred from one container to another to allow for recycling of spill and leaks. 11. Inspect storage containers 12. Train employees in spill prevention and control
Vehicle and Equipment Storage	<ol style="list-style-type: none"> 1. Store equipment indoors 2. Use drip pans under all vehicles and equipment for the collection of fluids 3. Use absorbents for dry cleanup for spills and leaks 4. Regularly sweep area to minimize debris on the ground

<p>Vehicle and Equipment Maintenance Areas</p>	<ol style="list-style-type: none"> 1. Perform all cleaning operations indoors or under covering when possible. Conduct the cleaning operations in an area with a concrete floor with no floor drainage other than to sanitary sewers or treatment facilities. 2. Park vehicles and equipment indoors or under a roof whenever possible and maintain proper control of oil leaks/spills. 3. Regularly inspect vehicles for leaks and maintenance needs. Use pans to collect leaks.
<p>Waste Management</p>	<ol style="list-style-type: none"> 1. All waste is stored in a cover container in a central location 2. Regular waste pick up occurs 3. Proper disposal of damaged equipment 4. Proper disposal unused chemicals and fluids 5. Create a regular sweeping schedule to prevent build up of debris 6. Train employees on proper waste disposal
<p>Fuel Storage</p>	<ol style="list-style-type: none"> 1. Maintain the integrity of storage containers 2. Use drip pans and absorptive materials beneath aircraft during fueling operations where leaks or spills can occur and where making and breaking hose connections. 3. Use fueling hoses with check valves to prevent hose drainage after filling 4. Provide spill kits and spill response trainings for personnel 5. Use spill and overflow detection devices 6. Clean up spills promptly 7. Store drums indoors when possible 8. Provide secondary containment for above ground storage tanks and drums 9. Clearly label contents 10. Regular monitoring for leaks and spills
<p>Aircraft, ground vehicle, and equipment maintenance areas</p>	<ol style="list-style-type: none"> 1. Prevent and contain spills and drips. 2. Do all cleaning at a centralized station so the solvents stay in one area. 3. Remove any parts that are dipped in liquid slowly to avoid spills. 4. Use drip pans, drain boards, and drying racks to direct drips back into a fluid holding tank for reuse. 5. Confine cleaning activities to designated areas outside drainage ways and away from surface waters. 6. Drain all parts of fluids prior to disposal. 7. Transfer used fluids to the proper container promptly; do not leave full drip pans or other open containers around the shop. Empty and clean drip pan containers.

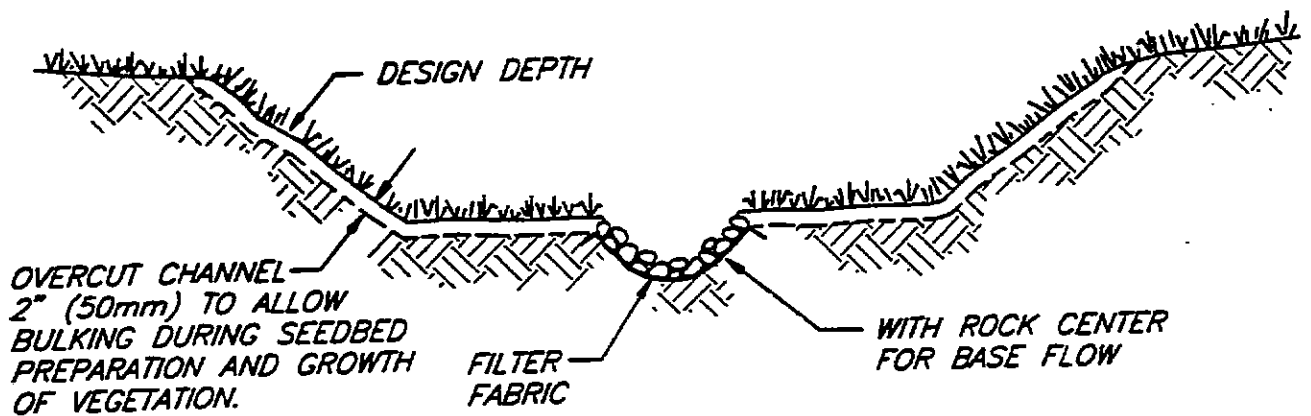
	<ol style="list-style-type: none"> 8. Clean up leaks, drips, and other spills without using large amounts of water. Use absorbents for dry cleanup whenever possible. 9. Prohibit the practice of hosing down an area where the practice would result in the discharge of pollutants to a stormwater system. 10. Prohibit pouring liquid waste into floor drains, sinks, outdoor storm drain outlets or other storm drains or sewer connections. 11. Maintain an organized inventory of materials. 12. Eliminate or reduce the number and amount of hazardous materials and waste by substituting nonhazardous or less hazardous materials. 13. Store batteries and other significant materials inside. 14. Dispose of greasy rags, oil filters, air filters, batteries, spent coolant, and degreasers in compliance with RCRA regulations.
Vehicle and Equipment Maintenance	<ol style="list-style-type: none"> 1. Leaking equipment is kept indoors until repairs can be made
Construction stormwater control	<ol style="list-style-type: none"> 1. Retain as much vegetation in the area as possible 2. Cover inlets of culverts and drains during construction/maintenance activities 3. Use of stormwater velocity dissipaters and retention devices such as riprap, silt fence, and straw wattles to slow water and allow sediments to settle
Vehicle and Equipment Maintenance Areas	<ol style="list-style-type: none"> 1. No discharge of vehicle wash or rinse water to surface waters.



**TYPICAL V-SHAPED CHANNEL
CROSS-SECTION**

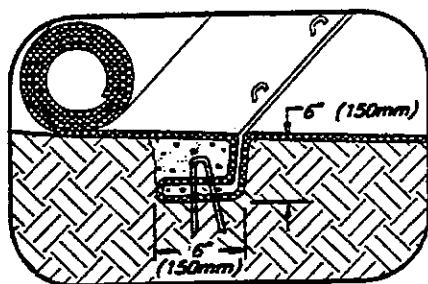
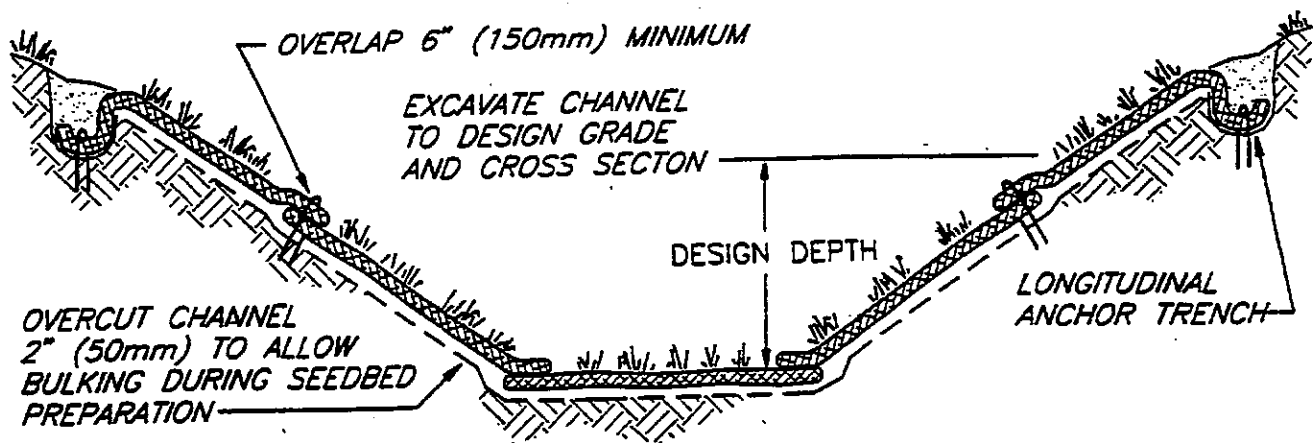


**TYPICAL PARABOLIC CHANNEL
CROSS-SECTION**



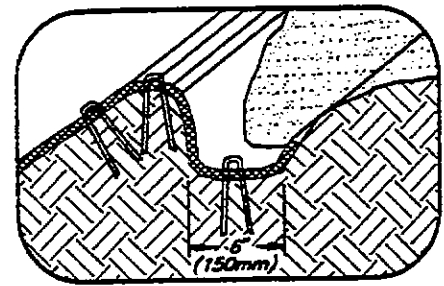
**TYPICAL TRAPEZOIDAL CHANNEL
CROSS-SECTION**

**GRASS-LINED CHANNEL
TYPICAL CROSS SECTIONS**



INTERMITTENT CHECK SLOT

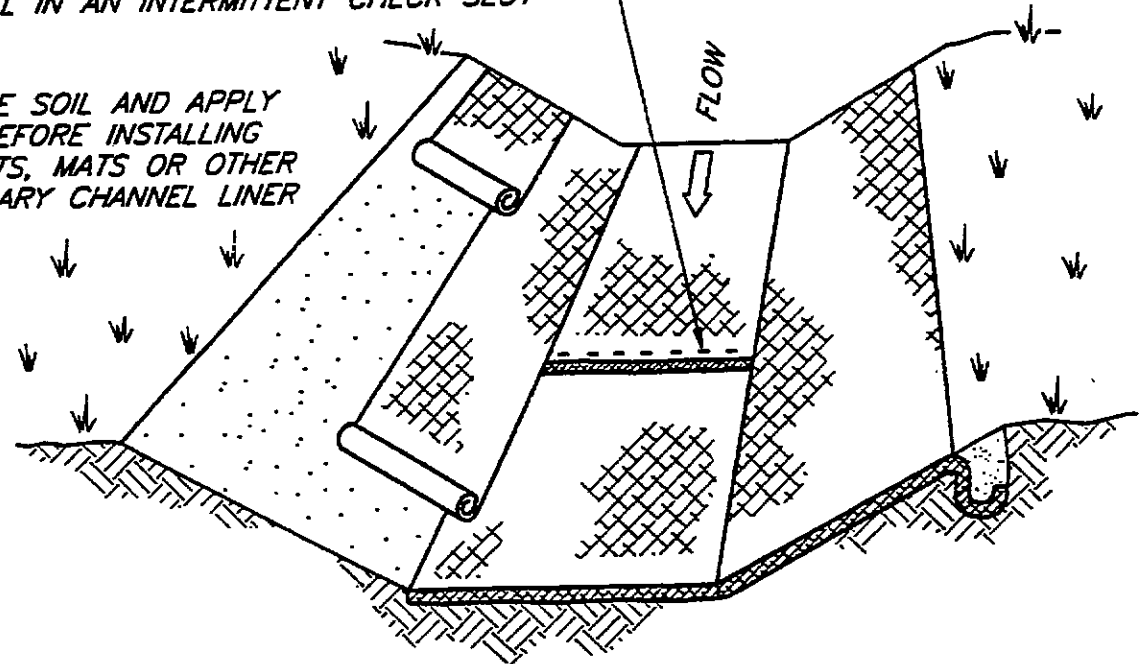
TYPICAL INSTALLATION WITH EROSION CONTROL BLANKETS OR TURF REINFORCEMENT MATS



LONGITUDINAL ANCHOR TRENCH

SHINGLE-LAP SPLICED ENDS OR BEGIN NEW ROLL IN AN INTERMITTENT CHECK SLOT

PREPARE SOIL AND APPLY SEED BEFORE INSTALLING BLANKETS, MATS OR OTHER TEMPORARY CHANNEL LINER SYSTEM

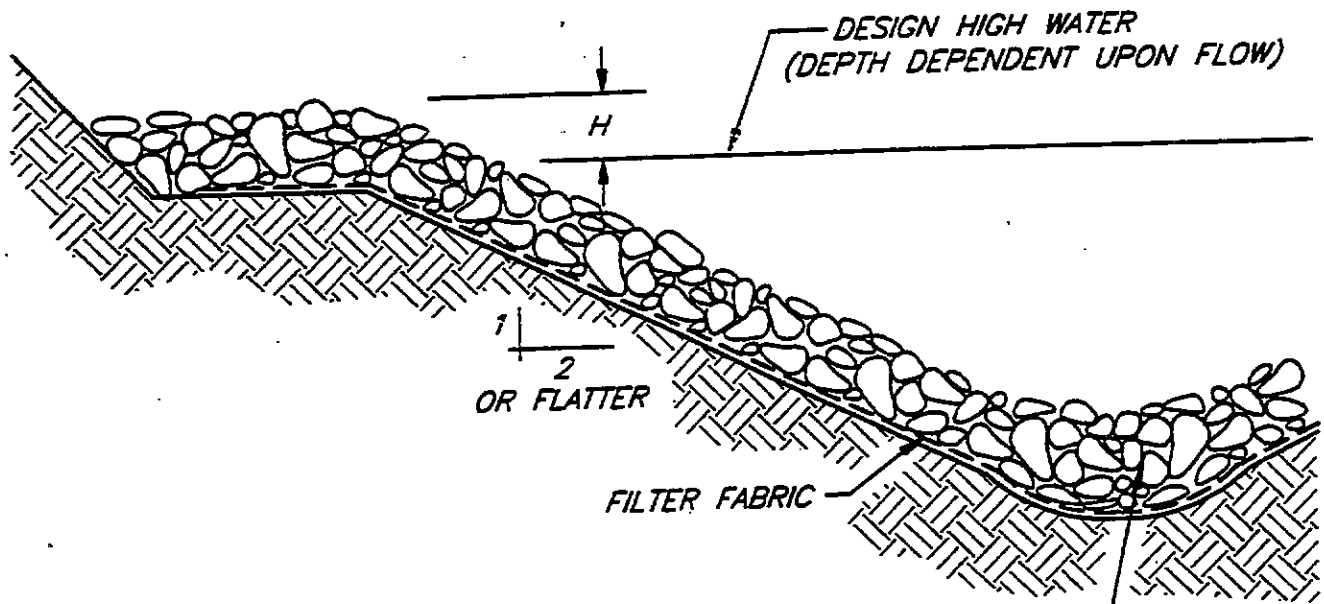


- NOTES:
1. DESIGN VELOCITIES EXCEEDING 2 FT/SEC (0.5m/sec) REQUIRE TEMPORARY BLANKETS, MATS OR SIMILAR LINERS TO PROTECT SEED AND SOIL UNTIL VEGETATION BECOMES ESTABLISHED.
 2. GRASS-LINED CHANNELS WITH DESIGN VELOCITIES EXCEEDING 6 FT/SEC (2m/sec) SHOULD INCLUDE TURF REINFORCEMENT MATS.

NOT TO SCALE

**GRASS-LINED CHANNEL
TYPICAL INSTALLATION**

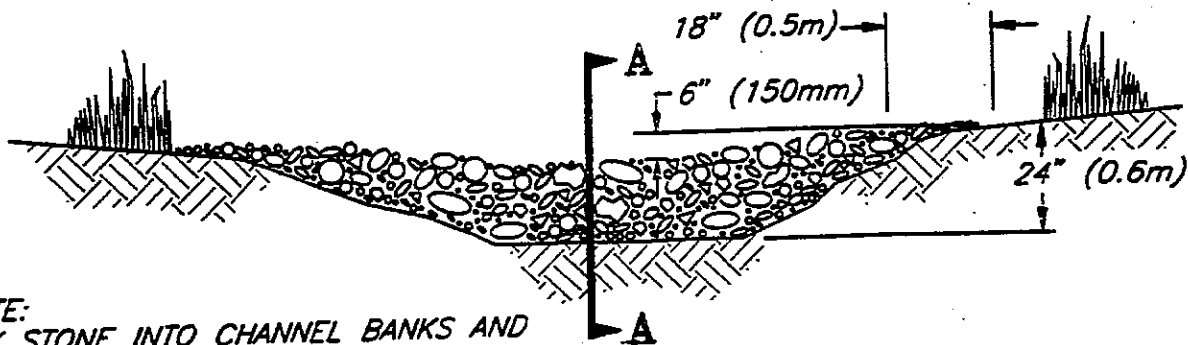
DESIGN HEIGHT (H), WIDTH AND STONE SIZE SHALL
BE DETERMINED BY THE ENGINEER



MINIMUM 6" (150mm) THICK LAYER OF 2" (50mm) MINIMUM
DIAMETER DRAIN ROCK. LARGER STONE SHALL BE USED
DEPENDENT UPON GRADIENT, SOIL TYPE, AND DESIGN FLOW.

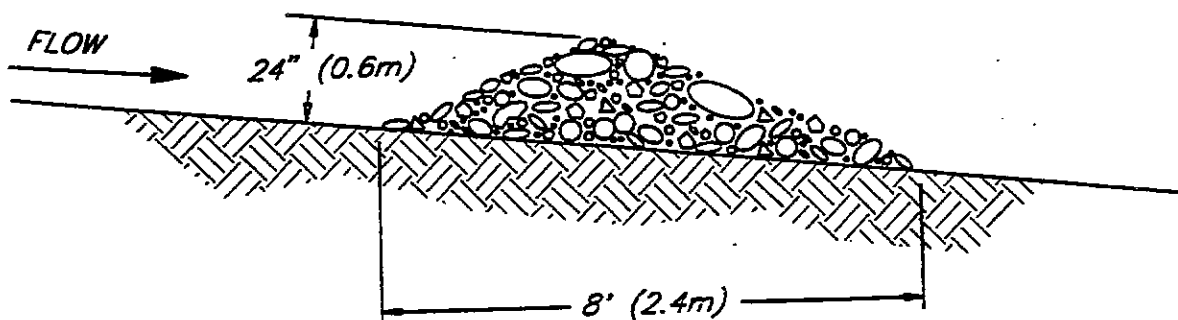
TYPICAL SECTION

**ROCK LINED
CHANNEL**



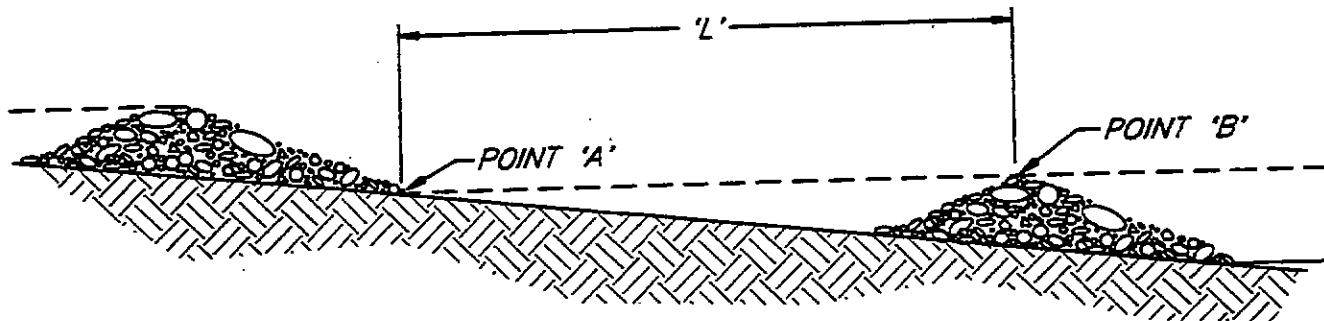
NOTE:
KEY STONE INTO CHANNEL BANKS AND
EXTEND IT BEYOND THE ABUTMENTS A
MINIMUM OF 18" (0.5m) TO PREVENT
FLOW AROUND DAM.

VIEW LOOKING UPSTREAM



SECTION A - A

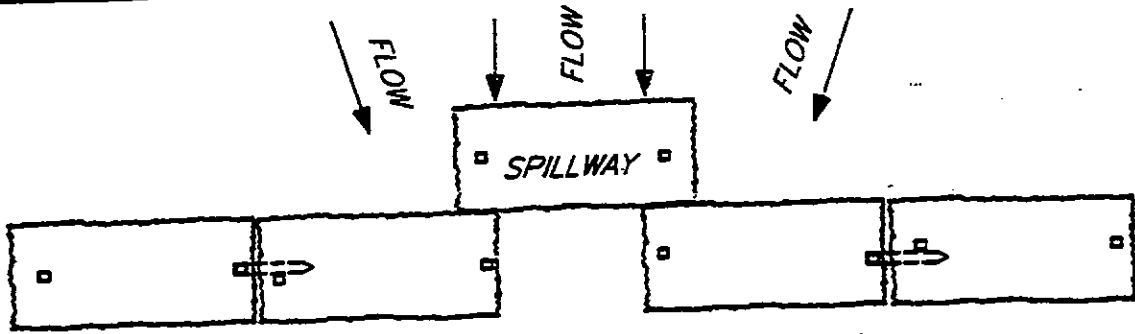
'L' = THE DISTANCE SUCH THAT POINTS 'A' AND
'B' ARE OF EQUAL ELEVATION.



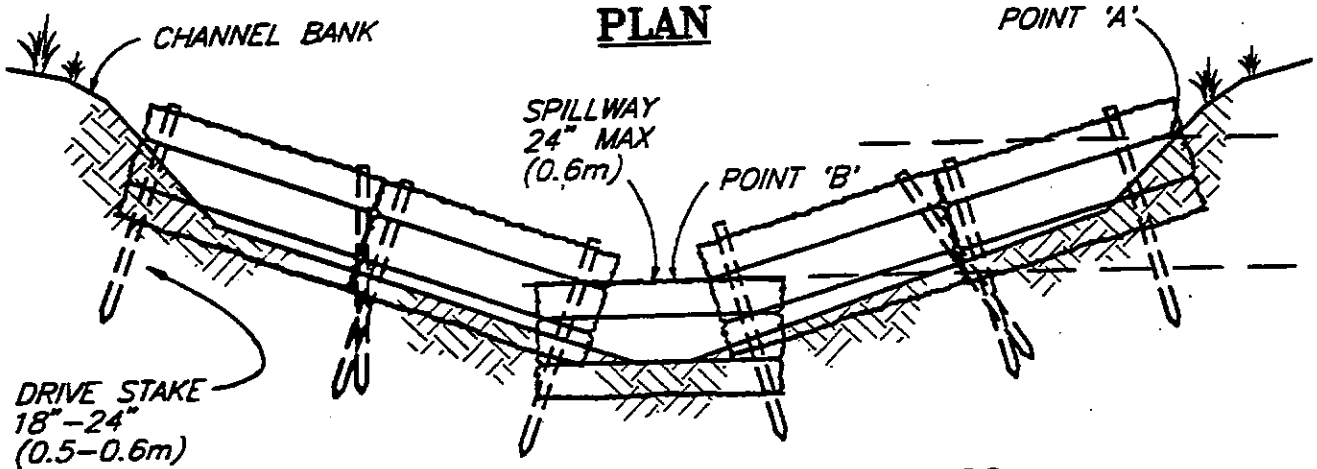
SPACING BETWEEN CHECK DAMS

NOT TO SCALE

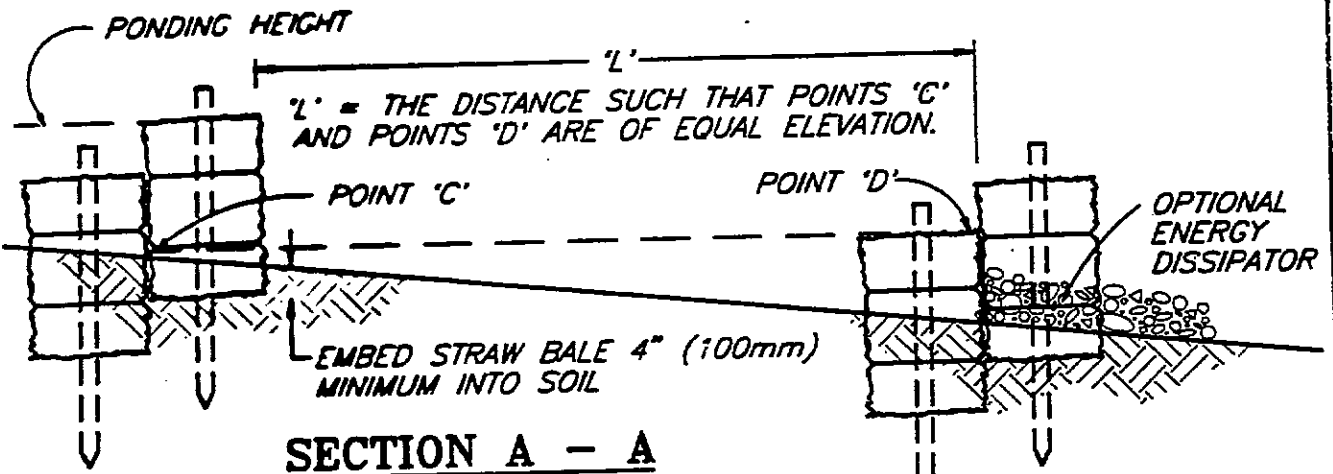
**ROCK
CHECK DAM**



PLAN



VIEW LOOKING UPSTREAM



SECTION A - A
SPACING BETWEEN CHECK DAMS

NOTES:

1. EMBED BALES 4" (100mm) INTO THE SOIL AND "KEY" BALES INTO THE CHANNEL BANKS.
2. POINT 'A' MUST BE HIGHER THAN POINT 'B': (SPILLWAY HEIGHT)
3. PLACE BALES PERPENDICULAR TO THE FLOW WITH ENDS TIGHTLY ABUTTING.
4. SPILLWAY HEIGHT SHALL NOT EXCEED 24" (0.6m).
5. INSPECT AFTER EACH SIGNIFICANT STORM, MAINTAIN AND REPAIR PROMPTLY.

NOT TO SCALE

**STRAW BALE
CHECK DAM**

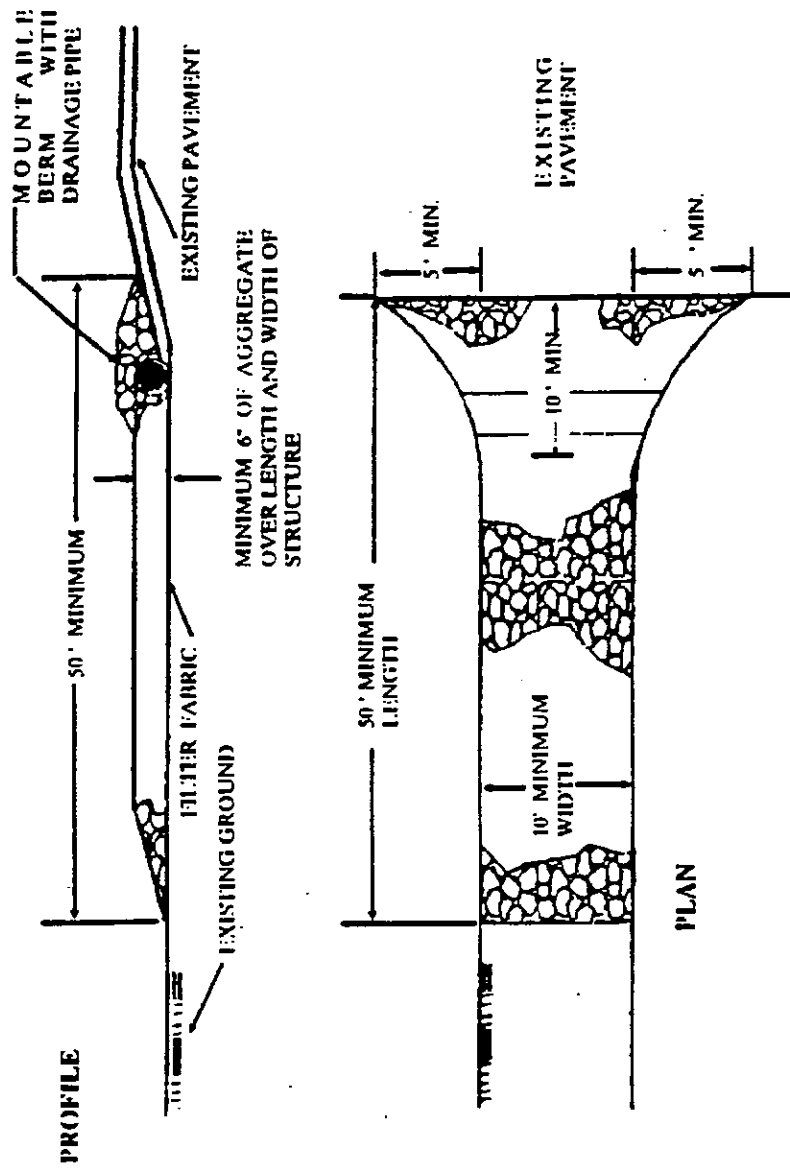


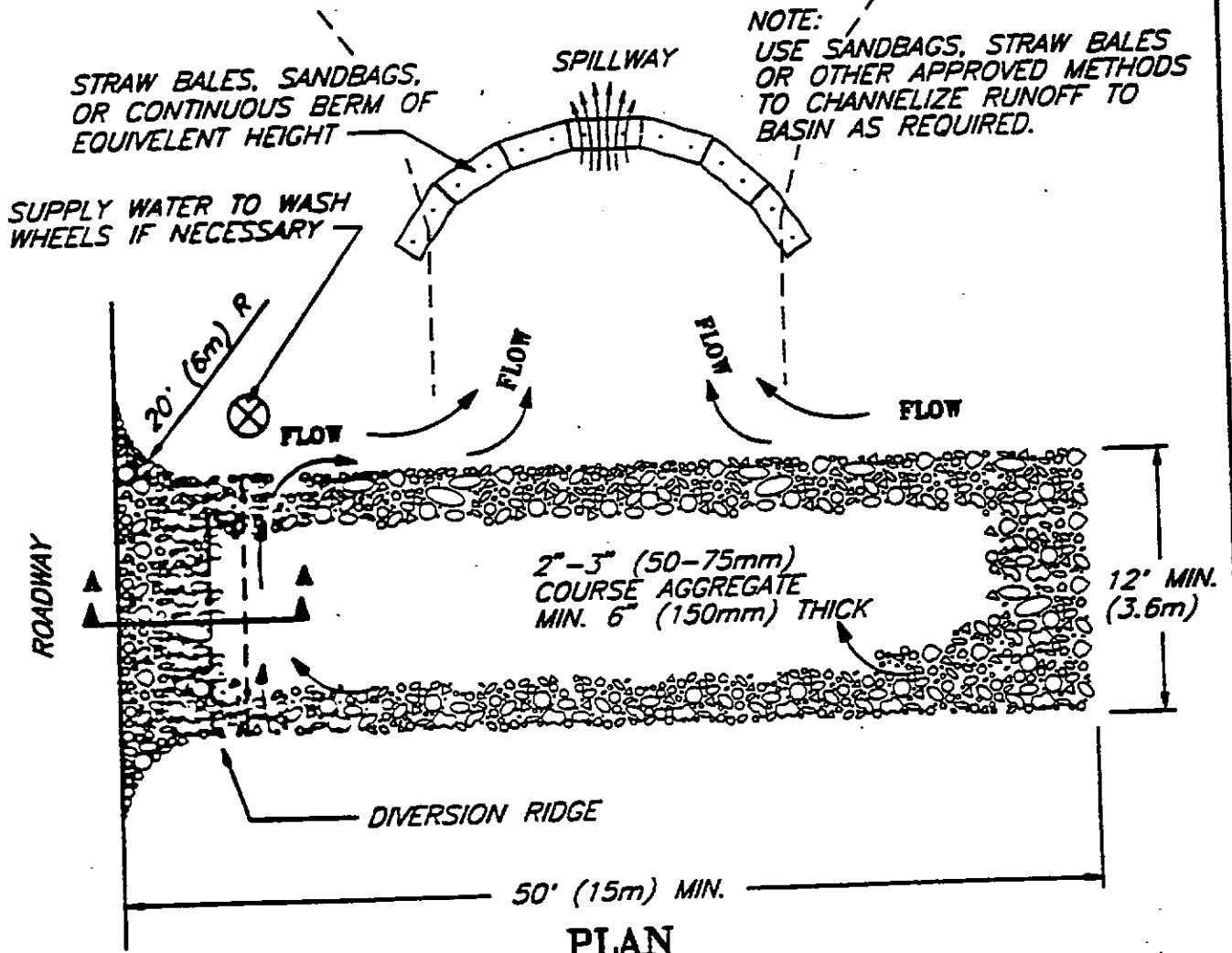
Figure 4-7
Stabilized Construction Exit

DIVERSION RIDGE REQUIRED
WHERE GRADE EXCEEDS 2%

2% OR GREATER



SECTION A - A



STRAW BALES, SANDBAGS,
OR CONTINUOUS BERM OF
EQUIVALENT HEIGHT

NOTE:
USE SANDBAGS, STRAW BALES
OR OTHER APPROVED METHODS
TO CHANNELIZE RUNOFF TO
BASIN AS REQUIRED.

SUPPLY WATER TO WASH
WHEELS IF NECESSARY

ROADWAY

2" - 3" (50-75mm)
COURSE AGGREGATE
MIN. 6" (150mm) THICK

12' MIN.
(3.6m)

DIVERSION RIDGE

50' (15m) MIN.

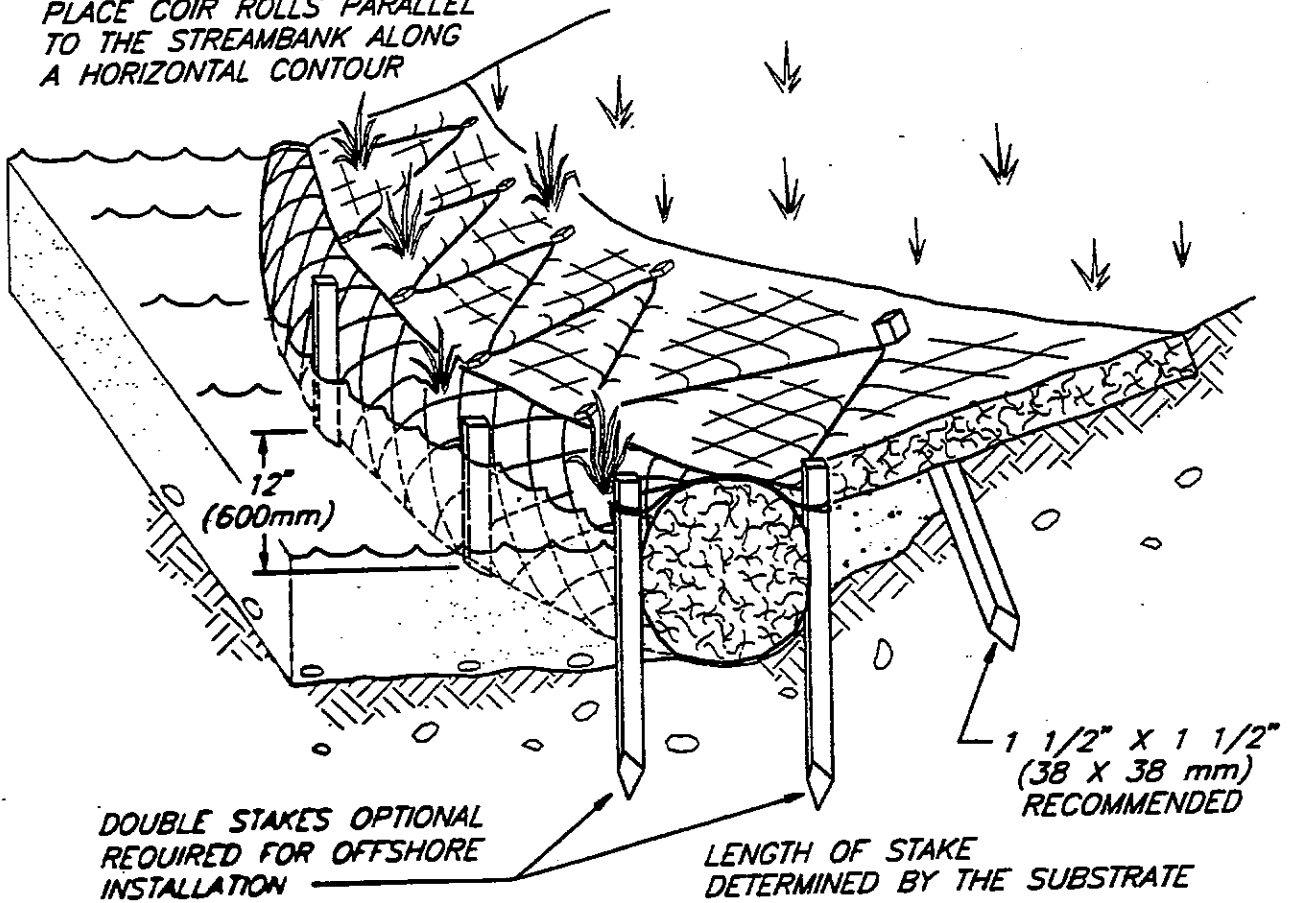
PLAN

NOTES:

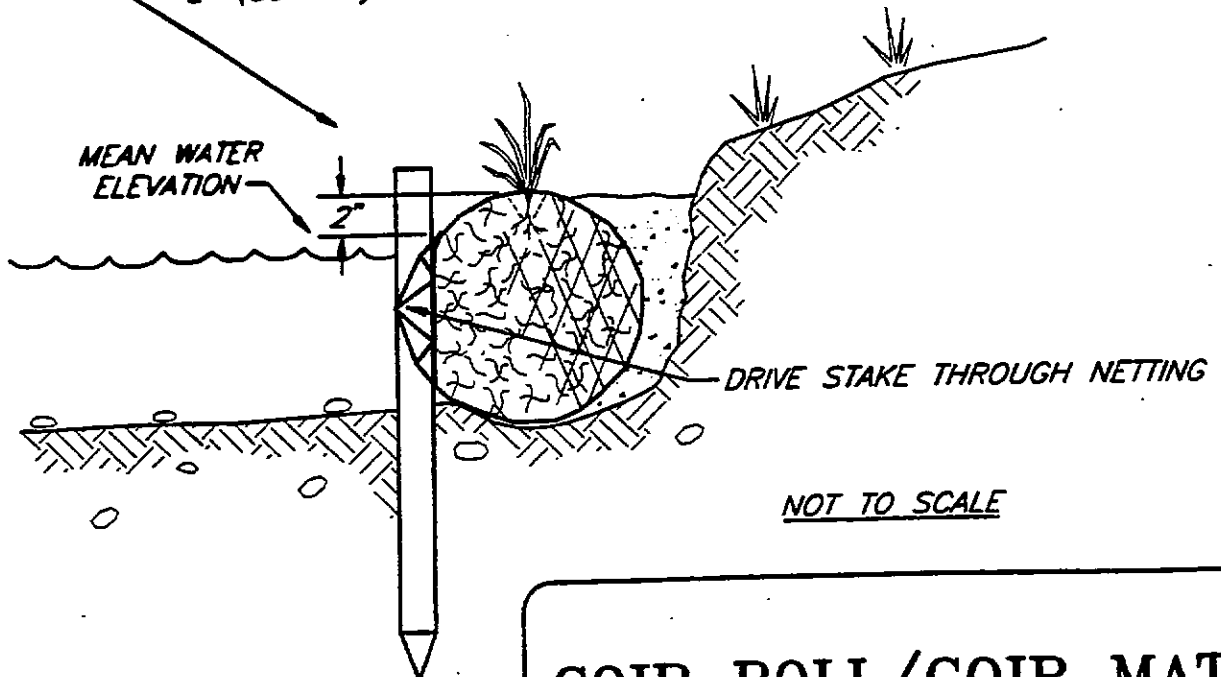
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

**TEMPORARY
GRAVEL
CONSTRUCTION
ENTRANCE/EXIT**

PLACE COIR ROLLS PARALLEL TO THE STREAMBANK ALONG A HORIZONTAL CONTOUR



PLACE COIR ROLL SUCH THAT THE ROLL EXTENDS 2" (50 mm) ABOVE MEAN WATER ELEVATION



COIR ROLL/COIR MATS

GALVANIZED WIRE MESH,
GEOTEXTILE REINFORCEMENT
MATS OR COIR MATS

SIDE VIEW

BIND AND/OR SPIKE
LOGS TOGETHER
ANCHOR ROD 3/4" X 6"
(20mm X 2m)

TYPICAL LOG CRIBBING

SOME BASAL ENDS OF LIVE
BRANCH CUTTINGS SHOULD
REACH UNDISTURBED SOIL
AT THE BACK OF CRIB
STRUCTURE

BACKFILL WITH
ROCK AND SOIL

$W =$ CHANNEL WIDTH

$\frac{W}{2}$ MAXIMUM

MEAN HIGH WATER
PLUS 12" (300mm)

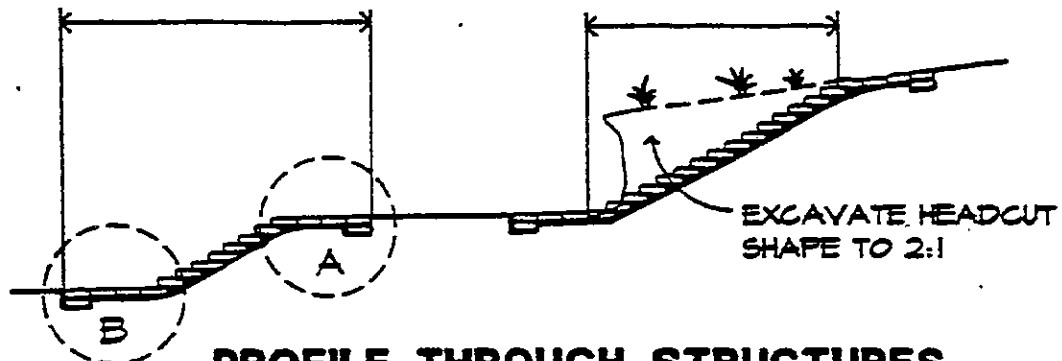
NORMAL
STREAM LEVEL
6" (150mm)

$D =$ EXPECTED DEPTH OF SCOUR
PLUS 2' (0.6m) OR 12" (300mm) MINIMUM

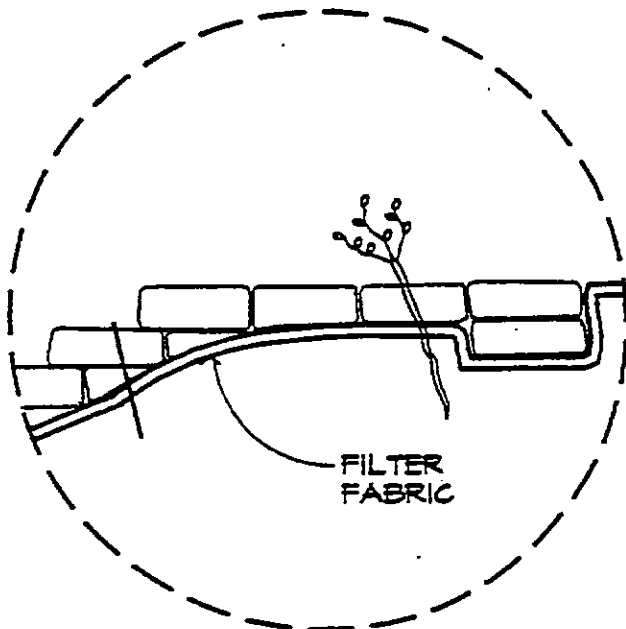
FILTER FABRIC ALONG BASE

TYPICAL GABION DEFLECTOR

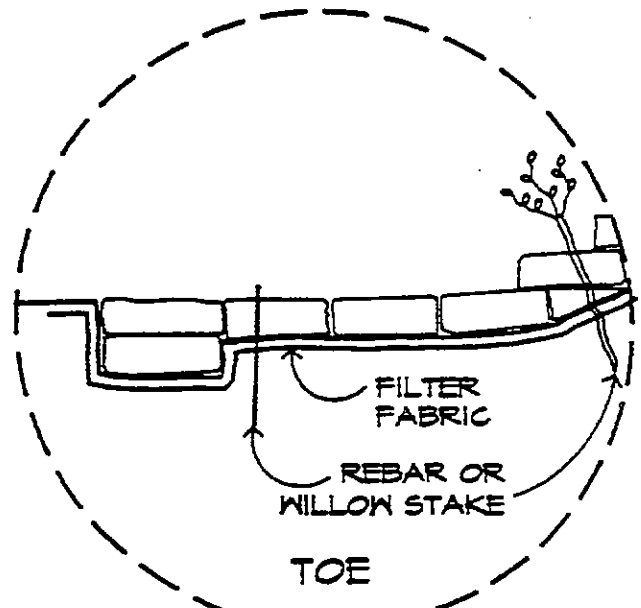
**STREAMBANK
STABILIZATION**



PROFILE THROUGH STRUCTURES

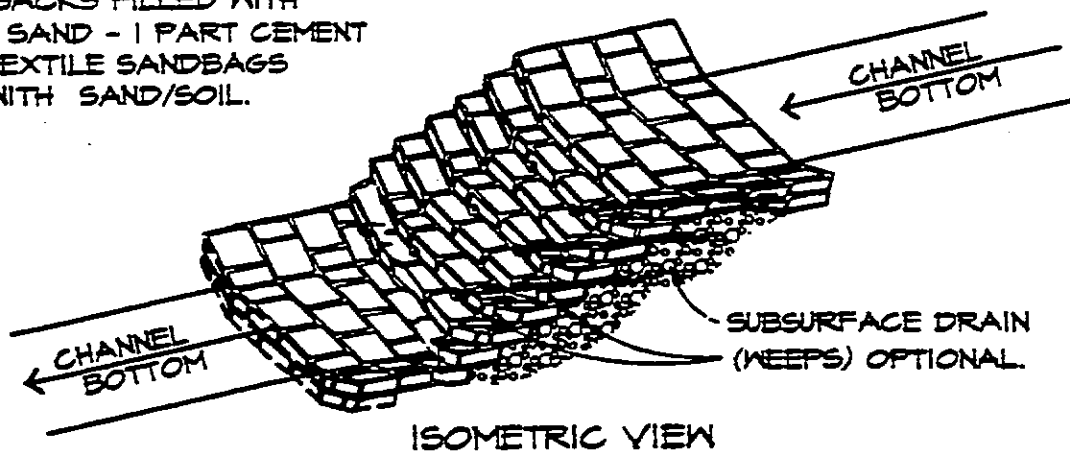


DETAIL - 'A'



DETAIL - 'B'

BURLAP SACKS FILLED WITH 4 PARTS SAND - 1 PART CEMENT OR GEOTEXTILE SANDBAGS FILLED WITH SAND/SOIL.



ISOMETRIC VIEW

SANDBAG HEADCUT STRUCTURE

25:

1. GEOTEXTILE SANDBAGS MAY BE STAKED WITH LIVE WILLOW STAKES, REBAR OR 'SNAP TIE' STAKES SHOULD BE USED WITH CEMENT SANDBAGS.
2. ROCK RIPRAP MAY BE USED IN PLACE OF SANDBAGS.

SANDBAG HEADCUT STRUCTURE

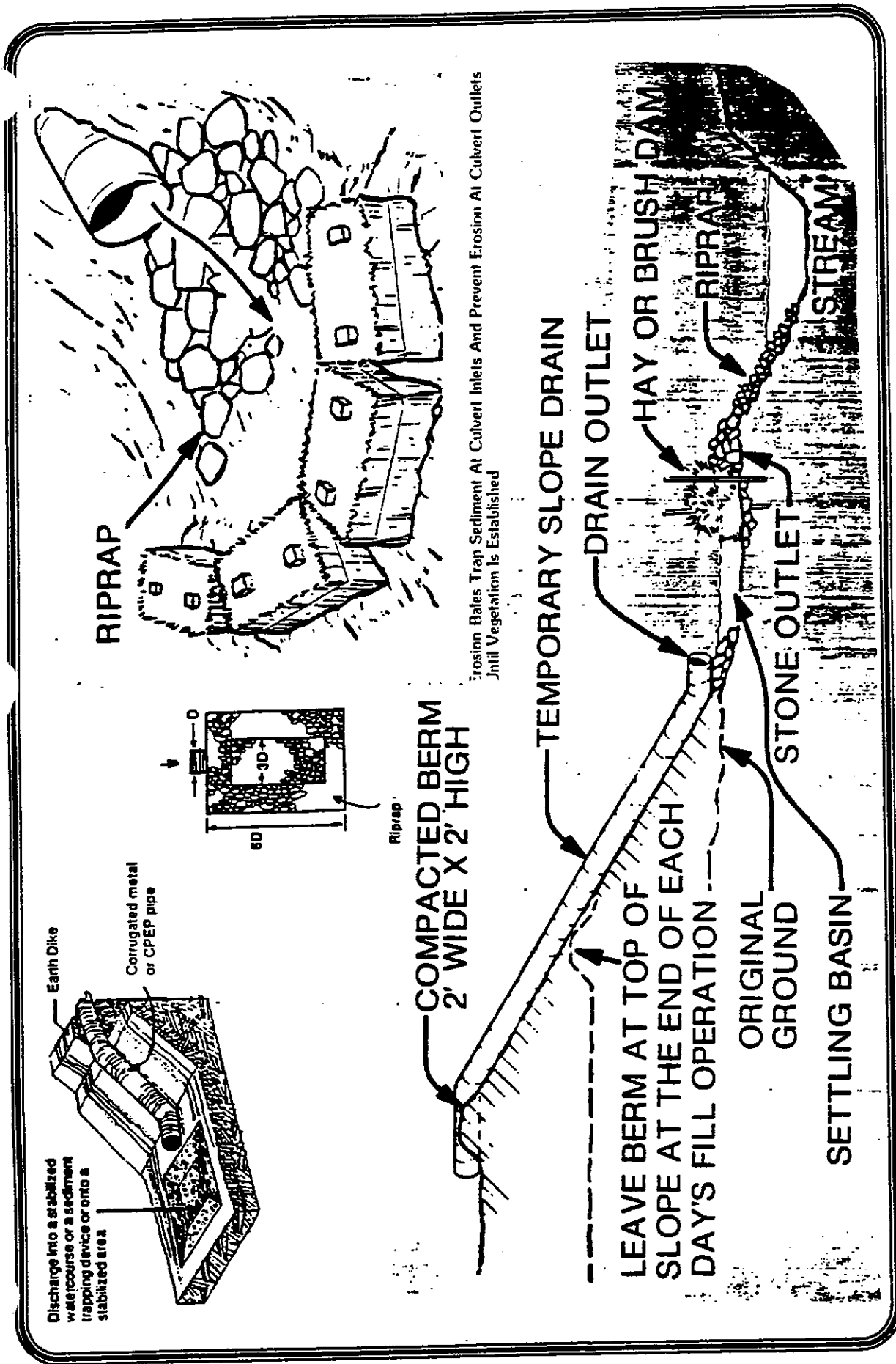
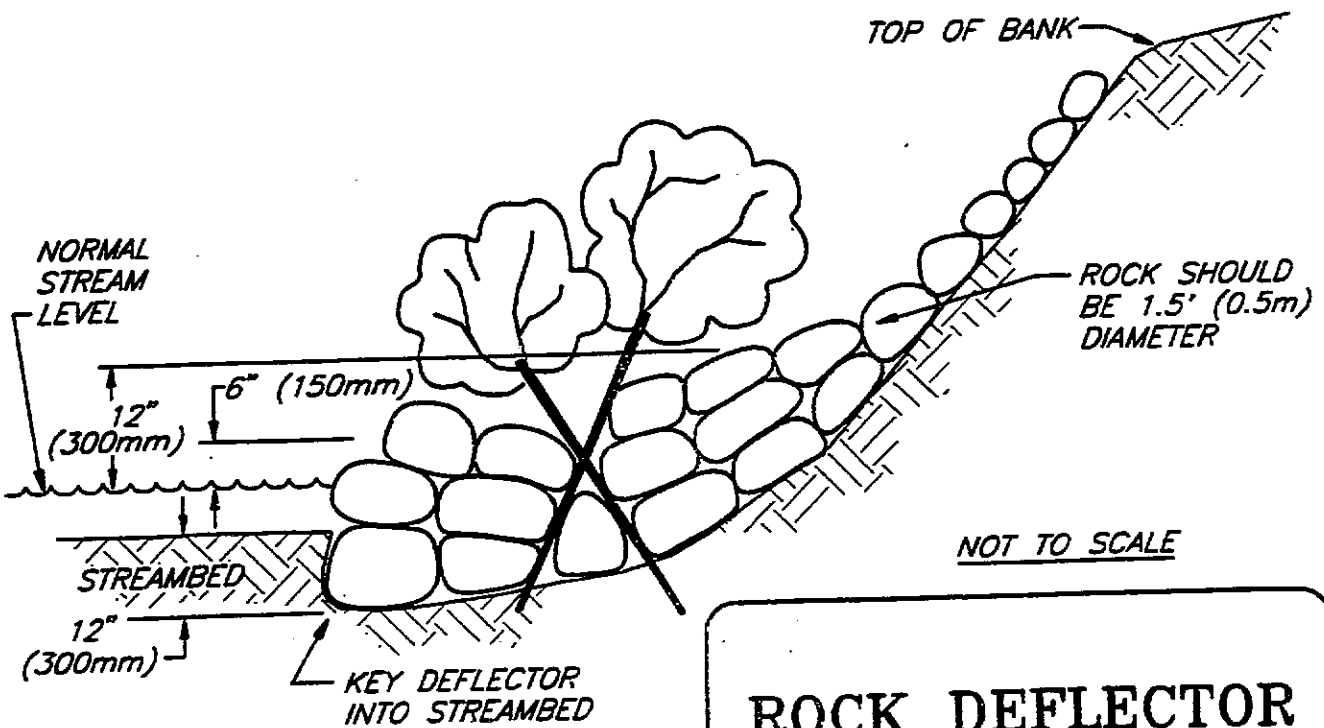
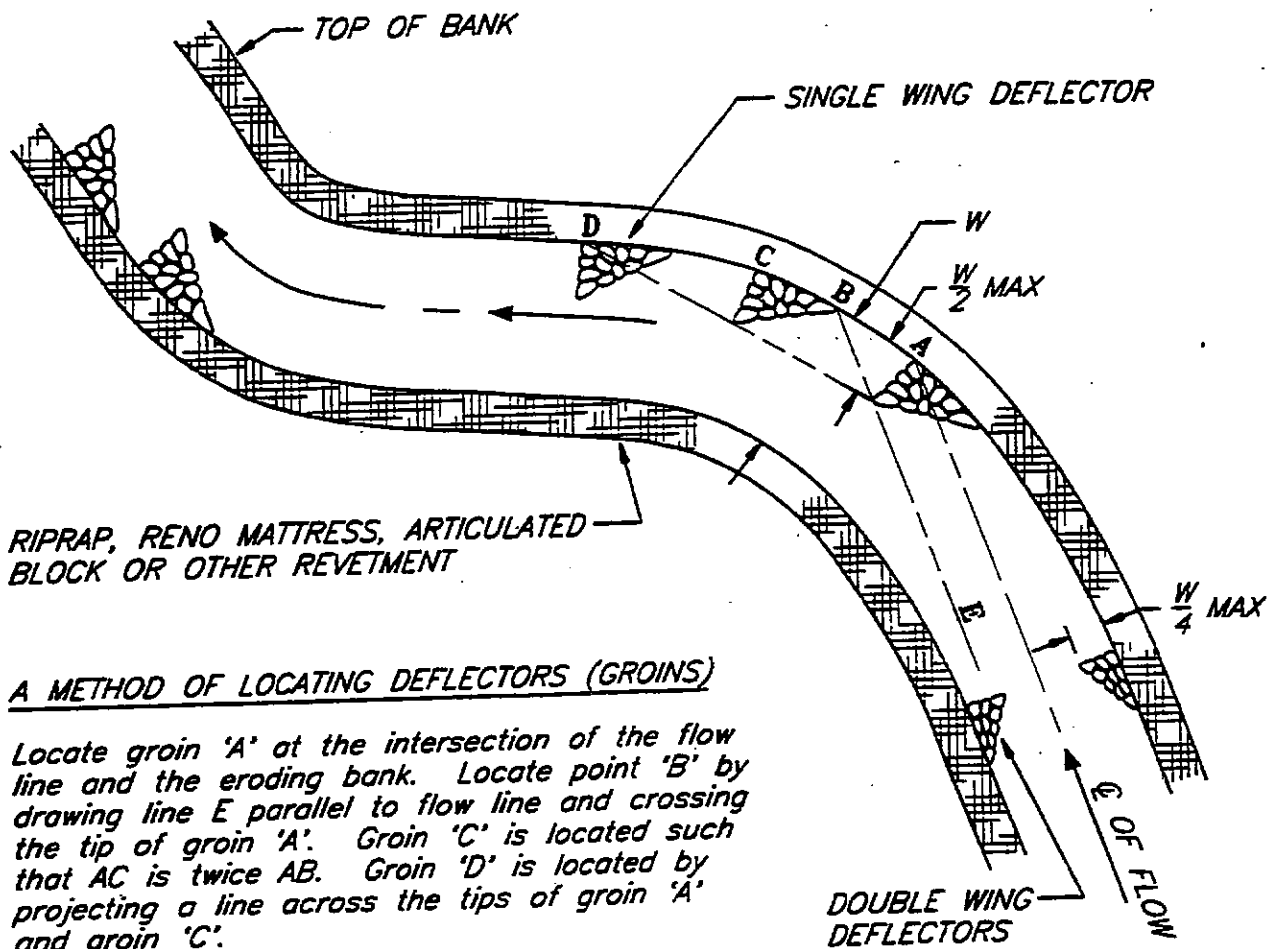
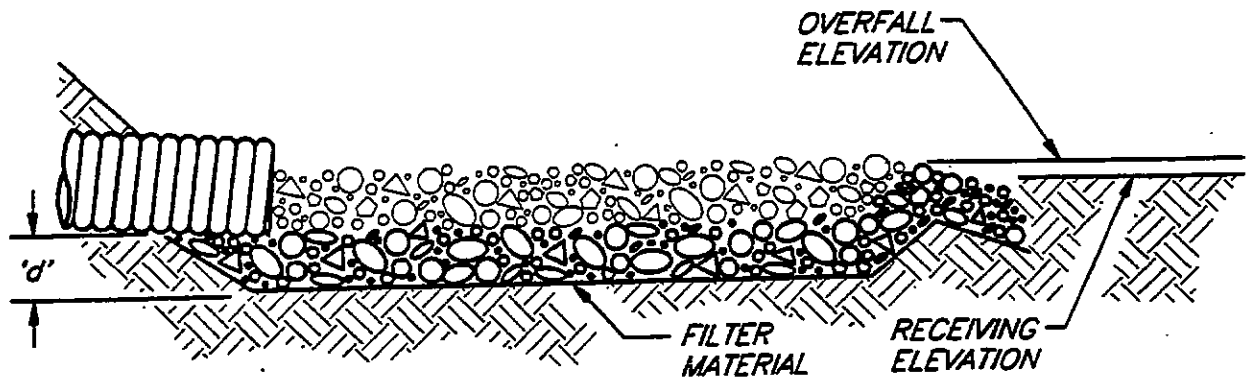


Figure 4-11
Outlet Protection



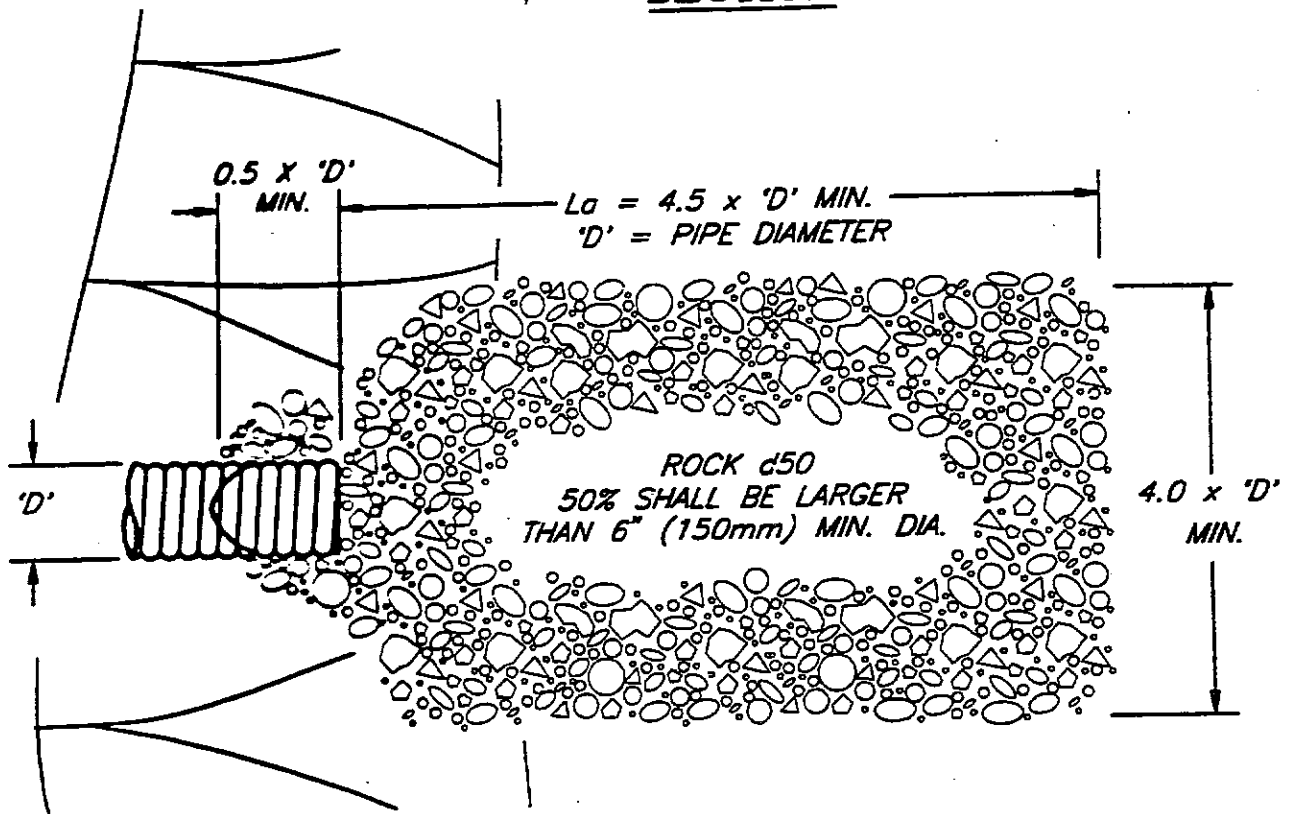
ROCK DEFLECTOR

1996 JOHN McCULLAH



THICKNESS ('d') = 1.5 x MAX. ROCK DIAMETER - 6" (150mm) MIN.

SECTION



PLAN

NOTES:

1. 'La' = LENGTH OF APRON. DISTANCE 'La' SHALL BE OF SUFFICIENT LENGTH TO DISSIPATE ENERGY.
2. APRON SHALL BE SET AT A ZERO GRADE AND ALIGNED STRAIGHT.
3. FILTER MATERIAL SHALL BE FILTER FABRIC OR 6" (150mm) THICK MINIMUM GRADED GRAVEL LAYER.

**ENERGY
DISSIPATOR**



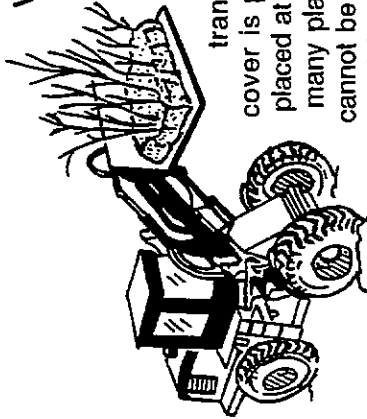
TRANSPLANTING

Transplanting is a revegetation technique that removes a plant, or plants containing roots and shoots from one site to be replanted at another. Transplanting can take several forms generally distinguished by size: vegetation mats, plugs, sprigs and transplants (single plants). All forms require careful selection and handling in order for the transplanting effort to be successful. Refer to *Streambank Revegetation Plant Species Selection List* for plant material suggestions.

Locate a donor site and obtain permission to harvest plants. In cases where plants are going to be destroyed by construction, consider salvaging the plants that would otherwise be lost. The conditions of the donor site need to be relatively similar to those at the transplanting site. The best time to transplant is when plants are dormant. It is essential that the plant materials do not dry out while in transport and after planting. Transplanting efforts can be mechanized.

VEGETATIVE MAT

A vegetative mat is the largest transplant. Dimensions of the mats vary from one to several feet square and may contain woody and/or herbaceous vegetation. The greatest benefit of this transplanting technique is that vegetative cover is provided immediately after the mat is placed at the new location. The mats often contain many plant species, especially native plants that cannot be obtained elsewhere. Often, the cost will be for labor and machinery for moving and installing the mat.

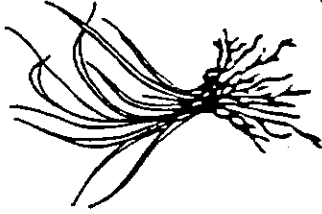


Harvest a vegetative mat by cutting the shoots and root/soil mass into a block. The root/soil mass is cut as deeply as possible. The mat is then lifted from the ground by hand or with mechanized equipment and transported to the planting site.

Prepare the planting site by creating a depression in the soil that will accommodate the dimensions of the mat. The sides of the mat should be covered by soil. If the mat is placed directly on the surface with other mats immediately adjacent to each other, make sure that the edges of the mat are not left exposed to the air which would cause damage to the roots. If needed, soil should be placed in the spaces between mats to cover the roots.

PLUGS

Plugs are smaller than vegetative mats and not necessarily, contain only one plant species. They can be harvested from a donor community using tools and transported easily to the planting site. They are particularly well suited for planting in wetlands, including grass rolls or being divided into sprigs.

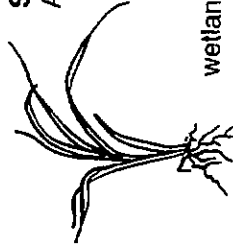


Dig a plug with a shovel. A plug may range from a few inches in diameter. It is important to include as many roots and as much soil as possible with each plug.

Plant plugs so that the new soil level matches the soil level of the donor site. If the planting site is dry, the plug should be planted in the center of a small depression that will catch and retain water. The soil around the plug should be pressed firmly into place.

SPRIGS

A sprig is the smallest transplant unit, consisting of a single shoot and roots. Grasses and sedges are often transplanted as sprigs. Species with a rhizomatous (underground stem) growth form are most suited for sprigging. Sprigs are often planted in wetlands or into coir logs.

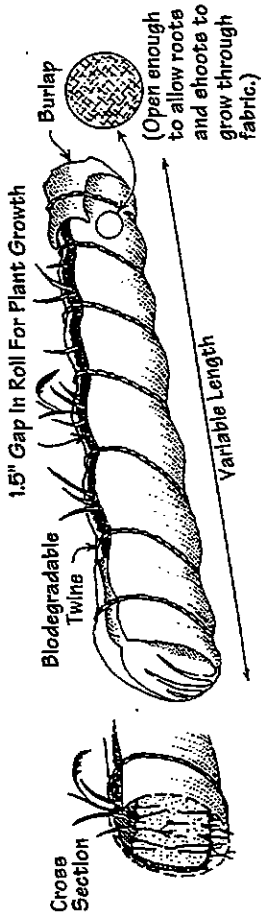


Prepare a sprig from a small plug that contains one plant species. The plug can be separated into sprigs either at the donor site or the planting site. The important point is to keep the plant material moist, removed from direct sunlight and wind while preparing the sprigs and transporting them to the planting site. Harvest only the number of sprigs that can be planted the same day.

Plant a sprig by sticking a shovel in the ground perpendicularly; push it forward to create a small opening; place the sprig in the opening, remove the shovel and then firm the ground around the sprig. Care should be taken to ensure that the entire root system is covered by soil. A more extensive discussion of the sprigging is found in *Beach Wildrye: Planting Guide for Alaska* (Wright, 1994).



GRASS ROLLS

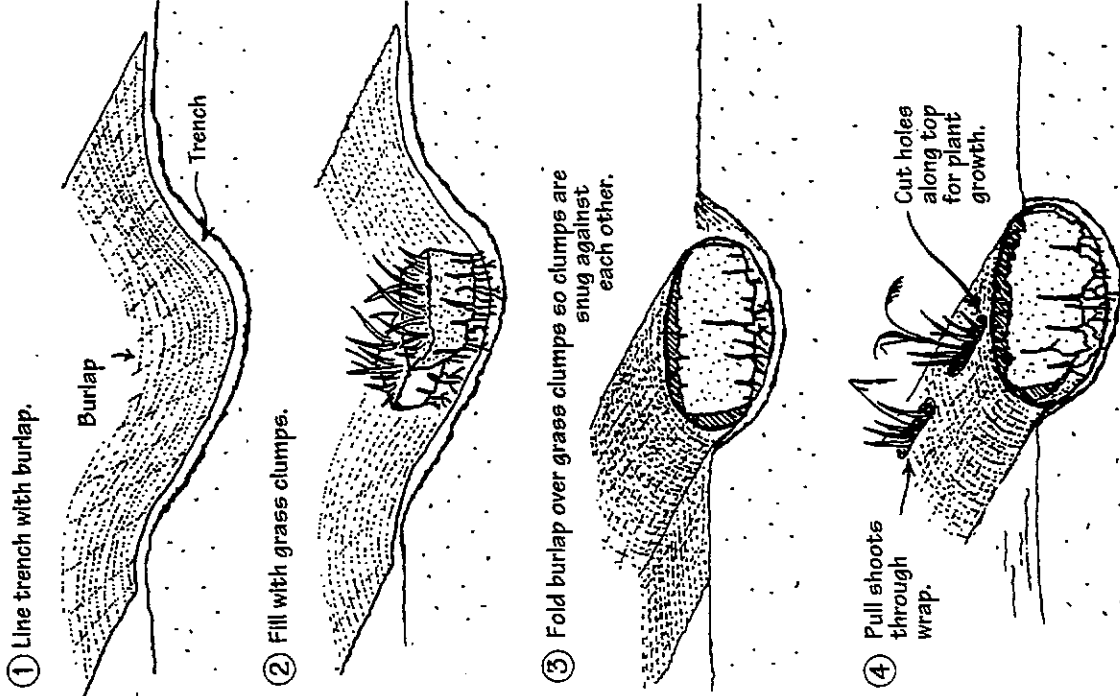


Grass rolls are often used to revegetate shorelines and streambanks where grasses and grass-like plants have been the primary vegetation type and where seeding is impractical due to fluctuating water levels or other site conditions. Clumps of grass sod are placed tightly together, side by side with shoots pointing up, in a sausage like structure and held together with burlap and twine. The roll is then anchored in place. This technique reintroduces herbaceous vegetation to a site while simultaneously providing some structural stability. Ultimately, the sod will form a dense root system along the streambank and provide structural protection to the site. When the grasses die back at the end of each growing season, their leaves hang over the streambank and provide rearing habitat for fish.

Construct a grass roll by laying out a length of burlap; place clumps of sod tightly together in the middle of the burlap. Bluejoint reedgrass, *Calamagrostis canadensis*, is the primary grass used for this technique and should be collected from sites away from streambanks. Beach wildrye, *Leymus mollis*, has also been used for streambank plantings, and although it produces a strong rhizome it does not form the dense sod characteristic of Bluejoint.

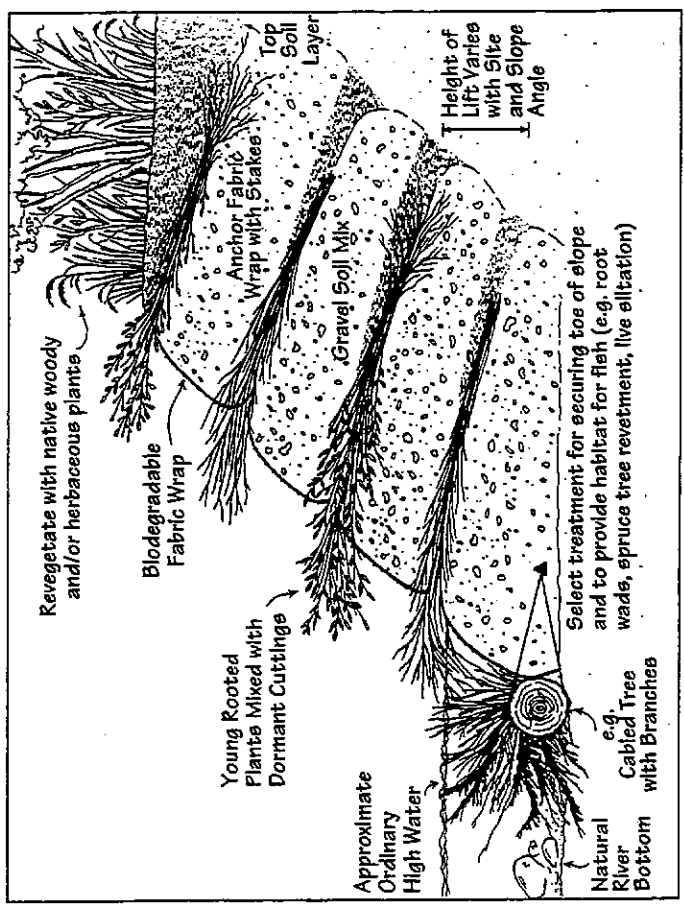
Wrap the sides of the burlap over the sod clumps to make a sausage-like roll. Tie the roll every few inches with twine. Cut holes in the burlap wrap to expose the sod shoots. Try to create the grass roll onsite so that the length of the roll or rolls match the length of the area being planted.

Constructing Grass Rolls





HEDGE BRUSH LAYERING



Hedge brush layering is a revegetation technique which combines layers of plant material, both dormant cuttings and rooted plants, with soil to revegetate and stabilize a streambank. Greater plant diversity can be provided with a hedge brush layer than with a simple brush layer. Rooted plants of species that do not root readily, such as alder, scouler and bebb willow, can be included in the plant layer. A mixture of species may allow the revegetation project to blend with existing vegetation.

Branches and transplants are placed on horizontal benches that follow the contour of the slope and provide reinforcement to the soil. The transplants will add stability quickly as their roots become anchored. Relatively steep slopes can be stabilized with this technique if a biodegradable revegetation fabric is used to hold the soil in place between the plant layers. The front of the wrapped soil layer can be lightly seeded with grasses to increase soil stability while the woody plants become established. Overhanging branches provide fish habitat.

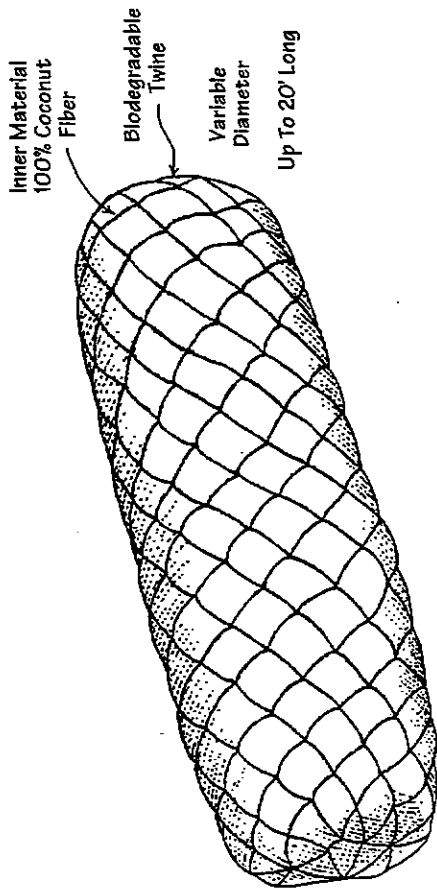
Select plant species suitable for site conditions (see *Stream Revegetation Plant Species Selection List, Shrubs and Trees*). For results dig transplants in spring or late summer and plant them the day. If possible root prune the plants several weeks prior to transplant. Select plants less than 5 to 6 feet tall and root prune the plants to the shovel width. After the plant has been dug for transplanting, trim branches to compensate for root loss.

Collection, storage and planting information is described in the *Dormant Cuttings and Transplanting* sections. A hedge layer, which uses all rooted plants can be planted throughout the growing season from spring through early fall.

Choose a technique to secure the toe of the slope. Begin layering at the bottom of the slope. Along a water body, the first layer is typically installed at the ordinary high water (OHW) level. Brush layers may be installed below OHW to provide cover and fish habitat. These plants probably will not root and become established.

Excavate the first bench two to three feet deep so that it angles slightly down and into the slope (see *Hedge Brush Layering/Brush Layering, Step by Step*). Lay branches and transplants on the bench, slightly crisscrossing them. Place the cut ends of the branches and the roots of the transplants into the slope with the tips or shoots extending beyond the edge of the bench **no more than 1/4 the total branch length**. Plant 20 to 25 stems per yard. Higher density plantings are needed for more erosive sites and if the diameter of the plant material is small. Fill the newly planted bench with desired bank height is reached. The spacing between layers will vary with the erosion potential of the site. Sites with a shallow slope and low erosion potential can have wider spacing than sites with a steep slope and higher erosion potential. This technique can be easily mechanized, layer by layer, if it is installed during construction of a fill slope. On cut slopes and existing banks each layer must be excavated.

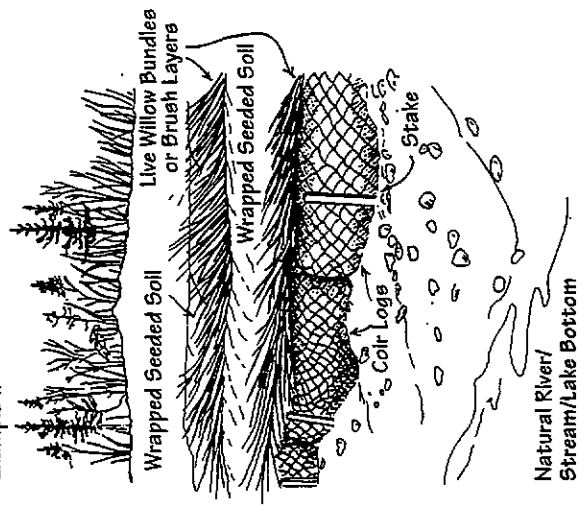
Hedge brush layering is a variation of brush layering (see *Brush Layering*).



Coir logs are constructed of interwoven coconut fibers that are bound together with biodegradable netting. Commercially produced coir logs come in various lengths and diameters. The product needs to be selected specifically for the site. Fiber logs composed of other sturdy biodegradable materials may function equally as well.

Applications for coir logs occur in many streambank, wetland and upland environments. The log provides temporary physical protection to a site while vegetation becomes established and biological protection takes over. The logs can provide a substrate for plant growth, protect plants growing adjacent to the log, can be used as a transition from one revegetation technique to another, and used to secure the toe of a slope. Both the upstream and downstream ends of the coir log(s) need to transition smoothly into a stable streambank to reduce the potential to wash out.

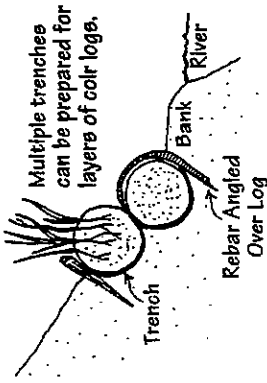
Example 1.



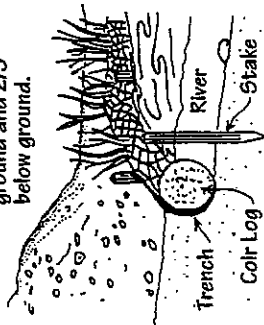
Install the logs to ensure contact with soil along the entire length. In most cases, excavate a shallow trench to partially bury the log. At no time should the coir log span any open space that may occur between rocks, logs or uneven ground. Tie logs together that have been placed end to end and stake into place. Flowing streams, particularly those carrying ice during breakup, could rip the log out of the streambank, if it is not adequately anchored. Wooden stakes, curved rebar and earth anchors have all been used to securely anchor these logs.

Sod or sprig coir logs when they are placed in locations that will provide adequate moisture for plant growth. Small holes can be created in the surface of the logs and sprigs, or small plugs of suitable plant species can be transplanted into the log (see *Streambank Revegetation Plant Species Selection List, Grasses and Sedges*). These plantings should be fertilized (see *Fertilizer section*).

Example 2.
Logs biodegrade as plant roots develop.



Coir Log is 1/3 above ground and 2/3 below ground.



Partially buried coir log with live siltation immediately behind.