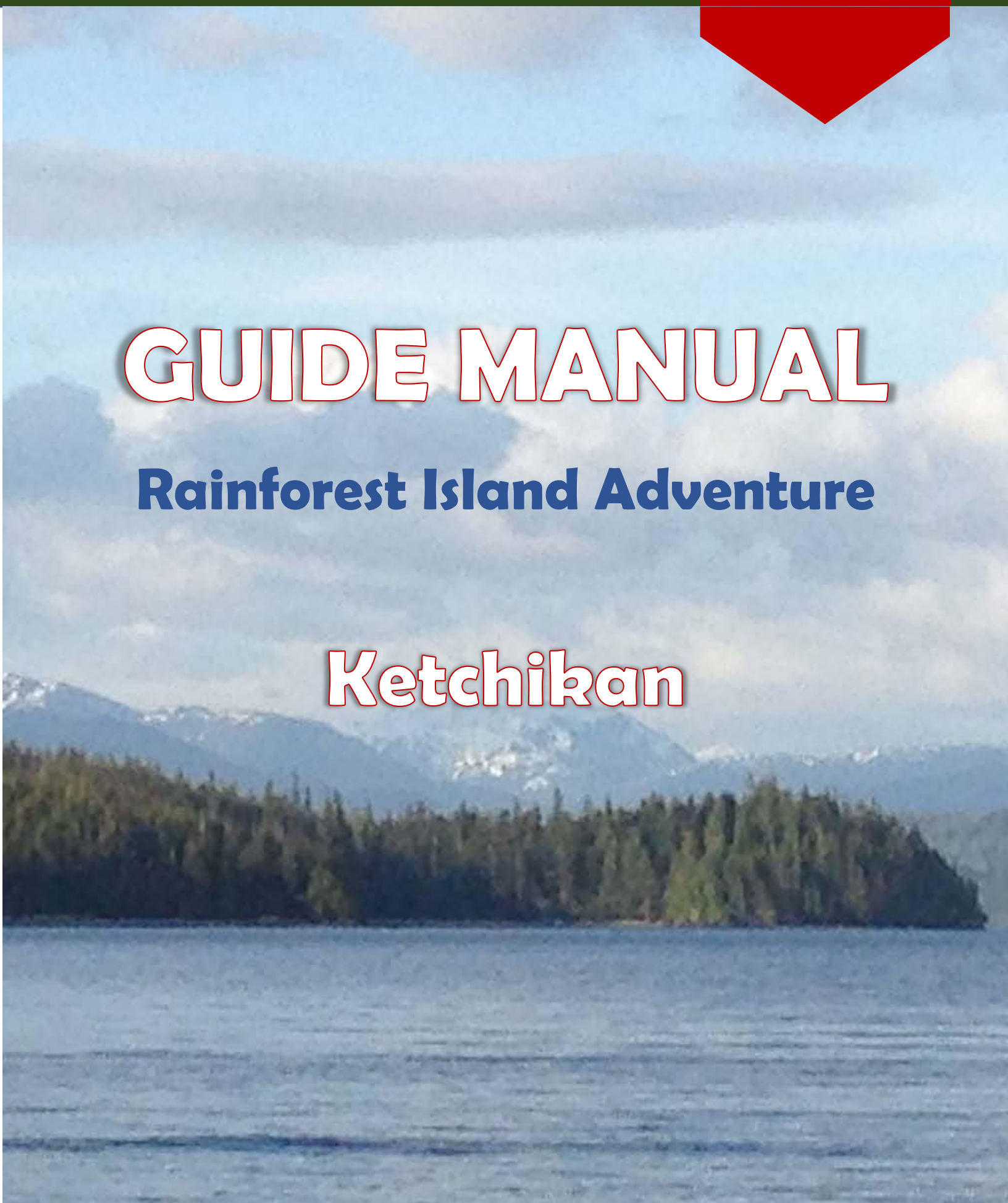

GUIDE MANUAL

Rainforest Island Adventure

Ketchikan

Alaska Travel Adventures

Ketchikan

GUIDE MANUAL

Rainforest Island Adventure

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A VIOLATION OF THE EMPLOYEE AGREEMENT.
THIS ENTIRE HANDBOOK MUST BE RETURNED TO
ALASKA TRAVEL ADVENTURES IN TACT.

Alaska Travel Adventures, Inc.
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Ketchikan, AK, 99901
907-257-5295

Alaska Travel Adventures' History

Alaska Travel Adventures, (ATA) was founded in 1978 by Martin H. Behr in Palo Alto, California, for the purpose of providing Alaska visitors with a variety of Alaskan outdoor adventures. Over the past four decades, we have provided over a million clients the opportunity to experience Alaska's natural beauty and spirit of adventure in a safe and comfortable manner. We pioneered many new concepts in Alaska travel, including van safaris, active luxury cruises, active shore excursions and safari base camps. ATA has received high marks from major Alaska tour operators, cruise lines and wholesalers.

Our summer staff now numbers nearly 300 employees including management, sales, escorts, drivers, and guides. ATA has operations in Anchorage, Juneau, Ketchikan, Redmon, Sitka, and Skagway.

Our participants are not exclusively younger people, nor are they necessarily experienced in outdoor activities. All our trips feature personalized attention and provide participants with a chance to actively experience Alaska's natural world. It is our intent to continue to provide Alaskans and Alaska visitors with high quality adventures for all ages.

You are valued team members and have become part of the rich history of Alaska Travel Adventures. We're glad you are here! We're going to have a great season!

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ATA Tour Policy

Chapter 1

Risk Management

Learning Objectives

- ✓ Become Informed about ATA Safety Culture
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- ✓ Become Aware of ATA Tour Policy
- ✓ Discuss How a Proactive Approach to Safety Mitigates Risk
- ✓ Learn How to Manage an Incident & Follow Incident Reporting Protocol

Introduction

Customer and staff safety and security is the highest priority of Alaska Travel Adventures, Inc. (ATA), and safety related policies are strictly enforced. ATA safety related policies and procedures, and an attitude-belief-values system that makes safety our Number 1 Priority, combine into realistic best practices to be carried out by field staff. We devote much effort in training our field staff to execute our tour product with a high level of professionalism. We also utilize high quality equipment which is maintained in a safe and clean condition. ATA management has over 30 years of experience operating adventure tours, marine excursions, restaurants, campgrounds, and vehicle rental operations. We communicate effectively in numerous ways to ensure that all participants are made aware of any potential dangers. This extends to all areas of our operation including accommodation of the disabled as directed by the American Disabilities Act (ADA). *Our Full Alaska Travel Adventures, Inc. General Risk Management Plan is located in the Employee Handbook, which must be read, and acknowledged by signature by every ATA employee pre-employment*.

ATA Safety Culture

The Way We Do Things Around Here. A proactive approach to safety is paramount to operating safe Rainforest Island Adventure tours. Alaska

Travel Adventures' approach to safety starts when customers meet our Customer Service staff on the docks and is executed with intentionality throughout the tour. ATA's senior management has developed an appreciation and understanding of the risks involved, and we manage proactively to ensure that any risks are removed or minimized.

Customers

Itineraries

Our tour itineraries are structured to ensure the safety and security of our customers and personnel. We consider any potentially hazardous activities and have an operating plan to address these for each tour. We provide information in advance on our tour data forms. We also alert the customers prior to their encounter of any known risks. Some of the common risks that might be encountered on our tours include uneven terrain, getting in and out of vehicles, rafts, kayaks, canoes, boats, navigating steps, hazards associated with navigating unmaintained roads (potholes, water crossings, stops, wildlife in the road). For this reason, tours must be delivered as structured in the itinerary with no deviation. The only allowed deviation is to avoid a safety hazard, such as incoming hazardous weather, bear on trail or to deal with a sick customer.

Safety Briefing & Liability Waiver

ATA conducts a safety briefing on all our tours and all our adventure tours have a liability waiver that the customers are required to sign. These customers acknowledge the risks, confirm that they are in generally good physical condition, and agree to not smoke, stand in any raft, canoe, or kayak, and wear seat belts at all times where provided. The liability waiver must be signed by all participants, and by all parent/guardians for minors, participating on ATA tours. If any participant is unwilling to sign the waiver, contact your supervisor, who will arrange return transport for the customer(s). All ATA tours with inherent risks include a safety, equipment, and site orientation prior to commencement. ATA requires its personnel and customers to wear life jackets at all times they are on or near the water in any open vessel or as required by USCG regulation.

Age & Weight Restrictions

We designate appropriate age and weight restrictions as well as provide information on the activity level for our adventure tours to ensure the experience is safe and appropriate for the age and physical abilities of the customer. Children under 5 years of age and weighing less than 40 lbs. are not permitted to participate in our rafting, kayaking, canoe tours, or any boat tours which require a life jacket. Children under 12 years of age must be accompanied by a parent or guardian. Children ages 13 to 17 are required to have a signed parental consent form if traveling without a parent or guardian.

Health

Any person with guest contact is not permitted to participate in the tour if they are sick or symptomatic. This includes ATA personnel as well as customers. ATA personnel are required to practice good hygiene. If a customer becomes symptomatic on tour, every effort will be made to immediately provide separate return transportation for the customer. Transport vehicles will be disinfected, and hand sanitizer provided for the customers and ATA personnel.

Staff Qualifications

ATA is regarded as a leader in the Alaska Shore Tour Industry. We are vetted by all our cruise ship partners as well as independent sellers of shore tours. Staff Qualifications and Certifications ensure that all ATA field staff meet minimum industry standards and must be maintained throughout your period of employment with Alaska Travel Adventures.

Handbook & Guide Manual

All employees must read and acknowledge the ATA Employee Handbook and Rainforest Island Guide Manual before leading clients on adventure tours. The Employee Handbook outlines Alaska Travel Adventures policies and procedures applicable to every ATA employee. The Guide Manual outlines Alaska Travel Adventures policies and procedures specific to each tour product. Both the Handbook and the Manual must be read in their entirety and

acknowledged by the employee before any hours are recorded.

Pre-Employment Paperwork

Employees will be given pre-employment paperwork to be completed prior to working as an ATA Employee. All pre-employment paperwork must be completed in its' entirety prior to employment. Pre-employment paperwork includes the Employment Contract, DOT Qualification Form & Driver Questionnaire, Payroll Information, ATA Equipment List, Health Questionnaire & HIPAA Statement, Pre-Employment Drug Test Referral and State of Alaska Information.

First Aid & CPR

ATA requires all guides, deckhands, marine operators and drivers to be First Aid and CPR trained. First Aid and CPR certifications should be valid during the entirety of the employee's Employment Agreement dates.

Drug Testing

ATA requires all Ketchikan staff who work on the Seahawk vessel to pass their Pre-Employment Drug Test and be enrolled in Maritime Consortium. Employees who are not enrolled in Maritime Consortium can in no way be an active member of the crew onboard the vessel (Captain or Deckhand) or perform any safety sensitive function (such as boat maintenance). Employees who are enrolled in Maritime Consortium are subject to Random Testing throughout their employment period with Alaska Travel Adventures.

Marine Operator License

All Seahawks or inflatables carrying passengers will be operated by a U.S. Coast Guard Master licensed operator (minimum 25 Ton Masters License) and FCC Radio Operators License. Licenses should be valid during the entirety of the employee's Employment Agreement dates.

Transportation

Vehicles

All vehicles utilized in the delivery of our tours are in a safe and clean condition, and are operated according to relevant federal, state, and local safety regulations and requirements. All transport vehicles contain a step stool, basic repair tools, routinely inspected fire extinguisher and first aid, road emergency, and biohazard kits. Customers and guides are required to wear seat belts at all times in every vehicle equipped with seat belts. While the Jeeps come standard with 4 seatbelts and a 4-person maximum and vans with 15 seatbelts and a 15-person maximum, some vehicles have been modified or have had a seat removed to carry equipment to and from various tour locations and therefore have a lower carrying capacity. All our vehicles have set capacity maximums to ensure customer comfort and safety. ATA vehicles with capacities exceeding 15 passengers have a public-address system to ensure the customers can easily hear the safety briefing and tour narrative. All transport vehicles are inspected prior to each tour. These inspections are thorough and documented. Customer driven vehicles are additionally inspected post tour. Transport vehicles are secured when left unattended during the tour.

Drivers

ATA drivers who operate company vehicles have current required licenses to operate the vehicle according to all relevant statutory, federal, state and local safety regulations and requirements. A CDL licensed driver is required for all our vehicles carrying over 15 passengers. Copies of all licenses are kept in the corporate office in Juneau Alaska. Drivers only carry customers, ATA personnel, or tour escorts who can be identified as such. Drivers are required to be competent, punctual and alert at all times. Drivers have the ability to communicate via radio, satellite phone, or cell phone. Drivers are not permitted to make or accept any personal cell phone calls while in the presence of customers. Drivers are required to park vehicles with a dual brake system in place, assist passengers in and out of the vehicle, be proficient with ADA requirements and sensitivity, be CPR certified, familiarize passengers with the location of all safety equipment before departure, explain to passengers all evacuation procedures and alternative emergency escape routes before departure, be trained in response to public vomit and diarrhea incidents, to clean and disinfect the vehicle each evening. If a heightened level of public health concern exists, the

drivers are required to disinfect all transport vehicles using Virox or an equivalent product between transfers with extra attention given to hand contact surfaces as often as possible with Virox.

Watercraft

US Coast Guard Regulations

ATA operates watercraft tours in accordance with all United States Coast Guard regulations as a minimum standard. Watercraft tours are equipped with watercraft repair, emergency, first aid, and biohazard kits. Coast Guard regulated vessels have a current, approved certificate for carrying passengers (COI). This document is located on the vessel with a copy maintained in the corporate office located in Juneau, Alaska. The document stipulates the maximum number of passengers to be carried, the minimum safety equipment and crew required, and any operation restriction. ATA stores the number of life jackets indicated as maximum capacity on the vessel COI, in a location that is readily accessible and immediately available. On open watercraft tours, ATA requires all participants and personnel to wear life jackets at all times while on or near the water. All motorized watercraft have rescue flotation devices that can be thrown and retrieved from the boat, routinely inspected fire extinguishers appropriate for the size of the boat, the appropriate number of distress flares that are of an approved type and readily available, and first aid kits. Rafts, kayaks, and canoes are equipped with throw ropes, and first aid, and emergency kits accompany each tour. Communication is available via radio and/or cell or satellite phone. ATA boats are clean and seaworthy in all respects for the intended use. Boats are inspected prior to the departure of each tour.

Lifejackets

ATA requires its personnel and customers to wear life jackets at all times they are on or near the water in any open vessel or as required by USCG regulation. All ATA watercraft tours include a demonstration of correct donning of a life jacket. On all tours which require life jackets be worn during the tour, guides check that life jackets have been properly donned prior to assisting the customer into the craft. ATA watercraft tours embark and disembark safely. This process is supervised by a crew member. On large vessels, at least one crew member is positioned at the gangway to assist passengers on and off the vessel. On small craft tours, the captain/guide, will demonstrate proper procedures for getting in and out of the boats. ATA personnel are rescue trained to respond to a “man overboard” accident for all watercraft tours.

Marine Conditions

ATA monitors weather conditions so that additional precautions can be taken as needed up to and including canceling the tour. All Marine Operators, the Field Operations Supervisor and Operations Manager should be continuously monitoring the marine forecast for possible hazardous conditions well in advance of, and during, tour operations. Any forecast winds of Beaufort Scale Force 4 Force 5 (Winds 17-21 Knots / 19-24 MPH) or above, or any other hazardous marine condition, will trigger a high Alert Status in which Marine Operators, the Field Operations Supervisor or the Director may delay, modify, or cancel the tour.

The conditions of the marine forest must be cross-checked with actual conditions on the water before cancelling a tour. As the marine forecast for Clarence Strait covers a wide area including open ocean beyond Prince of Wales Island, wind direction, velocity, and duration, in addition to direction of tidal flow will all factor into the sea state in our area of operation. Our tour operates in inland waters area covered by the marine forecast. Marine Operators should be monitoring the NOAA Marine Forecast for Clarence Strait intermittently throughout the day of operations. The following sources should be used for the most accurate data:

- ✓ VHF Radio – Channel WX1/21B
- ✓ National Data Buoy Center – Guard Island Light (http://www.ndbc.noaa.gov/station_page.php?station=GIXA2)

When an Alert Status has been triggered, ATA Marine Conditions Policy is to enact the following procedure:

- ✓ Marine Operator AND Field Operations Supervisor OR Operations Manager communicate by phone or in person.
- ✓ Marine Operator AND Field Operations Supervisor OR Operations Manager must evaluate conditions in the field. Safety of the vessel and ATA personnel should never be compromised by an on-water evaluation.
- ✓ If the safety of the vessel, crew or passengers would be compromised by operating the tour, either the Marine Operator, Field Operations Supervisor or Operations Manager may cancel the tour.
- ✓ When a decision to cancel a tour is made, the Field Operations Supervisor or Operations Manager should immediately contact ATA Customer Service Representatives. CSRs will alert the appropriate ship personnel and OTCs that the tour has been cancelled for the safety of the passengers due to hazardous marine conditions.
- ✓ All assigned field staff will be made aware that the tour has been cancelled. If cancellation has been made during a day of tours, any passengers or field staff who are on Betton Island should be brought off the island at the earliest opportunity using the appropriate route (primary or safety route).

Radio Use

Radios provide valuable communication between ATA personnel and with the cruise ships. For marine operations, they are required by the USCG. It is important to treat the radios with care as they are delicate and expensive pieces of equipment.

Radios will be assigned by the Director to appropriate staff. The radio is then the responsibility of that staff member and will be returned to ATA in the condition they were assigned. Any difficulties or problems with the radios must be immediately reported to the manager. Radios used for field work must be enclosed in a weather protection device. They also must be secured to the operator at all times and will be fully charged at the end of the day.

All radio operators must abide by appropriate FCC radio regulations. Radios will be used for business purposes only and under the supervision of the trip manager. Unauthorized use of company radios will not be allowed. Radios are not private! Use discretion when relaying any information via radio. When reporting sensitive information, state so and give other staff the opportunity to either turn their radio down or excuse themselves from customers. Under no condition will profanity or abusive language be tolerated when using radios.

Betton Island Policies

Rainforest Island Adventure is operated under permit from the US Forest Service. All policies and procedures that have been established for these tours have been established to comply with the conditions of the operating permit. ATA management consistently audits its products for quality and safety and compliance with our National Forest permit. Additionally, the US Forest Service many conduct a random inspection of Betton Island at any time to ensure that ATA is in compliance with conditions of the operating permit.

Beach Safety

Unloading and loading passengers from the Seahawk to the intertidal zone must be handled with the highest level of care. ATA provides training and written procedures for all field personnel to ensure both clients and staff remain safe while loading and unloading the Seahawk at the beach. Wading and swimming is not permitted at any time.

Trail Safety

Slip and Fall incidents may easily occur if preventative actions are not taken by field staff. Every stair and board on the Betton Island boardwalk should have “no-slip” grip applied to the surface. If the no-slip has been damaged or is otherwise missing, report this condition to your supervisor immediately. Upon arrival on the island, clients shall be informed by the guide during the safety briefing that they should:

- ✓ Stay on the boardwalk trail, at all times, during the hike.
- ✓ Mind their step and step onto the center of the boardwalk, as lower body injuries have occurred when clients have not stepped squarely on the boards.

- ✓ Use handrails where present.

Camp Safety

Guides and Camp Attendants should be mindful of risks involving the campfires, stove and hot surfaces and take the appropriate actions to keep customers safe. Mitigating these risks involves informing clients of the presence of the campfire and hot cooking surfaces, being aware of customers' proximity and movements around the campfire and hot cooking surfaces and taking any appropriate actions to keep customers safe around these areas. ATA personnel are responsible for making sure our operation is compliant with the condition of the Betton Island operating permit, which specifies that the Camp Attendant will have a "full bucket of water nearby" at all times while a campfire is burning.

Food Service

ATA provides training and written procedures for all food service personnel to ensure compliance with all relevant national and local laws and general food and health safety. These written procedures are described in our operation manuals. Additionally, all food service personnel are required to obtain a food handlers safety card. Any food service area is inspected by ATA personnel prior to guest arrival. ATA restaurants and outdoor cook camps are frequently inspected by multiple levels of management. Any noted issues in food and beverage safety and hygiene procedures during inspections are expected to be corrected immediately.

Risk Factors

Risk Factors that are commonly found during food bourn illness outbreaks are the focus of the management in protecting the safety of the food including, cooking food adequately to the necessary internal temperature, holding food at proper temperatures, enforcing practices to avoid cross contamination during preparation and service, proper personal hygiene. Hand sanitizer is available in numerous locations at ATA restaurants in addition to potable water and soap. ATA provides hand sanitizer at its remote food service locations where potable water is not available. ATA food service employees understand the importance of reporting illness prior to reporting to work. Additionally, any food handlers who suffer from any symptoms of diarrhea and/or vomiting are not allowed to work at the venue in any capacity until they have been free of symptoms for at least 48 hours and cleared as fit for return to work. If ATA management suspects an employee is ill or concealing illness while working, the manager/supervisor will request that the employee return home until he/she is free of symptoms and has been declared fit to return to work.

Employee Hygiene

Food handlers will demonstrate a professional level of hygiene and are required to keep clean; wear a uniform that is clean and regularly changed; refrain from smoking, eating, or drinking in the kitchen or food storage area; wear a hat to cover their hair; wash hands thoroughly with soap and water at the start of work and regularly throughout the day, prior to handling any food items, between changing tasks or replacing gloves, after using the toilet facilities, and after activities that contaminate hands (handling raw fish or chicken, refuse/rubbish, chemicals, soiled dishes, touching any parts of the body, eating, coughing or sneezing). ATA requires food service handlers with cuts or infected wounds on their hands or arms to have the wounds properly dressed and wear disposable gloves, or they must be assigned to tasks that are not food related. ATA employees are required to report any diarrhea and/or vomiting to their supervisor and they will be excluded from working until they have been free of symptoms for at least 48 hours. Food handlers with symptoms of other communicable diseases, such as abdominal cramps, fever, excessive coughing, or sneezing, will be assigned to tasks not related to food.

Food Service Procedures

ATA standard food service operating procedures dictate proper handling of food during storage, preparation, cooking, and service. These basic minimum requirements are assessed and updated to reflect the operation and ensure compliance with the governing regulations and general food safety standards. Food and supplies such as cups, napkins, and cutlery are protected from contamination by storing off the floor and are generally stored in their packaging. Food storage areas are maintained clean

and with enough space to allow for rotation of food products. Surfaces and finishes of the floors, walls, ceilings, and shelving are maintained in good and clean condition. No chemicals are stored above or touching food or supplies such as cups, napkins, cutlery, etc. The food storage area is not used to store personal belongings such as personal bags, clothing, jewelry, etc. The food storage area is not used for storage of cleaning equipment (mops, brooms) or items used for cleaning, etc. Cold food storage units operate at a safe temperature range. Refrigerators below 41 degrees and Freezers below 32 degrees. Raw food items (raw chicken, and fish) is stored below ready-to-eat/cooked food, including fruits and vegetables. Dry goods are stored off the floor on a shelf/rack. Where possible, we assign utensils or equipment for specific purposes to avoid cross contamination. A properly calibrated probe food thermometer to measure food temperature is available at all times. The food thermometer is used to measure the temperature of the food to ensure temperature requirements are met during storage, cooking, and service/display. All refrigeration equipment shall be provided with a working internal thermometer to measure the air temperature inside the unit. Food is left at room temperature during preparation for a minimal amount of time and chilled food is left in the refrigerator until ready for immediate preparation. Frozen items are thawed in advance in a refrigerator. Hot food is cooked to a core temperature of 165 degrees for at least 15 seconds and chilled food is stored at or below 41 degrees. For meals served on the premise where food is prepared, hot food is maintained at a minimum of 145 degrees and cold food is kept below 41 degrees. Food transported and served at remote locations is transported using insulated containers which are thoroughly washed and sanitized after each use and allowed to dry. ATA restaurants offer buffet service. Each food item has a separate serving utensil, and the buffet is monitored and maintained by personnel at all times. Clean cutlery, cups, bowls, plates, etc., are available for those passengers who make more than one trip through buffet lines. All displayed food is protected from contamination by the use of lids, covers and sneeze guards.

Facilities

ATA food service facilities' physical structure, surface finishes (walls, ceiling, and floor) and the equipment within the facility are well maintained and in good repair. All restaurants and outdoor cook areas are equipped with fire extinguishers, first aid kits and biohazard supplies. The facilities have a good standard of cleaning throughout the premises, including all items of equipment. Food equipment, including counters and all other surfaces that may come in contact with food are in good condition - easy to keep clean and unlikely to contaminate food from leaking water, lubricants, peeling paint, rust, etc.

Cleaning

Food contact equipment and surfaces are the priority, but cleaning is routinely carried out below and behind equipment. Facilities include a sufficient number of restrooms for the capacity and are cleaned, restocked, and inspected continuously during food service periods. Hand wash facilities with hot and cold water are provided to allow all persons to wash their hands after using the toilet facility and before eating. Liquid hand soap (no shared bar soap) and disposable single use paper are provided. All food waste/garbage is stored in designated containers with appropriate cover to prevent attracting insects. All outside refuse storage containers will be bear proof. All water provided in the facilities is potable, safe for consumption and use. Public water is provided where available. Where Public water is not available well water, which adheres to all state requirements and testing is provided. ATA supplies bottled water where appropriate for remote food service operations. ATA facilities are as pest free as possible. Pest prevention and control procedures are in place and evaluated on a regular basis. The pest prevention program includes denying pests the ability to enter into the facility by eliminating any entry points, doors and windows are kept closed whenever possible or screens are in place, holes and gaps on walls, doors, windows, and torn screens on windows are promptly repaired, food is kept off the floors, in containers or properly wrapped, effective cleaning practices are in place.

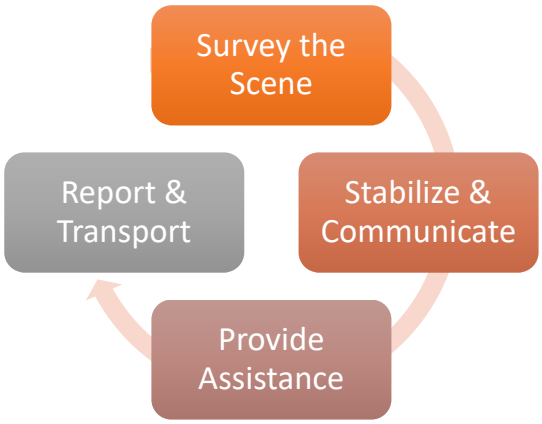
Sanitation

All utensils, including crockery, cutlery, glasses, and all cooking equipment are washed and sanitized after use. All items washed by hand are wash with a detergent solution, rinsed with clean potable water to remove any detergent residue, sanitized in a chemical solution, and allowed to air dry. Dishwashers are regularly inspected to ensure proper working condition in accordance with the manufacturer's specifications.

Incident Management

Alaska Travel Adventures makes safety and customer service our number one priority. Prioritizing safety is the key to prevent incidents from occurring during our operations. While doing everything we can to prevent any incidents, as a staff member you may be called upon to mitigate or manage an incident.

How to Manage Incidents



An incident (accident or emergency) can take place while at Knudsen Cove Marina, on the Seahawk or on Betton Island. In the event of an incident where personal injury or mechanical damage has occurred, **REMAIN CALM**. The next steps apply to all situations you may encounter in the field:

Survey the Scene

Mechanism of Incident (MOI) - The Mechanism of Incident is what caused the accident or emergency. The MOI may still present a hazard and therefore needs to be evaluated. Mechanism of Incident can be related to a medical injury or environmental hazard.

Number of People - Evaluate how many people are involved with this incident, where are they located and if there is any further risk to their safety.

Safety - As a leader, your primary responsibility to is keep yourself and any unaffected clients safe. After ensuring your personal and (unaffected) clients' safety, take steps to ensure the affected client(s) safety before attending to any equipment issues.

Stabilize the Situation

If the MOI is Present. If the MOI is present, proceed with caution and handle the situation with care. If possible, move yourself and all clients from the MOI into a safe location. If not possible to move an affected client to a safe location, move unaffected clients to safety, do not put yourself and risk and communicate the incident to EMS.

If the MOI is Not Present. If there is no hazard to either the customers or yourself, proceed to Communication & Providing Assistance.

Communicate

Incidents at Knudsen Cove. Enact the following communication protocol for incidents that may occur at Knudsen Cove Marina:

- ✓ In an emergency situation, contact EMS. After contacting EMS, immediately enact ATA Incident Communication Protocol first. The Operations Manager or Supervisors will advise you on the next steps to take with any customers or ATA personnel involved in an incident.
- ✓ In a non-emergency situation, immediately enact ATA Incident Communication Protocol. The Operations Manager or Supervisors will advise you on the next steps to take with any customers or ATA personnel involved in an incident.

Incidents Aboard the Seahawk. Enact the following protocol for incidents that may occur aboard the Seahawk. **Full rescue procedures can be found under the Rescues of Tour Procedures (Section 4, Chapter 2)** If a situation arises where an accident or incident occurs involving an inflatable vessel, it is the responsibility of the vessels Master to follow proper reporting procedures. The vessel operator should report the following accidents/incidents to their manager and

to the proper U.S Coast Guard authorities: Any injury which involves medical treatment beyond basic first aid, loss of engine power, loss of steering, loss of life, sinking, collision, capsizing or swamping, pollution, and any accident causing more than $25,000 in damage.

Mechanical Issue or Boating Accident: If self-rescue by returning the Seahawk to the Marina is possible, enact the ATA Incident Communication Protocol below.

- ✓ In non-emergency situations, the Marine Operator should contact Knudsen Cove, who may be able to provide assistance such as towing to the marina. Immediately following your initial call with Knudsen Cove, enact ATA Incident Communication Protocol and communicate the issue as well as plan for rescue.
- ✓ In an emergency situation, the Marine Operator should contact the contact guard by hailing on VHF Channel 16. As soon as the Seahawk is cleared from the emergency situation, enact ATA Incident Communication Protocol.

Injury Aboard the Seahawk:

- ✓ In a non-emergency situation, enact the ATA Incident Communication Protocol as soon as the Marine Operator is in cell phone range.
- ✓ In an emergency situation, contact EMS immediately. As soon as EMS has been contacted, enact ATA Incident Communication Protocol.

Incidents on Betton Island. Enact the following protocol for incidents that may occur while on Betton Island. In many cases an incident can be taken care of without requesting outside assistance. This does not mean an operator should not render aid in order to radio for assistance.

- ✓ Immediately contact the Marine Operator. If the Seahawk is on the island, you will be able talk to the Marine Operator directly. If the Seahawk is not on the island, contact the Marine Operator via the handheld VHF radio which is located at the Betton Island gathering area. There is no cell reception on the island, and VHF and the Satellite Communicator are the only means by which to communicate. If for some reason radio communication is not possible use a signal flare or attempt to flag down any passing craft who will be able to get a call out to EMS.
- ✓ In case of an emergency, the Marine Operator should contact EMS and then enact the ATA Incident Communication Protocol (Listed Below)
- ✓ In a non-emergency situation, the Marine Operator should enact the ATA Incident Communication Protocol.

ATA Incident Communication Protocol:

In an emergency always contact EMS first. In case of Knudsen Cove emergency, call 911. In case of watercraft emergency contact the Coast Guard on VHF Channel 16. Notification for further medical attention should follow these steps:

1. CALL 911 or the COAST GUARD (CHANNEL 16) Have available:
   a. Your name
   b. Injured parties name
   c. Location you are calling from.
   d. Nature of incident
   e. Extent of emergency
   f. Type of assistance required.
2. Maintain radio contact until you have received assistance or have been relieved by a supervisor!

In non-emergency situations, or after contacting EMS in an emergency, contact ATA personnel in the following order.

1. Operations Manager. The Director will conference with the Vice President of the company and then communicate directly with Ketchikan Operations Supervisors and Shore Excursion personnel.
2. Field Operations Supervisor - If unable to contact the Operations Manager, contact the Field Operations Supervisor who will attempt to contact the Operations Manager before contacting the Vice President of the company.

Make no statements and volunteer no information to the press. A spokesperson from the Juneau office will deal with any media attention, public and authorities.

Provide Assistance

In case of an injury to a customer, provide the Level of Care as qualified by your medical certification. Care should be continuously provided until the customer has returned to the ship and has been met by Shore Excursion personnel. In the case of a minor injury, the customer may want to continue with the

tour. If participating in the remainder of the tour does not cause further harm or compromise the tour for the remainder of the participants, the customer should be allowed to continue the tour. Guides should closely monitor the client while giving the rest of the tour.

Incident Report Form

All incidents need to be documented on the ATA Incident Report Form and accompanied by photos. An ATA Incident Report Form must be filled out for any incident, no matter the severity. Incident Report Forms are located in the waterproof box at Betton Island camp, aboard the Seahawk, and in the outfitting trailer. ATA personnel must gather the needed information from the client(s) involved in the incident, as well as (non-ATA personnel) witnesses to the incident. The ATA Incident Report Form includes a section for statements by a witness. Have witnesses write down their statement, including their name and address if possible.

New for 2023

All incidents need to be completed through the ATAapp once in service range. The employee will complete the incident reporting form based on what was completed on the paper form. There are no exceptions to filling out an Incident Report Form. Incident report forms and all corresponding photos must be given to the Operations Manager who will send to Juneau.

Transport

It may be necessary to transport an injured customer while managing an incident. As a guide you should always Survey the Scene and Stabilize the Situation first. If communication with the Marine Operator, Operations Manager or Field Supervisor is possible, they will give you a plan for providing care and transporting an injured client. In an emergency situation, EMS or the Coast Guard may give you instructions. Always follow instructions given by any EMS provider. You should never put yourself or any other clients at risk by transporting a client. In non-emergency situations, where guides are not putting themselves or other clients at risk, guides should move clients to beach and assist in loading the client onto the Seahawk. It is important to keep any customer warm and dry while being transported on the Seahawk.

Chapter 2

Environmental Policy

Learning Objectives

- ✓ Become Informed about ATA Environmental Policy, Goals & Objectives
- ✓ Identify areas in which sustainability can be implemented.
- ✓ Inform Guides of Reduce, Reuse and Recycle Actions
- ✓ Educated Guides & Marine Operators on Wildlife Viewing Policies
- ✓ Guide Field Staff's Management of Climate Change Topics

Introduction – ATA's Vision

At Alaska Travel Adventures, we have a deep respect for and commitment to protecting the environment in which we live and work, and to reducing our contribution to global climate change. Our goal is to minimize our environmental footprint while delivering exceptional operational results. We are committed to the development and implementation of environmentally responsible programs, policies, and practices within our organization. These include energy, water, and fuel conservation, decreasing GHG emissions, waste reduction and responsible procurement practices. ATA makes every effort to minimize any adverse effects on the environment. We instruct our customers on the appropriate behavior and ensure we are in compliance with all government regulations.

Goals & Action Plan

Environmental Goals

ATA pledges to reduce fuel consumption and GHG emissions associated with climate change by 40% between 2015 - 2025, and to eventually achieve zero emissions from vehicles as technology develops. We rely on vehicles to deliver products and services to our guests. We recognize that reducing our fuel use and emissions will have a substantial positive impact on the environment. We partner with our suppliers, maintenance providers, vehicle manufacturers, clients, and governmental organizations to educate our

employees and our clients on environmental impacts, develop ways to improve operational efficiency, and implement new technologies when feasible.

Advocate and employ energy management efforts to reduce consumption and our contribution to GHG emissions. The energy we consume is a finite natural resource and also contributes to climate change. We work to reduce our environmental footprint and advocate for renewable energy sources, which address climate change while also contributing to the environmental health of the communities in which we operate.

Recognize clean water as another finite natural resource and implement management practices that reduce water consumption and waste.

Minimize waste production, promote reduce/recycling and have an ongoing commitment to the efficient use of materials and resources.

Protect and preserve the natural environment in which we operate in by practicing “Leave No Trace” principals.

Ensure that we source, where possible, items for purchase from suppliers with a proven commitment to sustainability and the environment, including the use of “green” chemicals and non-toxic cleaning supplies.

Participate in local efforts and organizations where we can help shape the dynamics of sustainable practices. Work with our business partners and government agencies to improve sustainable practices through efficiency and cooperation with a shared vision.

Environmental Action Plan

ATA is continuously moving towards achieving the Environmental Goals established by senior management and has established the following Action Plan in order to do so. All employees should be aware of the action plan and take steps individually and collectively towards these goals. If an employee should observe or take part in actions that are contrary to our environmental goals, they should alert their supervisor immediately.

- ✓ Replace existing vehicles, with lower GHG emission vehicles, every time a vehicle is replaced. As technology advances, our goal is to eventually achieve zero emissions from vehicles.
- ✓ Emphasize the environmental benefit of reduced GHG emissions through our practice of incorporating an element of “human powered” transportation in all tour programs using canoe, rafting, kayaking, and hiking components.
- ✓ Utilize appropriately sized vehicles for each group in order to minimize our carbon footprint.
- ✓ Maintain our fleet of vehicles to achieve efficient, environmentally friendly operation. Maintain a zero-tolerance policy when it comes to fluid leaks or mechanical deficiencies that adversely affect the environment.
- ✓ Ensure a Reduce/Reuse/Recycle program is available and enforced.
- ✓ Incorporate reusable food service items and snack containers, wherever practical.
- ✓ Reduce water consumption by installing adjustable spray adapters on all hoses, reusing grey water for vehicle washing and eliminating excessive soaps and car was detergents and training employees on minimizing water use for vehicle maintenance.
- ✓ Maintain procurement policies that utilize suppliers with a proven commitment to sustainability and the environment. Purchase from local, environmentally sustainable sources whenever feasible.
- ✓ Practice “Leave No Trace” principles.
- ✓ Encourage employees to come up with innovative ideas that improve our sustainability and reward them for their efforts.
- ✓ Create less waste through paperless transactions when possible.
- ✓ Inform our guests about our commitment to the environment and educate them on the use of our recycling bins, Leave No Trace practices, and our commitment to reducing the effects of climate change.

Recycling Policy

Alaska Travel Adventures is committed to operating an environmentally responsible business. Part of our responsibility, as good corporate citizens, is to ensure that a recycling program is maintained at our offices, and other physical locations where we conduct our business. Our goal is to Reduce, Reuse and Recycle as often as possible.

Recycling Plan

Alaska Travel Adventures has a recycling program that encompasses all of our physical locations. Each location must have clearly labeled recycling bins to separate food scraps, aluminum, cardboard / paper and waste.

Each employee will have a paper recycling container at their workstation in order to encourage recycling. A paper recycling bin will be located next to all copy machines and printers.

All locations will nominate a point person to educate and encourage employees to participate in the recycling program and provide any further education required.

Employees will be instructed on the proper sorting and use of the provided recycling bins.

A waste reduction training will be given for all employees to educate them on simple ways to reduce their waste production:

- ✓ Printing double sided.
- ✓ Reusing paper if possible
- ✓ Utilizing electronic documentation wherever possible to avoid printing.
- ✓ Using silverware, cups and plates that can be washed and reused rather than plastic or paper.
- ✓ Remove paper coffee cups, paper plates and plastic silverware from breakrooms.
- ✓ Posting signs in the break rooms to encourage reuse.
- ✓ Change snack container from Styrofoam to a reusable container.
- ✓ Burn all paper and cardboard waste.

In addition to day-to-day recycling, the following will also be recycled with approved vendors when required:

- ✓ Toner/Ink cartridges, computers, and electronic waste.
- ✓ Cooking Oil
- ✓ Motor Oil/Hazardous waste
- ✓ Batteries

In Tour Food Service Areas:

- ✓ Use Paper Cups and Bowls that are manufactured from recycled materials.
- ✓ Encourage guests to reuse paper products and only set out what is necessary for group size.
- ✓ Protect paper supplies (bowls, cups, napkins) from environmental factors including rain, wildlife, and improper storage.
- ✓ Provide the means and instruction for our guests to recycle with bins and signage to educate them how to properly separate recyclables.

A list of approved recyclables is found in **Appendix C**. This list is displayed above recycling bins in the warehouse order to assist employees. Ketchikan maintain a weekly schedule for the recycling bins will be transported to the appropriate community recycling center and deposited.

Leave No Trace

Alaska Travel Adventures has a deep respect for the land and water on which we operate. Our company is committed to minimizing our impacts on the environment and encouraging sound environmental practices by our employees and customers. We do not own the land on which we operate the Rainforest Island Adventure tours. While we are the primary users of the boardwalk trail, it is open to public use. It is important that we share it with other users in a respectful manner that preserves the enjoyment of all.

As a guide, it is your responsibility to help maintain and protect the environment in which we operate. The below principals should be followed at all times in order to preserve the land for those who follow. Every effort should be made to minimize encounters with others on land and water. Alaska Travel Adventures is a proponent of,

and strictly abides by, Leave No Trace Principles. All guides should be aware of LNT principles and guidelines, especially as relates to the Tongass National Forest and surrounding marine environment.

Plan Ahead & Prepare:

1) Know the regulations and special concerns for the area you'll visit.
2) Prepare for extreme weather, hazards, and emergencies.
3) Schedule your trip to avoid times of high use.
4) Visit in small groups when possible. Consider splitting larger groups into smaller groups.
5) Repackage food to minimize waste.
6) Use a map and compass to eliminate the use of marking paint, rock cairns or flagging.

Travel and Camp on Durable Surfaces:

1) Durable surfaces include established trails and campsites, rock, gravel, dry grasses or snow.
2) Protect riparian areas by camping at least 200 feet from lakes and streams.
3) Good campsites are found, not made. Altering a site is not necessary.
4) In popular areas:
   a. Concentrate use on existing trails and campsites.
   b. Walk single file in the middle of the trail, even when wet or muddy.
   c. Keep campsites small. Focus activity in areas where vegetation is absent.
5) In pristine areas:
   a. Disperse use to prevent the creation of campsites and trails.
   b. Avoid places where impacts are just beginning.

Dispose of Waste Properly:

1) Pack it in, pack it out. Inspect your campsite and rest areas for trash or spilled foods. Pack out all trash, leftover food and litter.
2) Deposit solid human waste in cat holes dug 6 to 8 inches deep, at least 200 feet from water, camp and trails. Cover and disguise the cat hole when finished.
3) Pack out toilet paper and hygiene products.
4) To wash yourself or your dishes, carry water 200 feet away from streams or lakes and use small amounts of biodegradable soap. Scatter strained dishwater.

Leave What You Find:

1) Preserve the past: examine, but do not touch cultural or historic structures and artifacts.
2) Leave rocks, plants and other natural objects as you find them.
3) Avoid introducing or transporting non-native species.
4) Do not build structures, furniture, or dig trenches.

Minimize Campfire Impacts:

1) Campfires can cause lasting impacts to the backcountry. Use a lightweight stove for cooking and enjoy a candle lantern for light.
2) Where fires are permitted, use established fire rings, fire pans, or mound fires.
3) Keep fires small. Only use sticks from the ground that can be broken by hand.
4) Burn all wood and coals to ash, put out campfires completely, then scatter cool ashes.

Respect Wildlife:

1) Observe wildlife from a distance. Do not follow or approach them.
2) Never feed animals. Feeding wildlife damages their health, alters natural behaviors, and exposes them to predators and other dangers.
3) Protect wildlife and your food by storing rations and trash securely.
4) Control pets at all times or leave them at home.

Be Considerate of Other Visitors:

1) Respect other visitors and protect the quality of their experience.
2) Be courteous. Yield to other users on the trail.
3) Step to the downhill side of the trail when encountering pack stock.
4) Take breaks and camp away from trails and other visitors.
5) Let nature's sounds prevail. Avoid loud voices and noises.
6) Chose paddle routes that avoid other boats on the water.
7) Keep your group in close control to minimize impacts on other users.

Wildlife Viewing

The wildlife of Southeast Alaska is unparalleled! Waters teem with marine mammals including Humpback Whale, Orca, Stellar Sea Lion, Harbor Seal and all five species of wild Salmon. Revillagigedo Island and it's surround small islands are home to Brown and Black Bear, Alexander Archipelago Gray Wolf, and Sitka Black Tail Deer. It is a privilege to observe wildlife in their natural environment and wildlife viewing opportunities are a primary reason our customers take part in a cruise and participate in shore excursions. In return for that privilege, it's our responsibility to be respectful of both wildlife and habitats, work to project these habitats and educate our customers on responsible wildlife viewing practices.

ATA's Wildlife Viewing Policies

Alaska Travel Adventures follows current best practices as developed by departments governing the public's interaction with wildlife. NOAA Fisheries and NOAA's Office of National Marine Sanctuaries have developed the **Ocean Etiquette** program to promote ocean stewardship more effectively. The Alaska Department of Fish and Game publishes **Wildlife Viewing Ethics.** Anyone who visits, works, or plays in the Tongass National Forest and surrounding marine environment has an opportunity to make a difference in protecting these ecosystems.

Knowing how to interact with wildlife can help you make the right decisions when you encounter wildlife. Without paying attention to how you interact in the environment, you are running the chance of putting endangered species, federally protected species, and thousands of other species' lives at risk. Each time someone visits the wilderness environment, they have the wonderful opportunity to encounter wildlife. However, the unfortunate potential to harm our land and marine life and resources exists with every visit. We have listed below a set of general marine wildlife viewing guidelines. To learn more about the Ocean Etiquette program and more specific guidelines and regulations pertaining to activity, sanctuary or species group follow our links.

Wildlife Viewing Guidelines

Learn Before You Go. Read about the wildlife, viewing sites and local regulations to get the most from your wildlife viewing experience. Many species live only in specific habitats such as estuaries, coral reefs, sand dunes or the open ocean. Seasonal and daily cycles also influence when and where an animal may be located. Research on the internet, buy regional viewing guidebooks, talk with local residents and hire local guides to increase your chances of seeing marine wildlife.

Keep your distance. Use binoculars, spotting scopes and cameras with zoom lenses to get a closer look. Wildlife may be very sensitive to human disturbance, and if cornered, they can harm the viewer or leave the area. If wildlife approaches you, stay calm and slowly back away or place boat engines in neutral. When closer encounters occur, do not make sudden moves, or obstruct the travel path of the animals – let them have the unhindered right of way.

Hands Off. Never touch, handle, or ride wildlife. Touching wildlife, or attempting to do so, can injure the animal, put you at risk and may also be illegal for certain species. The slimy coating on fish and many marine invertebrates protects the animal from infection and is easily rubbed off with a hand, glove, or foot. Avoid using gloves when diving or snorkeling to minimize the temptation to touch. Remember, wild animals may bite, body slam, or even pull you underwater if startled or threatened.

Do not feed or attract wildlife. Feeding or attempting to attract wildlife with food, decoys, sound, or light disrupts normal feeding cycles, may cause sickness or death from unnatural or contaminated food items, and habituates animals to people. Habituated animals are vulnerable to vessel strikes or vandalism and can be dangerous to people.

Never chase or harass wildlife - Following a wild animal that is trying to escape is dangerous. Never completely surround the animal, trap an animal between a vessel and shore, block its escape route, or come between mother and young. When

viewing from a boat, operate at slow speed, move parallel to the swimming animals, and avoid approaching head-on or from behind, and separating individuals from a group. If you are operating a non-motorized vessel, emit periodic noise to make wildlife aware of your presence and avoid surprise.

Stay away from wildlife that appears abandoned or sick. Some marine animals, such as seals, leave the water or are exposed at low tide as part of their natural life cycle — there may be nothing wrong with them. Young animals that appear to be orphaned may actually be under the watchful eye of a nearby parent. An animal that is sick or injured is already vulnerable and may be more likely to bite. If you think an animal is in trouble, contact the local authorities for advice.

Wildlife and pets don't mix. Wild animals can injure and spread diseases to pets, and in turn, pets can harm and disturb wildlife. For example, wild animals recognize dogs as predators and quickly flee when they see or smell dogs. If you are traveling with a pet, always keep them on a leash and away from areas frequented by marine wildlife.

Lend a hand with trash removal. Human garbage is one of the greatest threats to marine wildlife. Carry a trash bag with you and pick up litter found along the shore and in the water. Plastic bags, floating debris and monofilament line pose the greatest risk to wildlife.

Help others to become responsible wildlife watchers and tour operators. Speak up if you notice other viewers or tour operators behaving in a way that disturbs the wildlife or other viewers or impacts sensitive habitats. Be friendly, respectful and discrete when approaching others. When operating a boat, lead by example and reduce your speed in areas frequented by marine wildlife, anchor properly and encourage others to do the same. Violations of the law should be reported to local authorities.

Whales, Dolphin & Porpoise

Alaska Travel Adventures follows “The Humpback Whale Approach Regulation” which has been in effect since July 2001 and requires that you:

- ✓ Not approach within 100 yards of a humpback whale.
- ✓ Not place your vessel in the path of oncoming humpback whales causing them to surface within 100 yards of your vessel.
- ✓ Operate your vessel at a slow, safe speed when near a humpback whale.
- ✓ Federal law prohibits pursuit of marine mammals.
- ✓ Remain at least 100 yards from marine mammals.
- ✓ Time spent observing individual(s) should be limited to 30 minutes.
- ✓ Whales should not be encircled or trapped between boats, or boats and shore.
- ✓ If approached by a whale, put the engines in neutral and allow the whale to pass.
- ✓ Even if approached by a marine mammal, offering food, discarding fish or fish waste, or any other food item is prohibited.
- ✓ Do not touch or swim with the animals. They can behave unpredictably and may also transmit disease.

While viewing whales, dolphins and porpoise, your actions should not cause a change in the behavior of the animals. Assume that your action is a disturbance and cautiously leave the vicinity if you observe behaviors such as these:

- ✓ Changes in swimming such as rapid changes in direction, speed; erratic swimming patterns.
- ✓ Escape tactics such as prolonged diving, underwater exhalation, underwater course changes, or rapid swimming at the surface.
- ✓ Female attempting to shield a calf with her body or by her movements.
- ✓ Surface displays. . . like tail slapping or lateral tail swishing at the surface.

Be Aware - Whales may surface in unpredictable locations.

- ✓ Breaching and flipper-slapping whales may endanger people or vessels.
- ✓ Feeding humpback whales often emit sub-surface bubbles before rising to feed at the surface. Stay clear of these light green bubble patches.
- ✓ Noise may help whales know your location and avoid whale and vessel collisions. For example,

if your engine is not running, occasionally tap the side of the boat with a hard object.

- ✓ If you need to move around a whale, do it from behind the whale.
- ✓ Vessels that wish to position themselves to allow whales to pass the vessel should do so in a manner that stays fully clear of whale's path.
- ✓ Marine mammals are more likely to be disturbed when more than one boat is near them.
- ✓ Avoid approaching marine mammals when another vessel is near.
- ✓ Marine mammals should not be encircled or trapped between boats, or boats and shore.
- ✓ Always leave marine mammals an escape route.
- ✓ When several vessels are in an area, communication between vessel operators may reduce the potential for disturbance.
- ✓ Limit your time with any individual or group of marine mammals to 30 minutes.
- ✓ Your vessel may not be the only vessel in the day that approaches the same animal(s). Please be aware that cumulative impact may occur.
- ✓ Vessels traveling in a predictable manner appear to be less disturbing to animals.
- ✓ Pursuit of marine mammals is prohibited by law.
- ✓ Never attempt to herd, chase, or separate groups of marine mammals or females from their young.
- ✓ Avoid excessive speed or sudden changes in speed or direction in the vicinity of whales.
- ✓ The departure from a viewing area has as much potential to disturb animals as the approach

Seals, Sea Lions & Sea Otters

While viewing seals, sea lions & sea otters your actions should not cause a change in the behavior of the animals. Assume that your action is a disturbance and cautiously leave the vicinity if you observe behaviors such as these:

- ✓ Increased movements away from the disturbance; hurried entry into the water by many animals, or herd movement towards the water
- ✓ Increased vocalization, aggressive behavior by many animals towards the disturbance; several individuals raising their heads simultaneously.
- ✓ KEEP YOUR DISTANCE
- ✓ Use extra caution when viewing seals and sea lions that are on land or ice, as harassment may occur at distances greater than 100 yards.
- ✓ When encountering seals or sea lions hauled out on land or ice, avoid making the animal(s) aware of your presence: keep noise low, stay hidden and stay downwind.
- ✓ Pups are often left alone while the mother feeds. They are not abandoned and should not be disturbed.
- ✓ All major Steller sea lion haul outs and rookeries throughout Alaska are protected by regulation. Extra caution is needed in these areas to prevent harassment of Steller sea lions in their critical habitat. Critical habitat includes the air, land and sea surrounding the site to 3,000 ft (0.9 km) in all directions.

Federal Law & Marine Mammals

The **Marine Mammal Protection Act** prohibits the TAKE of all marine mammal species in U.S. waters. Take means "to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill," and harassment means "any act of pursuit, torment, or annoyance which has the potential to injure a marine mammal or marine mammal stock in the wild; or has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to migration, breathing, nursing, breeding, feeding, sheltering." TAKE includes feeding or attempting to feed a marine mammal in the wild. Some exceptions are made for authorized scientific research and subsistence hunting by Alaska Natives.

The **Endangered Species Act** prohibits the TAKE of species listed as endangered or threatened. The definition of TAKE under the Endangered Species Act adds the terms harm, pursue, shoot, wound, trap and collect to the Marine Mammal Protection Act definition of TAKE

Bear Safety

All guides must carry a canister of pepper spray while on trail with customers. ATA provides Bear Safety training and bear spray for all Hiking Guides leading tours on Betton Island. All guests must receive the following orientation on bear safety-as part of the Hiking Guides Safety Briefing.

If you encounter a bear:

- ✓ Remain calm and avoid sudden movements.
- ✓ Give the bear plenty of room, allowing it to continue its activities undisturbed. If it changes its behavior, you're too close so back away.
- ✓ If you see a bear but the bear doesn't see you, detour quickly and quietly.
- ✓ If a bear spots you, try to get its attention while it is still farther away. You want it to know you're human so talk in a normal voice and waive your arms.
- ✓ Remember that a standing bear is not always a sign of aggression. Many times, bears will stand to get a better view.
- ✓ Throw something onto the ground (like your camera) if the bear pursues you, as it may be distracted by this and allow you to escape.
- ✓ Never feed or throw food to a bear. Remember, food is prohibited at the MGVC.

If a bear charges:

- ✓ Remember that many bears charge as a bluff. They may run, then veer off or stop abruptly. Stand your ground until the bear stops, then slowly back away.
- ✓ Never run from a bear! They will chase you and bears can run faster than 30 mph.
- ✓ Don't run towards or climb a tree. Black bears and some grizzlies can climb trees, and many bears will be provoked to chase you if they see you climbing.
- ✓ If you have pepper spray, be sure that you have trained with it before using it during an attack.

If a Black Bear attacks:

- ✓ Be loud, waive your arms, and stand your ground.
- ✓ Fight back! Be aggressive and use any object you have.
- ✓ Only if you are sure the bear attacking is a mother who is protecting its cubs, play dead.

If a Brown Bear attacks:

- ✓ Play Dead!
- ✓ Lie face down on the ground with your hands around the back of your neck.
- ✓ Stay silent and try not to move
- ✓ Keep your legs spread apart and if you can, leave your pack on to protect your back.
- ✓ Once the bear backs off, stay quiet and still for as long as you can. Bears will often watch from a distance and come back if they see movement.

Climate Change

As a guide, you will likely receive many questions about the receding glacier and climate change. Please refer to the following information to help guide your discussion:

The Alaskan Yellow Cedar has recently been dying off locally due to changing environmental conditions. In the winter, snow acts as an insulation blanket, so the more snow that lies on the ground, the bigger the blanket is for everything at or below ground level. Over the past several decades, the snowpack in the Tongass and the Ketchikan region has been decreasing and becoming more inconsistent, causing the snow blanket to be too thin to shelter the sensitive Yellow-cedar tree roots from the freezing and subfreezing temperatures of winter. These cold temperatures tend to shock and injure the roots of the Yellow-cedar. Injured or weak roots aren't able to supply the tree with adequate nutrients come summer, and the tree slowly begins to die off. While other tree species such as spruce and hemlock are affected by parasitic fungi, plants, or (though rare) insects/bugs, the Yellow-cedar is the only tree species affected by the decline in snowfall. These trees tend to stay standing for multiple decades even after the tree has largely died and lost all leaves, showing how rot-resistant and strong of a wood the Yellow-cedar is. Hence the use of the timber for canoes or more modernly, residential shingling, siding, and decking.

Remember, "climate-change" and "global warming" are two different topics that can both become political and personal to guests very

quickly. Do not use this as an opportunity to express political beliefs or opinions. While the causes of a changing environment and climate are still not concretely proven, climate change is a very real thing that we see daily in Southeast Alaska. Once upon a time, the lake was under hundreds of feet of ice. The rounded hills, secession of lakes without a connecting river and extreme topography of the land around the lake are the evidence to support this claim. Obviously, great change has occurred to the location over the years, and those changes are continuing.

If you sense that the discussion is becoming heated or has the potential to generate conflict between you or your guests, quickly steer the discussion in another direction. When discussing climate change issues with guests, please keep the following guidelines mind:

- ✓ Know what you are talking about and stick to the facts.
- ✓ Cite your sources.
- ✓ Don't mix science and politics.
- ✓ Share what we do as a company to minimize our environmental impact (refer to our Environmental Sustainability Policy).

It is important that all of us consider how we can mitigate climate change in our own lives and businesses. Climate Change Mitigation refers to efforts to reduce or prevent emission of greenhouse gases. Mitigation can mean using new technologies and renewable energies, making older equipment more energy efficient, or changing management practices or consumer behavior. All of these tools are utilized by Alaska Travel Adventures in the operation of our vehicles, offices, and tours, and are summarized in our Environmental Sustainability and Climate Change Policy, which can be viewed at our website.

Chapter 3

Employee Conduct

Learning Objectives

- ✓ Become informed about ATA Employee Conduct Policies
- ✓ Identify areas of compliance and ensure guide conduct meets standards
- ✓ Provide guidelines for the use of ATA vehicles
- ✓ Provide guidelines for accepting gratuities and complimentary tours
- ✓ Ensure cohesive and cooperative working environment

Introduction

Alaska Travel Adventures has a team of over 400 seasonal workers across our operations in Southeast Alaska and Anchorage. Employee conduct is critical to providing excellent customer and employee experiences in all ATA locations. As an employee your behaviors are crucial to providing a safe and respectful work environment in which all employees are able to thrive, and our operations are successful. The Employee Conduct policies in this manual apply to ALL seasonal workers, regardless of position or experience. *Our Full ATA Employee Conduct Policy is located in the Employee Handbook, which must be read, and acknowledged by signature by every ATA employee.*

Dress & Appearance

It is important Rainforest Island Staff be distinguished from clients and look professional, organized and clean. Every effort has been made to select items of clothing that are functional, practical, appropriate, and affordable. Each employee, regardless of position, will be expected to follow this policy. The following is the **ATA Uniform & Grooming Standard:**

- ✓ **Grooming.** Hair must be kept neat and in a conservative manner.
- ✓ **Piercings.** No piercings are acceptable other than two lobe earrings.
- ✓ **Jewelry.** Approved jewelry includes wedding rings and a watch. No other jewelry is permitted.
- ✓ **Tattoos.** All tattoos should be covered.

Uniform

The following is a list of approved Alaska Travel Adventures uniform items, and conditions regarding these items. No Substitutions are permitted.

- ✓ **Black Pants**. Pants must be clean, unstained, without holes, and in good condition. Levi's, Carhartt., or other similar "canvas style" pants are acceptable.
- ✓ **Black Shorts with a liner.** No long pants (or long underwear) under the shorts.
- ✓ **ATA baseball cap*.** No logo caps, rain hats, stocking caps (beanies) or cowboy hats are permitted.
- ✓ **ATA Shirts***. ATA will provide all guides with 3 free shirts. Shirts must be clean and free of wrinkles. (3 shirts are provided to full time; 2 to part-time employees)
- ✓ **ATA Logo Jacket** or other red rain jacket. ATA Jackets can be attained at cost.
- ✓ **Black Rain Pants**
- ✓ **Knife**. (Guides and relevant personnel)
- ✓ **Watch**. ATA Guides should wear a watch to stay on time during tours. A cell phone should not be used as a timekeeping device and should never be used in front of clients.
- ✓ **NO SUBSTITUTE CLOTHING**

Note: This list is subject to change. Employee's will be informed of any changes and expected to comply. Uniform items with a (**) are issued to the employee by Alaska Travel Adventures. These items are required to be returned in good condition at the end of the season. Uniform items with a (*) are issues to the employee and do not need to be returned at the end of the season. All uniforms will be issued to the employee at the front office using the ATAapp. Employees will be charged the replacement cost of the item if they do not return items that 'Must be Returned' in good condition at the end of the season.

Drug & Alcohol Policy

Alaska Travel Adventures is committed to a drug-free environment. Our full Drug & Alcohol policy is covered in the Employee Handbook. Rainforest Island personnel are operating on United States Coast Guard approved vessels - Seahawk 2 & Seahawk 3. USCG and US Department of Transportation regulations are applicable to these vessels and prohibit the use, sale, distribution, manufacture, or possession of illegal drugs. They also prohibit the use of Marijuana, which is legal in the State of Alaska. To facilitate enforcement of the provisions of this policy, this company will use every legal means to deter and/or detect violations including, but not limited to, urine, breath, or blood testing of Captains, Crewmembers, Guides, and independent contractors as required by DOT and USCG under the following circumstances:

- ✓ **Pre-employment**. A condition of hiring a new employee is the passing of a pre-employment drug test.
- ✓ **Reasonable Suspicion**. In situations where the employer is aware of facts that would lead him/her to suspect the drug policy has been violated, a drug test will be conducted.
- ✓ **Post Incident**. In case of a "serious marine incident" as defined in 46 CFR Part 4, the employer must determine who should be tested.
- ✓ **Random.** Any time during an employee's work schedule, he/she is subject to an unannounced random test for the illegal use of drugs.
- ✓ **Periodic.** As required upon license renewal, usually exempt as in 46 CFR Part 16.220.
- ✓ **Return to Duty**. An employee who tests positive may be terminated by the employer, or alternatively, if directed to counseling or rehabilitation, as a condition of continued employment, must submit to unannounced drug tests for a specified period.

Our company supports the necessity for maintaining a Drug-Free Policy and pledges to abide by the provisions of this document and DOT/Coast Guard drug and alcohol testing rules. This company will take appropriate disciplinary action, including the possibility of termination of employment and/or services as well as possible suspension of United States Coast Guard license and/or merchant Mariner Document, and legal prosecution, for violations of this policy. We understand that The Maritime Consortium, Inc., is also required to notify the U.S. Coast Guard in the case of any positive

tests. We further recognize that chemical dependencies are a personal concern for many individuals and accordingly encourage drug abusers to immediately seek professional help such as is available through the confidential services of an Employee Assistance Program (EAP).

Gratuities & Comp Tours

There are many benefits to working for Alaska Travel Adventures. These benefits include working with amazing people, working, and living in the one of the world's most beautiful places and fun activities we offer as a team. In addition to competitive pay, guides may earn gratuities, invitations aboard cruise ships, discounted tours, and tours we will take as a team.

Gratuities

Tips can and may be a significant supplement to your income. They are an indicator of the quality of your tour delivery. "Tip Jars" or any other soliciting for tips or other gratuities will not be condoned or tolerated. Alaska Travel Adventures does not have a company policy for dividing tips between Captains, Guides & Support Staff. Determining any system for dividing tips is between the employees working the tour. The company does not, nor is it required to, report your tips to the Internal Revenue Service. You are required by law to claim your tips as income.

Invitations Aboard Cruise Ships

If you are invited by a client, cruise ship personnel or one of the suppliers to have dinner or drinks aboard a cruise ship, you must get approval from the Operations Manager. Do not wear your work uniform. Slacks, socks, shined shoes, and a pressed shirt or a skirt and blouse are minimum requirements aboard ships.

Comp'd & Discounted Tours

If you are offered a complimentary or discounted product by a local merchant, tour operator, or transportation carrier, you must check with the Director of Opet prior to accepting. Products and services at free or discounted rates are not to be solicited, it may jeopardize the company's ability to arrange them for a larger staff outing.

Crew Tours & Rates

We often arrange with other companies for their crew to take part in ATA tours at discounted rates. Any crew tours and discounted rates for ATA tours must be approved by the Operations Manager. Do not promise any discounted rates to friends, peers, companies or Shore Excursions staff. If a request is being made of you by another organization, please direct the request to the Operations Manager.

Vehicle Use

Alaska Travel Adventures owns and maintains over twenty vehicles for use in Ketchikan operations. The primary purpose of company vehicles is for operational purposes including use by clients for Jeep tours, transportation of clients to and from tour, and transportation of guides and support staff from the warehouse to the tour location. We also use company vehicles to transport ATA staff to and from ATA Employee Housing and the warehouse to start work. Company vehicles may also be utilized for ATA Staff Outings with permission of the Operations Manager. ATA company vehicles are not for personal use. DO NOT ASK to use a company vehicle for personal uses or daily transportation.

All drivers must be at least 21 years of age (exceptions to this are made only by the President) and are required to have a valid driver's license. Drivers must complete a driver's eligibility questionnaire prior to driving any ATA vehicle. Drivers will obey all traffic laws and will pay their own parking and/or moving violations.

No one will drive an ATA vehicle while under the influence of alcohol or non-prescription drugs. Employees are not to ride in ATA vehicles while the driver is under such an influence. Drivers with a " driving while intoxicated" or "reckless driving" citation within the immediate three years may not operate ATA vehicles under any circumstances. Smoking is not allowed in ATA vehicles.

Drivers must perform a pre-trip inspection prior to driving a company vehicle. All vehicles will be

equipped with a first aid kit, fire extinguisher and accident/incident report forms. This includes checking all fluid levels (water, oil, fuel, transmission) and adding fluid if necessary. All vehicles should carry a spare quart of oil. Drivers towing trailers are responsible for checking trailer hitch, safety chain, lights and wheel bearings before departing.

Drivers are required to refuel anytime a vehicle has less than a half tank of fuel. Note the vehicle # on the receipt and submit to supervisor.

In the event of an incident, drivers are required to fill out an incident/accident form and submit it to the manager. The form must be filled out completely at the time of the incident. If needed provide the information to the police or other driver on request. DO NOT VOLUNTEER ADDITIONAL INFORMATION. Any damage to company vehicles must be immediately reported to the supervisor.

Merchandise & Paperwork

No matter what your position with ATA, you will at some point be required to do paperwork. The information you provide is vital for the operation of this business. All paperwork must be completed in a timely manner and submitted to your supervisor or the main office immediately. If the paperwork is to be mailed to the Juneau or Redmond office, ~~fax~~ scan it first. Any department handling cash must adhere to the company cash management plan with regards to cash, vouchers, and deposits. Supervisors are responsible for ensuring that paperwork is completed and submitted on time.

Purchases

All purchases must be approved by the manager. Any purchases made without prior approval and proper paperwork may result in disciplinary action. All paperwork associated with a company purchase must be submitted to the supervisor immediately. Charges must be made with an ATA Purchase Order and receipts must be kept for all purchases, especially for cash purchases. If, for any reason, an employee should purchase an item for company use, reimbursements for purchases must be approved by the supervisor and accompanied by an expense report and receipt.

- ✓ A Purchase Order (PO) is required for anything you are purchasing that will not be paid for with a credit card.
- ✓ A physical Purchase Order is not necessary for the transaction to take place, only a PO number is required. A PO number is obtained by calling the corporate office in Juneau at (907)789-0052
- ✓ When requesting a PO, you will need to provide the following information, vendor name, amount or estimated amount (not to exceed) of the purchase and project code. You will also need to indicate if the PO is recurring or for a one-time purchase. Remember that you are authorized to commit company funds only up to your approved level, beyond that level and you must have the approval of your supervisor.
- ✓ Single purchase PO – A single purchase PO will be requested for an individual purchase. An example of this would be if you were to go to the hardware store and buy nails to execute a repair.
- ✓ Recurring PO's - Recurring PO's will be used to authorize payment for an ongoing expense and will be coded appropriately. An example of a recurring PO would be power for the Ketchikan warehouse. In this example, you would indicate the PO as "recurring", and estimate the annual amount of the expense. Careful thought must be given to the estimate made. A good starting point is to request from accounting the amount of money that was spent on that specific item in the prior year and how the expense was allocated between any departments that must share in the expense. You can then apply information such as expected volume, increased/decreased product cost or any other variables that would result in an increase or decrease of the projected total expense. The PO must be coded properly to ensure that the expense is spread correctly among the appropriate departments. If you are in doubt, consult with your supervisor for additional guidance.
- ✓ In the event that a PO is accidentally not obtained for a purchase, a copy of the bill will be forwarded by accounting to the manager of the

offending department. If the bill was for a single purchase, simply code the bill and return it to the accounting department for payment. If the bill is for a recurring expense, code the bill, return it to accounting for payment and prepare a recurring PO for the remainder of the anticipated expense.

- ✓ PO's serve as an authorization for our accounting department to process payment for a specific bill. Every bill that arrives for payment must have a corresponding PO number that the accounting team can reference. Remember that the amount indicated on the PO is the maximum amount authorized for that purchase. In the event that the purchase amount exceeds the amount on the existing PO, accounting will inform the responsible manager and authorization will be obtained prior to executing payment. In these instances, accounting will update the information on the PO Log, including the name of the manager authorizing the change and the new amount (up to the individual manager's limit) as well as the date requested.

Section

II

ATA Personnel

Chapter 1

Job Descriptions

Roles

Responsibilities

Team Approach

Chapter 1

Ketchikan Personnel

Learning Objectives

- ✓ Develop understanding of ATA's "All Hands On Deck" Philosophy
- ✓ Develop understanding of each staff member's role on the team
- ✓ Develop understanding and take ownership of your role and responsibility
- ✓ Discover how we can succeed as an operation.

Introduction

Working in Alaska can be a dream come true for seasonal workers and full-time employees alike. As an ATA Ketchikan staff member, you are part of a team that works together to service over 20,000 customers each season. While each member of our team has a specific role to fill, ATA is an "all hands on deck" operation in which no task is too small for any member of our team. The job descriptions listed in this section outline the responsibilities of each position so that field staff understand their primary responsibilities as well has understand how our Ketchikan team functions.

Ketchikan Operations Manager

Under the direction of the President and Vice President, the Operations Manager assumes overall responsibility for all facets of the Alaska Travel Adventure's operations in Ketchikan and Sitka. The Operations Manager provides the primary leadership for the success of ATA's tour products. Duties include but are not limited to the following:

Leadership. Works under ATA Leadership to drive value and exceptional experiences for our customers; cultivates a positive work culture and seasonal experience for employees by leading, inspiring and supervising, mentoring, and developing staff; and maintains a climate that attracts and retains quality personnel.

Risk Management - Provides leadership to Operations Supervisor and field staff teams to

ensure compliance of ATA policies and procedures; and develops and implements safety policies and procedures, as well as reporting, evaluation, and follow-up.

Financial Management - Ensures the financial stability of KTN and STK through strategic planning, budgeting, and fiscal controls; oversees all aspect of financial management, including the general operating budget for Ketchikan and Sitka; and provides fiscal controls by approving scheduling and timesheets, properly coding expenses, and approving reports by operations supervisors.

Tour Delivery & Development - Assumes overall responsibility of day-to-day tour operations of all related activities; delivers top-quality training of guides and related field staff; development and control of tour narrative and delivery; and observes each employee's performance several times over the season and complete written audits, holding periodic performance evaluation sessions with employees.

Community & Business Development - Develops of new tour products from Concept Stage to Launch; maintains a positive relationship with Shore Excursions Managers/Teams, confirming the quality of our tour products and a high level of customer service; and actively participates and positively represents Alaska Travel Adventures in the communities of Ketchikan and Sitka.

Operations - Supervises, directly and indirectly, all operations supervisors and field staff to ensure compliance with all permit requirements, federal, state and local laws and any marine or land use requirements; maintains a positive relationship with the local Forest Service office, and ensure compliance with our special use permit; leads Operations Team to ensure facilities, vehicles and equipment are in standard working order, are clean and organized at all times and food/supplies are in the appropriate supply to perform work; works in conjunction with the Field Operations Manager, marine operations and mechanics to ensure capital equipment is properly maintained and tour ready; and communicates with Dock Operations Supervisor regarding transportation to ensure well-coordinated bussing of passengers whilst on tour.

Administrative Tasks - Approves weekly schedule and vets timesheets; oversees and monitors daily logistics and tour staging; other duties as assigned by the President and Vice President.

Field Operations Supervisor & Senior Guide

Under the direction of the Operations Manager, the Field Operations Supervisor is responsible for customer service, tour quality, transportation coordination and the overall efficiency of tour operations. The Field Operations Supervisor is a working manager and is the Senior Guide. Duties include but are not limited to the following:

Culture - Works in conjunction with the Operations Manager and Dock Operations Supervisor to cultivate a positive working environment and amazing seasonal experience; leads Ketchikan staff by developing a maintaining core values; works in conjunction with the Operations Manager and Dock Operations Supervisor to plan and deliver employee experiences; and work in conjunction with the Operations Manager and lead guides to ensure compliance of ATA policies and procedures by field staff, including the proper reporting of Employee Misconduct and possible termination.

Customer Service - Works in conjunction with the Operations Manager and Dock Operations Supervisor to ensure delivery of excellent tours and customer service; maintains a high level of appreciation for guest satisfaction and assist in the day-to-day management of service recovery processes; assists in resolving Lost and Found and Guest Incidents and responding to various forms of customer feedback (Comment Cards, TripAdvisor, Princess Tour Ratings, etc.); and timely communication to Director of all passenger related issues. Work with Director and Dock Operations Supervisor to communicate passenger related issues to Shore Excursion staff.

Tour Delivery - Supervises all day-to-day tour operations and all related activities; works in

conjunction with the Operations Manager to deliver quality training of guides and related field staff; develops and assumes control of tour narrative and delivery; observes each employee's performance several times over the season and complete written audits; hold periodic performance evaluation sessions with employees; and works in conjunction with the Operations Manager to handle any staff issues including the proper reporting of Employee Misconduct and possible termination.

Field Operations - Works in conjunction with the Operations Manager to ensure compliance with all permit requirements, federal, state and local laws and any marine or land use requirements; works in conjunction with the Lead Guides to maintain a positive relationship with the local Forest Service office, and ensure compliance with our special use permits; works in conjunction with the Lead Jeep and Lead Hiking Guides to ensure that Jeep Base is kept in standard working order and work area is clean and organized at all times; works in conjunction with the Lead Jeep/Canoe Guide to ensure Jeep Trails, Lake Harriet Hunt Docks and Cook Camp are in standard working order and area is clean and organized at all times; and schedules trail and road maintenance & repair, and maintenance, repair and servicing of equipment; works in conjunction with the Lead Hiking Guide to ensure the Betton Island Camp and Knudson Cove Staging Areas are in standard working order and area is clean and organized at all times; oversees weekly inventory of food and supplies and propose order to ensure all food and supplies are in stock in appropriate quantities for field staff to complete its' tasks; communicates with Dock Operations Supervisor regarding transportation to ensure well-coordinated bussing of passengers whilst on tour; and works in conjunction with the Mechanic and Lead Jeep/Canoe Guide to ensure the fleet of Jeeps and Vans are properly maintained and tour ready.

Administrative Tasks - Prepares weekly schedule for guides and support staff; check and approve timesheets; prepares, adjusts, and monitors daily logistics and tour staging; and other duties as assigned by the Operations Manager.

Ancillary Sales - Works with staff to display and actively sell ancillary products including t-shirts and stickers; and works in conjunction with the Operations Manager to ensure compliance and timely reporting of the merchandise sales plan.

Lead Marine Operator

Under the direction of the Operations Manager and Field Operations Supervisor, the Lead Marine Operator is responsible for tour quality and the overall efficiency of Rainforest Island Programs. The Lead Marine Operator is a working operator, the Senior Captain, and also has leadership responsibilities.

Culture - Works as part of the leadership team to cultivate a positive working environment and amazing seasonal experience for Ketchikan employees; assists the Field Operations Supervisor in planning and delivering employee experiences; leads and develops team of Marine Operators, Deckhands and Hiking Staff by maintaining core values; and works as part of the leadership team to ensure compliance of ATA policies and procedures by field staff.

Customer Service - Works as part of the leadership team to ensure delivery of excellent tours and customer service; maintains a high level of appreciation for guest satisfaction and assist in the day-to-day management of service recovery processes; assists in resolving Lost and Found and Guest Incidents and responding to various forms of customer feedback (Comment Cards, Trip Advisor, Princess Tour Ratings, etc.); communicates in a timely manner with the Field Operations Supervisor and Dock Operations Supervisor of all passenger related issues; and complies with the company dress and appearance policy (this includes wearing and maintaining in a clean and neat condition the required uniform and equipment)

Tour Delivery - Maintains a high level of performance and a current 25 ton USCG license applicable for the operation of the inflatable boats; passes all drug tests required by the USCG consortium, consisting of a pre-hire test and random drug tests administered throughout the

season; operates inflatables in a professional, legal and safe manner, making sure they are properly equipped; maintains and repairs any equipment necessary for the operation of the tour; serves as an example to other Captains, Deckhands and Hiking Guides in delivering tour products at a high level; serves as leader of the team of Captains; develops other captains to a high level of tour delivery and customer service; works in conjunction with the Operations Manager, Field Operations Supervisor and Lead Hiking Guide to deliver quality training of guides and related field staff; assists Field Operations Supervisor and Lead Hiking Guide in auditing guides' tour narrative and presentation and participate in employee evaluation sessions; evaluates all field staff for compliance and or meritorious service; monitors and adjusts tour logistics and staging; and monitors program safety and inform the Field Operations Supervisor of any unsafe or potentially unsafe conditions or procedures.

Field Operations - Assists Field Operations Supervisor to maintain a positive relationship with the local Forest Service office, and ensure compliance with our special use permit; assists Field Operations Supervisor to ensure compliance with all permit requirements, federal, state and local laws, and any marine or land use requirements; assists Field Operations Supervisor to ensure and maintain a positive relationship with Knudson Cove Marina; assists the Field Operations Supervisor in ensuring Staging Area, Dock Locker and Betton Island are in standard working order and area is clean and organized at all times; and performs maintenance, repair and servicing of Rigid Hull Inflatables and equipment.

Ancillary Sales - Works to with staff to display and actively sell ancillary products including t-shirts and stickers; and assists Field Operations Supervisor to ensure compliance and timely reporting of the merchandise sales plan

Marine Operator

Under the direction of the Lead Marine Operator and Field Operations Supervisor, the Marine Operator is responsible for conducting safe and enjoyable experiences aboard the Seahawk for passengers and crew.

Culture - Works to cultivate a positive working environment; leads and develops deckhands in a positive manner; and works to ensure compliance of ATA policies and procedures.

Customer Service - Delivers excellent tours and customer service; maintains a high level of appreciation for guest satisfaction and assist in the day-to-day management of service recovery processes; assists in resolving Lost and Found and Guest Incidents and responding to various forms of customer feedback (Comment Cards, Trip Advisor, Princess Tour Ratings, etc.); communicates in a timely manner with the Lead Marine Operator and Field Operations Supervisor of all passenger related issues; and complies with the company dress and appearance policy (this includes wearing and maintaining in a clean and neat condition the required uniform and equipment)

Tour Delivery - Maintains a high level of performance and a minimum of current 25 ton USCG license applicable for the operation of the inflatable boats; passes all drug tests required by the USCG consortium, consisting of a pre-hire test and random drug tests administered throughout the season; operates inflatables in a professional, legal and safe manner, making sure they are properly equipped; maintains and repairs any equipment necessary for the operation of the tour; serves as an example to Deckhands and Hiking Guides in delivering tour products at a high level; assists with tour logistics and staging; and monitors program safety and informs the Lead Marine Operator and Field Operations Supervisor of any unsafe or potentially unsafe conditions or procedures.

Field Operations - Assists Lead Marine Operator and Field Operations Supervisor to ensure compliance with all permit requirements, federal, state and local laws, and any marine or land use requirements; assists Lead Marine Operator and Field Operations Supervisor to ensure and maintain a positive relationship with Knudson Cove Marina; assists the Field Operations

Supervisor and Lead Marine Operator in ensuring Staging Area, Dock Locker and Betton Island are in standard working order and area is clean and organized at all times; and performs maintenance, repair and servicing of Rigid Hull Inflatables and equipment.

Ancillary Sales - Works to with staff to display and actively sell ancillary products including t-shirts and stickers; and assists Field Operations Supervisor to ensure compliance and timely reporting of the merchandise sales plan.

Lead Hiking Guide

Under the direction of the Field Operations Supervisor, the Lead Hiking Guide is responsible for tour quality and the overall efficiency of Hiking Tour operations. The Lead Hiking Guide is a working guide who has leadership responsibilities.

Culture - Works as part of the leadership team to cultivate a positive working environment and amazing seasonal experience for Ketchikan employees; assists the Field Operations Supervisor and Lead Marine Operator in planning and delivering employee experiences; leads hiking guide staff by maintaining core values; works as part of the leadership team to ensure compliance of ATA policies and procedures by field staff.

Customer Service - Works as part of the leadership team to ensure delivery of excellent tours and customer service; maintain a high level of appreciation for guest satisfaction and assist in the day-to-day management of service recovery processes; assist in resolving Lost and Found and Guest Incidents and responding to various forms of customer feedback (Comment Cards, TripAdvisor, Princess Tour Ratings, etc.). Communicates in a timely manner to Field Operations Supervisor and Dock Operations Supervisor of all passenger related issues; and complies with the company dress and appearance policy (this includes wearing and maintaining in a clean and neat condition the required uniform and equipment.)

Tour Delivery - Serves as an example to other Hiking guides in delivering tour products at a high level; works in conjunction with the Operations Manager, Field Operations Supervisor and Lead Marine Operator to deliver quality training of guides and related field staff; assist Field Operations Supervisor in auditing guides' tour narrative and presentation and participate in employee evaluation sessions; evaluates all field staff for compliance and or meritorious service; monitors and adjust tour logistics and staging; and monitors program safety and informs the Field Operations Supervisor of any unsafe or potentially unsafe conditions or procedures

Field Operations - Assists Field Operations Supervisor to maintain a positive relationship with the local Forest Service office, and ensure compliance with our special use permit; assists Field Operations Supervisor to ensure compliance with all permit requirements, federal, state and local laws, and any marine or land use requirements; assists Field Operations Supervisor and Lead Marine Operator to ensure and maintain a positive relationship with Knudson Cove Marina; assists the Field Operations Supervisor in ensuring warehouse is kept in standard working order and work area is clean and organized at all times; assists the Field Operations Supervisor and Lead Marine Operator in ensuring Staging Area, Dock Locker and Betton Island are in standard working order and area is clean and organized at all times; performs trail maintenance & repair; performs maintenance, repair and servicing of equipment; ensures that equipment and supplies are available in sufficient quantities for the field staff to perform its designated tasks; ensure a high level of sanitary practices and general hygiene.

Administrative - Assists Field Operations Supervisor in staff scheduling and vetting of timesheets.

Ancillary Sales - Works with staff to display and actively sell ancillary products including t-shirts and stickers; assists Field Operations Supervisor to ensure compliance and timely reporting of the merchandise sales plan.

Hiking Guide

Under the direction of the Field Operations Supervisor and Lead Hiking Guide, the Hiking

Guide is ultimately responsible for the delivery of an enjoyable tour experience for the passengers. Duties include, but are not limited, to the following:

Culture - Maintains core values and is a positive and contributing member to organizational excellence.

Customer Service - Works as part of a team to ensure delivery of excellent tours and customer service; maintains a high level of appreciation for guest satisfaction; and communicates in a timely manner to the Lead Guide & Field Operations Supervisor of all passenger related issues, notifying them regarding any irregular activities or events occurring within the trip.

Tour Delivery - Complies with all ATA policies and procedures; participates in all relevant training exercises to be fully prepared to offer top quality tours; load and unload the necessary equipment for delivery of the tour; presents safety talk to all passengers; delivers an informed narrative covering the marine environment and species, flora, fauna, local history, etc.; instructs hiking in a safe and secure manner; serves food and beverages; assists passengers with supplied personal equipment and with loading and unloading; and delivers emergency first aid treatment as required.

Field Operations - Maintains adequate inventory of food and supplies, restocking if necessary; cleans and maintain equipment and facilities; monitors the appearance of the trail, and perform any necessary maintenance.; repairs equipment under the supervision of the Lead Guide; monitors program safety and inform the Field Operations Supervisor and/or Lead Guide of any unsafe or potentially unsafe conditions or procedures; helps maintain a positive relationship with the local Forest Service office, and ensure compliance with our special use permit; ensures compliance with permit requirements, federal, state and local laws, and any marine or land use requirements

Ancillary Sales - Actively sell ancillary products including t-shirts and stickers.

Deckhand / Outfitter

Under the direction of the Field Operations Supervisor Lead Marine Operator, the Deckhand is ultimately responsible for the delivery of an enjoyable adventure experience. Duties include, but are not limited, to the following:

Culture - Maintains core values and is a positive and contributing member to organizational excellence.

Customer Service - Works as part of a team to ensure delivery of excellent tours and customer. service; maintains a high level of appreciation for guest satisfaction; and communicates in a timely manner to the Lead Marine Operator & Field Operations Supervisor of all passenger related issues.

Tour Delivery - Complies with all ATA policies and procedures; participate in all relevant training exercises to be fully prepared to offer top quality tours; loads and unloads the necessary equipment for delivery of the tour; outfits customers efficiently, maintaining positive customer service throughout the process; instructs riding in the Seahawk in a safe manner; assists passengers with supplied personal equipment and with loading and unloading and; delivers of emergency first aid treatment as required.

Field Operations - Maintains the Outfitting Station at Knudson Cove, keeping clean and neat at all times; cleans and maintains equipment and facilities; repairs equipment under the supervision of the Lead Guide; monitors program safety and inform the Field Operations Supervisor and/or Lead Marine Operator of any unsafe or potentially unsafe conditions or procedures; and ensures compliance with permit requirements, federal, state, and local laws, and any marine or land use requirements.

Ancillary Sales - Actively sell ancillary products including t-shirts and stickers.

Section

III

Tour Procedures

Chapter 1

Pre-Tour Procedures

Learning Objectives

- ✓ Gain understanding of tasks which need to be completed before passengers arrive.
- ✓ Take ownership in the "all-hands-on-deck" approach of Alaska Travel Adventures
- ✓ Learn role and responsibilities in order to conduct efficient pre-tour operations.
- ✓ Ensure compliance with US Forest Service permit.

Introduction

Providing a high-quality tour is the goal of ATA. This can be done with the cooperation of the staff and crew. To maintain consistency in the quality of the tour, the following is a list of procedures that are to be followed pre-tour.

Arrival Times & Timekeeping

It is crucial to arrive at the warehouse on time. Staff members should arrive a few minutes before the start of their shift in order to clock in and be ready to work at the time they are scheduled. It is important that all members of the team arrive on time as every member has a job to do and the team must work efficiently in order to complete all tasks on time.

Guides will be scheduled to arrive at the warehouse 1 hour prior to the start time of the first tour. Deckhands and captains will be scheduled to arrive at Knudson Cove 50 minutes prior to the start time of the first tour. These timings are historically accurate and give field staff ample time to be able to complete all pre-tour procedures.

All staff must record their start time using the ATA app. Guides and outfitters must sign in on the ATA app at the start of the day. Captains may clock in at the marina. All employees must complete all timekeeping steps.

Food & Equipment Preparation

It is important that guides pack all food and equipment needed for the day of tours in accordance to the packing sheets prepared for the day. Forgetting any equipment can result in a poor customer experiences or inefficient return trips to the warehouse to retrieve forgotten equipment. Upon checking in at the warehouse, guides should start pre-tour food and gear tasks:

Food - A majority of the guides working the tour should pack the food while one guide packs the equipment and firewood.

- ✓ Login to the Logistics & Packing Application. Double check the total number of guests today and the number of guests per group.
- ✓ Plan the accurate amount of food trays by checking the quantities provided on the packing list.
- ✓ After washing hands thoroughly and putting on rubber gloves, prepare food trays consisting of crackers, smoked salmon, and cheese. A complete cheese platter has multiple types of crackers on it as well as thin-cut cracker sized pieces of cheddar and pepper jack cheese and salmon cut into squares no larger than 1”x1”. Platters should be made to appear full, but smaller groups don’t need nearly as much food on their platter in comparison to larger sized groups.
- ✓ Be sure not to use a clean knife when switching food products (i.e. Don’t cut cheese with a fishy knife).
- ✓ Wrap the food trays and pack them in the coolers.
- ✓ Pack the coolers into the van.

Gear Prep - While the majority of guides prepare the food, one guide should pack equipment and firewood.

- ✓ Cross-check the supply totes with the supply sheet packing list.
- ✓ Load (2) totes of firewood.
- ✓ Make sure to check for PFDs that are hanging in the loft to dry and ensure they are loaded into the van.
- ✓ Pack all gear and firewood into the van.

Knudsen Cove & Outfitting Building

The Outfitter and/or Deckhand is scheduled to arrive at Knudson Cove Marina 1 hour prior to the first tour of the day. It is their responsibility to ensure that the outfitting station is set-up and equipment is arranged in a neat and orderly fashion. Good organization of the outfitting building creates a professional appearance and minimizes the time needed to outfit customers. Outfitter begins to set up the outfitting station by placing rain gear, PFDs on the racks. Guides should be available to help with this task.

Guides should unload the van, bring all equipment down to the docks/Seahawk where the captain will be inspecting the vessel. A guide or deckhand will prepare the rest of the gear from the marina locker. When the Seahawk is fully loaded and ready to go, the Island Ops crew departs for Betton Island.

Seahawk Preparation

The Marine Operator is scheduled to arrive 50 minutes prior to the first tour time on their daily schedule. Upon arrival, the operator should complete the Pre-Tour Vessel Inspection Checklist. The checklist includes the following:

- ✓ Check engine mounting bolts.
- ✓ Check fuel levels, start engine to warm up (check log to see if boat was fueled on previous day)
- ✓ Visually inspect the inflatable for any leaks, water in bottom, loose patches, etc.
- ✓ Check inflation pressure of inflatable. Inflate to proper pressure (2 PSI), if necessary, make sure chambers have equal air.
- ✓ Turn on and check operation of VHF radio and listen to weather report. (WX1)
- ✓ Check that waterproof safety box is onboard. The Safety Kit should have first-aid kit, flashlight, charts, sounding device ((air horn)) or whistle, flares, etc.) Make sure kit is kept dry and secure. If the safety box was opened on the previous day of operations, ensure that the item marked “used” has been replaced.
- ✓ Check that the waterproof map case is onboard. The map case should have the binder, logbook, rules of the road, rite-in-the-rain pen, lighter, current tide book, and alcohol screening strips.

- ✓ The Help out other crew members with daily duties.
- ✓ Each inflatable will carry all required U.S. Coast Guard equipment. Equipment list must be checked on a daily basis.

Equipment List for Seahawk: The following items will be kept on each vessel and be in good working condition.

On Board:

- ❑ 2 Paddles
- ❑ Life Ring
- ❑ Extendable Pole
- ❑ B II Fire Extinguisher
- ❑ Air Pump
- ❑ Bailer
- ❑ Marine Radio & FCC License
- ❑ 20" Ring Buoy with Water Light & 60' of Line
- ❑ Anchor with 100' of Line
- ❑ Compass
- ❑ In line fuel primer (hand pump)
- ❑ Overboard Lifesaving Device
- ❑ First Aid Kit
- ❑ Marine Radio & FCC License

In Waterproof Chart Case
Check to Ensure Case is On-Board

- ❑ Logbook
- ❑ Charts
- ❑ Handheld VHF Radio

In Orange Waterproof Box
Check to Ensure Box is On Board

- ❑ 3 Red/ 3 Orange Flares
- ❑ Pyrotechnic Devices (flare gun)
- ❑ Patch Kit
- ❑ Flashlight with extra Batteries
- ❑ Sound Blasting Device and Spare Cartridge
- ❑ Duct Tape
- ❑ Flat Head Screwdriver
- ❑ Phillips Head Screwdriver
- ❑ Pliers
- ❑ Bailing Wire
- ❑ Hose Clamps
- ❑ Spark Plugs & Plug Wrench
- ❑ Extra Fuel Line Clips

All Staff Pre-Tour Briefing

After the Seahawk has been inspected and all equipment has been loaded into the craft, ALL PERSONNEL will meet at the fueling dock for a Pre-Tour Briefing lead by the Marine Operator or Field Operations Supervisor. Items that need to be covered during the briefing are as follows:

- ✓ Daily Logistics & Tour Schedule
- ✓ Tidal Information - High & Low Water Timings for the day.
- ✓ Any questions or concerns by Staff.
- ✓ Any personnel changes that will happen due to work shifts.

Island Preparation

Upon arrival at Betton Island, guides and camp cook will work together to perform the following tasks:

- ✓ Assist the captain with landing and unload the vessel.
- ✓ Take all equipment up to the camp area once the Seahawk has departed the beach.
- ✓ Set-up tarp to provide shelter while unpacking all equipment.
- ✓ Set-up tables, water jugs, cooler, totes and the rest of the equipment.
- ✓ Build a Fire
- ✓ Prepare Hot Chocolate & Coffee and set the table.
- ✓ Bring the ladder to the beach.
- ✓ Beach Comb
- ✓ Walk the boardwalk to ensure it is in good condition.
- ✓ Be ready to greet the tour upon arrival.

Chapter 2

Tour Procedures

Learning Objectives

- ✓ Gain understanding of all tasks to be completed during the tour.
- ✓ Take ownership in the “all-hands-on-deck” approach of Alaska Travel Adventures.
- ✓ Learn roles and responsibilities in order to conduct efficient tour operations.
- ✓ Develop customer service centered approach to delivering tours.
- ✓ Engrain a safety-first mindset which is in alignment with ATA Safety Culture
- ✓ Ensure compliance with US Forest Service operating permit.

Introduction

The tour experience starts as passengers disembark from their ship and are met by an ATA Customer Service Representative (Dock Reps). The passenger(s) should understand our tour will be a high-quality experience from the moment they are engaged by ATA personnel.

On the Docks / Bus

Customer service representatives should present themselves as friendly, knowledgeable, and organized. The following procedures will be followed by all personnel greeting customers and directing them onto the proper transportation.

- ✓ Greet customers as they come off the ship. Introduce yourself and make it clear that they are on the tour they registered for. You will be greeting passengers who are coming off the ship in several stages. Ensure the passengers are registered for our tour by checking their tickets. Many tours have the name “Rainforest” included in their title.
- ✓ If there is a place you would like the passengers to wait while you gather the rest of the tour group, communicate both the waiting location and time you will meet them clearly.
- ✓ Let the passengers know it's a 30 min bus ride and that they can use the bathroom on the docks (If there is time) or at the marina.
- ✓ Direct customers to the correct bus. If the weather is nice, you can keep the group with you and walk over to the bus all together.

- ✓ Customers should keep tickets/vouchers and give them to the bus driver.
- ✓ Once all passengers are accounted for and have been loaded onto the bus, start **"NARRATION #1"**, which is described in the Narrative Section of this Manual. This Narration includes information on the tour and reading the Waiver.
- ✓ Ensure that you have collected all the tickets from the Bus Driver.

Marina Orientation & Outfitting

When arrive, it is imperative that you are prepared to give them 100% of your attention. The key to this portion of the tour is to move the clients through the orientation and outfitting process as quickly as possible without making them feel rushed. The outfitting area can get busy as you may have more than one group at a time there, therefore it is critical that this process be well organized. The following client orientation and outfitting procedures should be followed each trip.

- ✓ **Be ready and awaiting the arrival of the group**. The outfitter should be waiting at the door of the bus, ready enter the bus when the driver guide acknowledges them.
- ✓ **Enter the bus and deliver the narration.** Once the door opens and the outfitter enters the bus, the outfitter will deliver **"NARRATION #2".** Narration #2 welcomes passengers to the marina, directs them to the bathroom facilities and to the outfitting station. Ensure that you have collected the completely signed waiver.
- ✓ **Outfit the Passengers**. After the passengers disembark the bus and have had the opportunity to use the restrooms, the outfitter, deckhand, guides and / or operator should be ready to assist them in getting outfitted. The outfitting will be done at the shelter. Be friendly and direct the passengers to the appropriate area and reinforce the instructions that they were given on the bus.
- ✓ **Be thorough, kind and helpful**. All clients will be advised of the conditions and offered raingear. In addition to raingear all clients are required to wear lifejackets at all times while on the water. Rain gear should be displayed by size and is the logo is color coded to help you identify sizes from the outside. Assist and monitor the passengers at each station, quickly identify problems and correct them, then send them to the next station. Lifejackets need to fit snugly and should be worn outside of all other clothing including the raingear. Guides should ensure a proper fit. Any personal items they wish to leave behind will be left in the outfitting building.

Route Overview & Merchandise

The number one priority at the Marina is to have passengers ready to board the vessel and on tour. There will be many tours when there is extra time at the marina between completion of outfitting the passengers and the arrival of the Seahawk. The outfitter, deckhand or guide who has prepared the customers will give an overview of the tour location in **"NARRATION #3"** and have an opportunity to sell merchandise.

It is important the ATA personnel are proactive in selling t-shirts and other merchandise while at the Marina. Merchandise should be prominently displayed in the tent. Merchandise sales should be promoted both while outfitting the passengers before the tour and while assisting passengers after the tour.

Seahawk Operation

During a tour in which inflatable vessels are used, ATA strives to provide a safe and enjoyable experience for all passengers. This portion of the tour is what makes ATA different from most others. The use of the term Seahawk will encompass all ATA owned inflatable vessels. Rainforest Island Adventure tours utilize two 30' rigid hull inflatables for passenger transportation.

Loading, Safety Talk & Journey

The Marine Operator will provide a brief welcome and introduction, and then load the clients onto the Seahawk in a safe and orderly manner with the Deckhand's assistance. Once the clients are loaded, check for stray clients and any personal articles that may have been inadvertently left on the dock. Once the operator ensures that all clients have been loaded, equipment is stowed properly, and all

lifejackets are worn properly, the deckhand will assist with untying the vessel. If time is available, guides should offer to assist clients with photos.

Once the vessel has left the dock, the Marine Operator will give **Narration #4: Safety Talk**. The Safety Talk covers safety, risks, equipment and emphasizes that life jackets must be worn at all times and that there is no standing or smoking while aboard the craft.

While underway, the Marine Operator should be mindful of safety, courteous and informative with passengers, and polite with the deckhand and other ATA field staff - a professional in every manner. The Marine Operator's primary responsibilities are (1) the safety of the passengers and vessel and (2) providing an informative and enjoyable experience aboard the craft. The Marine Operator should:

- ✓ **Never deviate from the route.** The PRIMARY ROUTE has been established to offer the most expeditious travel to-and-from the island and is clear of obstructions so that the vessel does not run aground. The SAFETY ROUTE has been established as an alternate, but longer in duration, route in case of high winds / increased sea state. Deviating from the route could cause damage to the vessel as there are many shoals which may not be exposed at lower water levels. Never deviate from the route. Route maps are included in the Appendices of this manual.
- ✓ **Remain Aware of the Environment.** Be vigilant in your awareness of the environment, and changes to the environment. This includes marine wildlife, other watercraft, weather and sea state. Be especially mindful that this is a dynamic environment and risks include swell while landing at the beach and tide rips when there is wind/swell against tide.
- ✓ **Stay on Tour Timings.** All staff must be conscientious of tour timings. Timings have been established as multiple tours are run consecutively and delays have compounding consequences. A delay in returning a tour to Knudson Cove will cause transportation delays and may even cause a passenger to miss their cruise ship - a consequence that is not acceptable. Several tools are provided to the Marine Operator to ensure that he/she is fully informed of the day's tour timings.
- ✓ **Give the Narrative.** Marine Operators should always give the Safety Talk narrative. While underway, the narrative is an important part of the ride to the beach. Refer to **Narration #5: Journey to Betton Island** for points of interest including a seal haul out on Clover Island, an eagle nest on Pup Island, a sea bird rookery on Tatoosh and many seals to spot on Tatoosh Islands. There are opportunities to view both Humpback Whale and Orca! You are an important part of bringing SE Alaska "alive" to the passengers. On occasion, a tour may be running late, and it may be necessary to "skip" a point of narration. Please use your best judgement, always keeping the customers' experience at the forefront.

Landing the Seahawk on the Beach

A controlled beaching of the Seahawk is inherent to successful operation of the Rainforest Island Adventure. As a marine operator, you will perform this procedure multiple times a day. It is vital to do so in a vigilant and calculated manner in order to ensure passenger safety, avoid equipment damage, and maintain general tour quality. If you consistently follow the below procedure EVERY time you beach the vessel, you will avoid costly mishaps.

Approach

- ✓ As you near 200 yards off the beach, begin gradually throttling down.
- ✓ By the time you are 80 yards away from the beach, you should be at bare steerageway.
- ✓ IMMEDIATELY trim your engines to as high as they can go without your propellers cavitating. This may seem like overkill, but it CANNOT be stressed enough: NEVER come even CLOSE to having your propellers in a position near the gravel, the result can be costly and sometimes dangerous.
- ✓ This idle speed time will give you a moment to turn to your passengers (while glancing all around you for any traffic) and brief them on what will happen next: "We will be gently placing the bow of the vessel on the beach, once

the vessel is secure our guides will attach a ladder to the tube of the vessel, and our deckhand will demonstrate the proper way to utilize the ladder to disembark safely from the vessel to the beach."

Once you have briefed your passengers, you can turn your attention to landing the vessel. While doing so, there is no need to focus on anything but the safe operation of the vessel (narration and conversation with passengers stops). Below is the procedure for landing the vessel, starting with just after the passenger brief.

Landing

- ✓ RUN THE BILGE. KEEP THE BILGE RUNNING WHILE LANDING, ON THE BEACH, AND DISEMARRKING THE BEACH.
- ✓ At bare steerageway, guide the vessel towards the beach. Note what the wind and current is doing and compensate accordingly. You should already know what the tide is doing at any moment, because you noted the tides at the beginning of your day, but it never hurts to double check.
- ✓ Aim your vessel for the best possible spot on the beach, which should be as clear (as possible) of larger rocks, and as close to the center as possible. The guides will want you to put the vessel next to where they have placed the ladder, this is not always practical. Your need to safely beach the vessel trumps their desire to have the vessel in a spot that is convenient for them.
- ✓ GENTLY land the bow of the vessel. There is absolutely no need to accelerate into dry land. IMMEDIATELY adjust your steering according to how the stern of the vessel reacts to the landing: tide, wind, and current.
- ✓ Once you have gently landed the vessel, you may need to gently throttle the bow further up the beach to accommodate the ladder. However, keep in mind that you must not get yourself stuck.
- ✓ Allow the guests and deckhand to perform disembark and assist as needed. However, be mindful of the tide, current, and wind. For example, you may need to hold your engines in reverse if the tide is going out, or steer to the left with the engines in forward if the wind is blowing. If you are operating during a very fast receding tide, in some instances you may even need to pause passenger disembarkation, come off the beach, and land again in order to avoid getting stuck.

Once all passengers have disembarked and the ladder has been removed, you should immediately begin reverse throttle to get off of the beach ASAP. Use the process of rocking steering back and forth and putting all weight to stern BEFORE attempting to muscle the vessel off the beach with your engines, as this is hard on them and also stirs up debris, which can harm the propellers. Ask the guides to help push if needed. If you have done everything properly, it should be very rare that you find it hard to get off the beach.

Following these procedures will help you successfully operate a safe and smooth beach landing. However, the biggest challenge is doing so consistently, it is very easy to fall into complacency, forget one step, and find yourself in a nasty situation. Stay sharp, establish a routine and habit, and you will have a successful season!

Loading & Unloading at the Beach

Prior to arriving at the beach, the operator will radio ahead so the guides are prepared. Once at the beach the Marine Operator will instruct passengers to remain seated until the vessel has been secured and then assistance in unloading will be provided by guide staff. When pulling onto the beach, watch for any swells and keep close watch on the tide. When the tide is ebbing, it can move so fast that the boat can go partially dry and be stuck on the beach in less than a minute. If you encounter this problem you should stop the loading or unloading process, instruct the clients to be seated, and reposition the boat.

As the captain approaches the beach, the deckhand should move towards the bow of the boat to keep an eye out for rocks, and to be in position to receive the ladder. At least one guide will be waiting on shore with the metal ladder ready to greet the customers and assist in their unloading process. The captain will tell the guide which side of the boat to put the ladder on and the guides should adjust the ladder

for the beach angle. Once the guide and deckhand place and secure the ladder, the captain will instruct and demonstrate to customers the safest way to disembark the vessel. After the guide and deckhand assist all customers in the unloading process, they will remove the metal ladder. Captain and deckhand will either leave the island or load up a returning tour. The guides will assist each client on and off the boat. Once all the clients have been safely unloaded onto the beach, the guides should provide a personal introduction, reinforce the safety items which were mentioned aboard the Seahawk, and begin to prepare the clients for the hiking portion of the trip. Guides will instruct customers to remove their PFDs and place them at the rocks near the trailhead.

RESCUE - Fire Onboard

Although a fire on board the Seahawk seems unlikely, it is possible. The best way to reduce the danger is to hold the required monthly practice drills. ATA may hold unannounced drills. The following is a list of actions to be taken in case of such an emergency:

1. Maneuver the vessel so that the fire is downwind.
2. Calmly move passengers away from the area. Keep low if smoke is a problem. Confine the fire if possible.
3. Once the situation is under control the crew will extinguish the fire if possible or prepare to abandon the vessel. All Employees should know the location of the nearest fire extinguisher.
4. Size up the emergency and calmly inform guides and the manager. Tell them the size and location of the fire. If the fire is small use an extinguisher to put out the fire.
5. The manager will inform the Coast Guard of the emergency if at sea, or if rescue from the island is necessary.
6. If the situation gets out of control prepare to abandon the vessel. When you abandon the vessel do so from the windward side.

RESCUE – Abandoning Vessel

Only in a dire emergency should the vessel be abandoned. If, at all possible, try and remain aboard the vessel. In situations where people are in danger by remaining onboard abandoning ship may be the only option. The following is a list of directions to follow should the need arise:

1. The Operator should inform the Coast Guard of the situation and give all pertinent information. If possible, radio another zodiac operator and/or trip manager to appraise them of the situation. Radio other boats on channel 16 for assistance.
2. Calmly inform everyone to check that their lifejackets are secure.
3. Move passengers to the safest and most convenient exit.
4. Other inflatables in the area should remain in the area and follow any directions the manager may have. Inflatables will be used as life rafts.
5. In most conditions the operator should be last off the vessel.
6. Before exiting, a sweep needs to be made of the vessel for remaining people.

RESCUE – Man Overboard

The following is a list of directions to be followed during a man overboard situation:

1. Immediately yell man overboard and point toward the person in the water. Maintain directional contact with the person.
2. Have another person toss a flotation device to the person in the water.
3. As the vessel turns around maintain visual contact with the person in water.
4. Only as a last resort should another person enter the water. If necessary, the person should be attached to the vessel by a lifeline or throw ring.
5. Keep the person away from the propellers. (Put vessel into neutral or if necessary turn off engines).
6. Pull the person aboard and perform the necessary first-aid.
7. If available, another inflatable might be of assistance in this type of situation. Maintain contact with them.
8. Contact the manager so that the Coast Guard, EMTs and ship personnel can be notified.

Island Operation

The trail on Betton Island is designated for public use and ATA field staff should expect to meet other users. Guides will be courteous to all trail users and not impede the progress of other hikers. Keep the group on the trail as much as possible. Explain that muskegs and forest fauna are very fragile and easily damaged. While on the trail, periodically check with the clients to make sure that everyone is doing ok. Keep up a good pace but do not rush the clients, if you are short on time cut out a stop or two.

Do not pick the plants or cut any vegetation and advise clients they should not eat any berries, plant or fungus. Remind clients that they should not remove any natural item(s) from the forest or beach area. This includes bones, feathers and marine mammal parts. Guides are also not allowed to remove these items. Keep a respectful distance from animals.

Make note of repairs needed on trail and report to manager. Report any accidents that happen even if just a splinter. All items should be removed from the trail and gathering area at the end of the day. This includes stoves, tarps, supplies, etc. No items may be stored overnight on the island.

Group Spacing

We may have as many 48 clients (2 full Seahawks) per departure on the Rainforest Island Adventure. Depending on numbers the clients should be split into groups once they arrive at the beach. Once everyone is safely on the beach, gather the clients, divide them into groups (2 or 3 as necessary) and begin the orientation. It is important that the guides stagger the groups so that the quality of the experience is not diminished. Guides should make every effort to create distance between themselves and the other groups.

Under no circumstances should group size exceed 16 clients and groups should be divided as equally as possible. The maximum 16:1 client/guide ratio must be observed as it is a required element of our operating plan with the Forest Service. Examples of Guide to Client Ratios on Betton Island:

- ✓ 1-16 clients = 1 guide
- ✓ 17-32 clients = 2 guides
- ✓ 32+ clients = 3 guides

In the event of multiple groups, one guide should immediately start hiking, so as to establish some distance between their group and the next. Following guides should pace their group so that the space between groups becomes acceptable. Under no circumstances should 2 groups be “back to back” on the trail.

Gathering Area & Campfire

A small “gathering area” has been developed on the island just off the beach, inside the forest. ATA uses this area to serve the snack. It also serves as a nice area for clients to gather after the hike if they need to wait a few minutes for the Seahawk to arrive. It is the guides’ responsibility to keep this area clean and free of trash.

Under no circumstances will we put up any type of permanent improvement in this area. Do not cut trees or put nails in any trees in the gathering area. We do not have exclusive use of this area. Guides should be courteous to all other users.

A campfire will be burned on every trip. Proper fire safety and etiquette will be observed at all times. The following procedures will be observed regarding the campfire:

1. The fire will be started prior to the client’s arrival and will have flame when clients are in camp.
2. The fire will be contained to the fire pit at all times.
3. A bucket of water and fire extinguisher will be kept nearby at all times. Guides should fill the bucket of water with sea water as part of setting up the island.
4. Wood for the fire will be hauled to the site daily from the warehouse and stored in the designated area. Under no circumstances will wood from the beach or forest be collected for use in the fire.
5. It is the responsibility of the guides to ensure that the fire is covered with the fire pan lid whenever the area is left unattended.

6. Prior to departing the island at the end of the day the guides will ensure that the fire is completely extinguished.

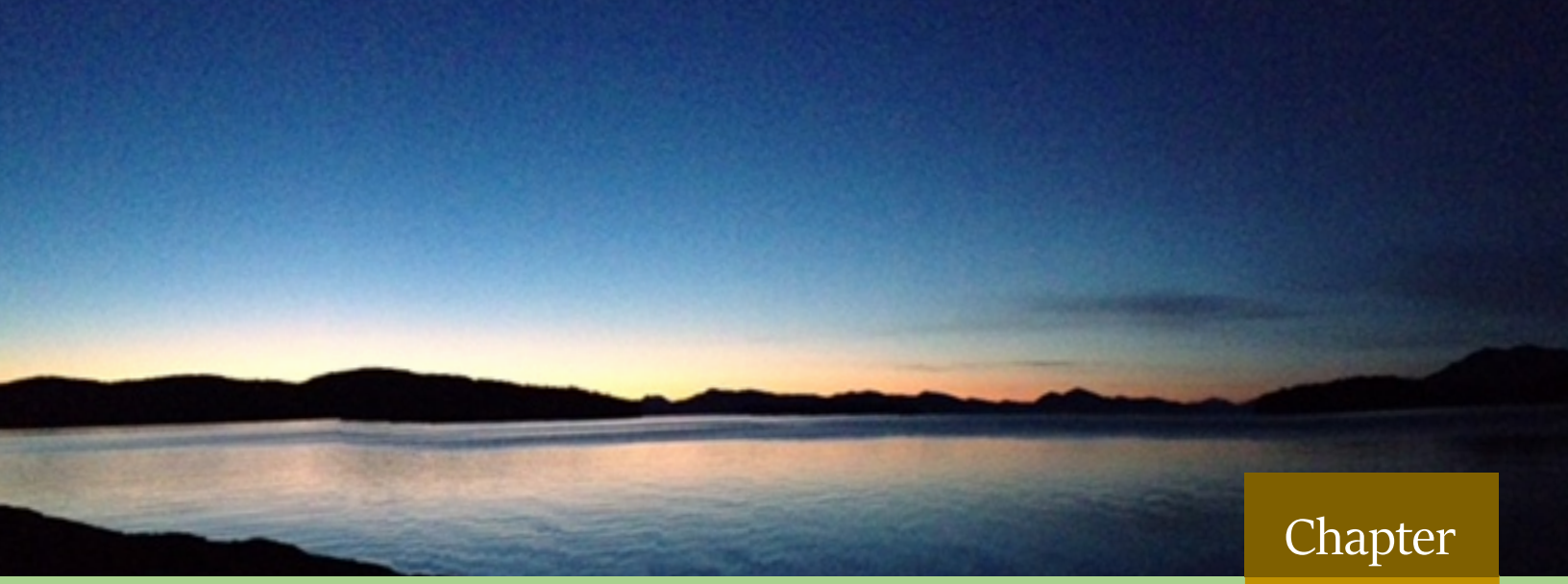
Alaskan Style Snack

Food for the Rainforest Island Adventure tours will be served as outlined during the staff training. It is important that all staff be extremely conscious of serving food in a clean and orderly manner and all Food Service Policies (outlined in the Tour Policy portion of this manual) must be complied with in preparation and serving of the snack. Guides should always wear disposable gloves when preparing and serving food.

The food for tours on Betton Island will include: Smoked salmon dip, apples, cheese, crackers, coffee, and hot chocolate. All food preparation will be performed at the warehouse, but apples will be sliced immediately prior to serving the snack. Cold water will also be made available for any client desiring it. Coffee and hot chocolate is to be heated using the propane stove and cooking over the campfire is not allowed. Do not leave the stove burning unattended. A bucket of water and fire extinguisher should be kept nearby whenever heating beverages on the stove.

The food plates should be arranged attractively. Napkins, plates and cups should be readily available. All food and articles should remain covered until clients reach the snack area and covered between groups as necessary. Keep food and supplies stocked and maintain awareness of the quantity of food consumed and available. The last group of customers should have the exact same amount of food available to them on a per person basis as the first group of customers.

At the end of the day of tours, any food items remaining at the completion of the trip should be taken off the Island and disposed of properly. All food and equipment used in the preparation and serving of the snack will be returned to the warehouse, cleaned thoroughly and prepared for the following day's tours.



Chapter 3

Post-Tour Procedures

Learning Objectives

- ✓ Gain understanding of tasks which need to be completed to ensure equipment is properly cared for and maintained.
- ✓ Identify High Risk Areas
- ✓ Become Aware of ATA Tour Policy
- ✓ Engrain a Proactive Approach to Safety

Introduction

It is important to follow post-tour procedures to comply with our operating permit, manage company resources and preserve company equipment. Following post tour procedures will aid in preparing properly for the next day's tours.

Betton Island

It is important to leave Betton Island in a pristine condition after each day's tours. Forest Service personnel and other members of the public may visit the island at any time and the condition of the island should reflect positively on ATA. After all tours have departed, remaining guides and camp staff will follow the following procedures:

- ✓ Trash: Separate trash - paper products, food, and trash. Pack them away. Do not dispose of any food or liquids in the fire or in the ocean.
- ✓ Firepit: A fire pan will be left over the top of the fire pit. Once a week, ash should be shoveled out of the fire pit and disposed of at the warehouse.
- ✓ Tables & Equipment: Break down tables, pack all equipment and remaining food items. Take care when packing that food/drink items do no become cross contaminated. Bring all equipment to the beach and put the ladder into its proper storage place in the woods and above the high-water line.

Once all the Betton Island post tour tasks have been completed, make sure you are ready to be picked up by the Seahawk. Upon the arrival of the craft, load all the equipment on board and depart the island.

Knudson Cove

Upon arrival at Knudson Cove, unload all equipment from the Seahawk and place in dock locker or cart up to the van. All dry PFDs and rain gear should be hung neatly the outfitting building. Load all totes, coolers, wet PFDs, wet rain gear, and employees into van for transit back to warehouse.

The outfitting building should be left in clean and orderly condition at all times. Guide staff is responsible for keeping it organized. Once the outfitting station and gear has been properly stowed, guides should check with the captains to see if they need any final help before departing the marina.

Seahawk

It is the Marine Operator's responsibility to ensure the vessel is properly stowed for the night and ready for the next day's operations. The vessel should be fueled and sprayed down on a daily basis. Any mechanical issues should be brought to the attention of the Lead Marine Operator. It is imperative that all issues be address in an expedient manner so that tours do not have to be cancelled due to mechanical issues with the Seahawk(s).

PM Shutdown for Seahawk: Complete the following Shut-Down Procedures

- ❏ Spray Down Vessel
- ❏ Fuel Vessel (Note: Log Fueling in Logbook)
- ❏ Freshwater Engine Flush
- ❏ Turn Off Batteries
- ❏ Report / Handle any Mechanical Issues
- ❏ Notate what items were used if Emergency Box was opened.

Warehouse

Upon arrival at Knudson Cove, unload all equipment from the Seahawk and place in dock locker or cart up to the van. All dry PFDs and rain gear should be hung neatly in outfitting building. Load all totes, coolers, wet PFDs, wet rain gear, and employees into van for transit back to warehouse.

Transport from Knudson Cove to the warehouse will take 10-15 minutes depending on traffic. Upon arrival at the warehouse, guides will unload all equipment from the van and bring food items and dishes to the kitchen area. Guides should work as a team to both clean up from the day's tours as well as prepare for the next day. The following is a list of tasks to be completed:

- ❏ Wash all dirty dishes
- ❏ Check supplies to ensure that any remaining supplies were not damaged by water
- ❏ Check equipment to ensure that it has not been damaged by water
- ❏ Print the packing list for the next day's tours.
- ❏ Pack the appropriate amount of equipment and supplies for the following day (excluding food trays, cold and/or perishable food items)
- ❏ Load the Firewood Bins with dry firewood.

Tour Reports

Hiking guides will fill out Tour Report for each departure. Tour reports will be completed in the ATAapp.

Clocking Out

All hourly wage employees shall clock out each day. Employees shall clock out at the time they are scheduled as the schedule allows ample time to perform post-tour tasks. The ATAapp's "Clock Out" process involves three steps:

1. Clock Out of your shift and declare any breaks.
2. Complete Your Shift
3. Approve Your Shift.

It is the employee's responsibility to consistently clock in and clock out on time, complete, and approve their shift each day. Managers can make corrections, but consistent errors will not be tolerated and will be considered for the employee's bonus evaluation.

Section

IV

Narratives

Chapter 1

Rainforest Island Adventure

Learning Objectives

- ✓ Gain a general understanding of information to be presented on tour.
- ✓ Give sample narratives which can be expanded as knowledge expands.
- ✓ Ensure consistency in guide staff's tour narrative and delivery.

Introduction

Narration is an important part of the tour experience. Passengers disembarking from cruise ships have a 10,000 foot view of Alaska. Our tours give them the opportunity to *experience* Alaska "up close" and you as a guide or Marine Operator bring that experience alive. A good narrative will include many different topics including Alaska, native history, flora & fauna, and facts about Ketchikan. It will also include frequent safety/instructional reviews. Developing a quality narrative presentation is an ongoing process, and the following outline will assist you in getting started.

It is not intended that guides memorize a canned presentation, but we do expect a standard narrative from each guide. We want you to know enough to answer questions intelligently and provide enough dialogue to create an atmosphere of camaraderie within the group. Conversation should be casual and free flowing. Do not burden the passengers with a lecture but respond to questions and lulls in the conversation. If the clients are talking among themselves, let them. Don't be afraid to ask questions of the clients; get them talking about themselves.

This outline details the way we want to break up the narrative information and gives the important information for you to deliver. It focuses on discussing certain topics at specific places along the route and each stop needs to be included. In addition, the information necessary for you to expound on these topics is provided in the Ecosystem section of this manual. Use the sample narrations as a baseline and add more depth to

your narrations with information provided in the Ecosystem Section as you gain familiarity with the content. You can also do research on your own but any information that you intend to add to the narrative (beyond what is provided in this manual) should be submitted for approval by the Field Operations Supervisor and Operations Manager.

Narration 1 - On the Docks

Narration #1 will be **delivered by the Dock Representative** who directs customers onto the bus. Once customers have been directed onto the bus and the Dock Representative has checked in with the bus driver, the Dock Rep will board the bus and provide a brief welcome and introduction. All clients need to sign the provided release and assumption of risk form as an indication of having been briefed. Clipboards and pens in good condition will be provided. The presentation is to be narrated as follows:

Welcome to the Rainforest Island Adventure, my name is _____ with Alaska Travel Adventures and we're looking forward to a fantastic tour today! Who is ready for an amazing day in Southeast Alaska? Before we get started, I have a few items that we need to cover before you depart for Knudson Cove Marina, the starting point of your adventure! I will be reading the waiver after which I will send around a copy for you to sign once your bus is underway! One of our staff members will collect the waiver from the driver guide upon arrival at Knudson Cove Marina.

WAIVER - Please understand that you will be riding in an open rigid hull inflatable and that there is a chance of getting wet. There is no smoking or standing allowed in the boat and all passengers must wear their lifejackets at all times. Once on the island we will be hiking on uneven, terrain and boardwalk that can be slippery when wet. We will be in a wilderness area without road access. All personal articles will be taken at your own risk, no articles of value should be brought on the trip. We expect that everyone is in generally good health. Some risks are involved and the possibility of tripping or falling is present, though not likely. This trip is operated on the Tongass National Forest under a permit from the U.S. Forest Service.

Stay seated and keep your hands and feet inside the boat at all times. No smoking is allowed on the boat.

Keep your lifejacket secured on the outside of your clothes and raingear on at all times while on the water.

We ask that you not bring items of value on the trip. Getting wet can be a part of boating. If you do bring items such as cameras, watches, or fine clothing, remember that you do so at your own risk and that Alaska Travel Adventures cannot be responsible if they are lost or damaged. Many people do bring cameras and binoculars; just be cautious about dropping them and to protect them from getting wet.

After reading the waiver, start the waiver with clipboards and wish them a fantastic tour.

Narration 2 - Bus Arrival

Narration #2 is **delivered by the outfitter** or any other staff member who greets the bus upon arrival. The purpose of this narration is to welcome the group and ensure a seamless transition from arrival to being outfitted and ready to depart on the Seahawk. The narrative should be similar to sample provided below:

Welcome to Knudson Cove! My name is _____ with Alaska Travel Adventures, and I will be getting you outfitted for your adventure! To your left is the restrooms. I would recommend using the restrooms before you are outfitted as this is the last chance to use the facilities – the island only has "faci-li-trees!!!" After you use the restrooms, please join me in our outfitting station (direct them to the location of the building) where we will get you set with rain gear and a life jacket. Once you have been outfitted, we will meet your Captain and crew down on the docks. The first segment of the adventure is a 20 minute, open boat ride through islands of the Tongass National Forest. If anyone does not need to use the restrooms, please feel free to join me in the outfitting tent when you leave the bus."

Narration 3 – SE Alaska & Route

Customers will be cruising either north or south, depending on their ship's itinerary and Ketchikan is either their first or last stop in Alaska. Find out whether your passengers are headed north or south

before you begin this narration. Narration #3 is meant to help orient passengers to the location of the tour and pre-load landmarks they will see along the way. This narration uses NOAA Charts (nautical charts) as a visual aid and a sample is provided below.

"Please join me over by the nautical charts on display. Here on the nautical chart of SE Alaska - NOAA Chart 16016 (Dixon Entrance to Cape St. Elias) you will see Ketchikan. This is your first (or last stop) in Alaska and you've come from _____ (Show route at this point). As you direct your attention to this next chart - NOAA Chart 17420 - Hecate Strait to Etolin Island, including Behm and Portland Canals, you'll see the waters surrounding Revillagigedo island - where Ketchikan is located. Your ship is docked outside of downtown Ketchikan on the Southwest corner of Revillagigedo Island. Now we will zoom in even further and take a look at Chart 17422 (Behm Canal-western part; Yes Bay). We are currently at Knudson Cove Marina on the west coast of "Revi" or "Revilla". We will be getting on our Inflatable vessel that we call The Seahawk, pilot out of the marina and toward Betton Island. Shortly after getting up to speed, we will stop at a little Island we like to call Eagle Island. We will then sneak between Pup and Betton Islands before rounding the southern cape of Betton and we'll make or way to the Betton Head on the Northwest corner of the Island. One landmark that the captain will point out along the way is the Cleveland Peninsula. The Cleveland Peninsula is part of the mainland and it is brown bear habitat whereas Revi, Betton and Tatoosh are black bear habitat. (if there is time, tell the story about how the Helm Bay cabin was shut down for a couple months in 2017 because a grizzly was frequenting the cabin)."

Narration 4 - Seahawk Safety Talk

After being instructed by the captain, the deckhand will remove the bowline from the dock. As the captain taxis the boat through the no wake zone, they will give a safety speech to the customers informing them of safety features and location of safety equipment as well as a verbal description of the "man overboard drill". It is IMPORTANT to set the clients at ease with a calm delivery style and appropriate humor. The below sample narrative covers all the required and important elements of the Seahawk Safety Talk:

"Welcome to (insert Seahawk and number). This is what's called a "RHIB", which is an acronym for "Rigid-Hulled Inflatable Boat". This is an extremely safe vessel that can float even without the help of the yellow inflatable tube. Even so, the coast guard does require us to have safety equipment and procedures in place, and also requires that I review them with you as we disembark. Before I begin, I'd like to note that we've never experienced any of the situations I'm about to cover while on board this vessel, however I think we'd all agree it's a good idea to be prepared.

*In the unlikely event of a fire onboard as we tour through the Tongass National Rainforest, we do have a hand held fire extinguisher on the side of the captain's console (either point to it or have the deckhand do so). This is much like the extinguishers you may find in any home or office building, to operate this unit we follow the P.A.S.S. procedure, which stands for Pull Aim Squeeze Sweep: Pull the safety pin out of the top of the extinguisher, Aim the nozzle at the end of the hose at the **BASE** of the fire, Squeeze the trigger or handle, and Sweep the nozzle back and forth until the fire is completely out. This vessel is also equipped with a below deck fume detection and fire extinguishing system that I can manually engage at the console here (point to the fireboy control).*

In the also unlikely event of a person overboard, the first step is extremely important: everyone except for the captain and deckhand MUST remain seated, because I will be maneuvering the vessel very quickly to get to the overboard individual as quickly as possible. My deckhand (insert deckhand's name) will throw the life ring equipped on the vessel in the direction of the person overboard (point to life ring) and maintain visual of the individual until I (the captain) verbally acknowledge that I have visual. Then once the stern of the vessel is in position we will pull the individual over the transom platform and provide first aid as needed.

In the unlikely event that myself (insert Captain and name) and my deckhand (insert deckhand's name)

were to both become incapacitated in any way, the vessel is also equipped with a marine VHF radio (point to radio and pick up handset). This radio is always tuned to the Coast Guard hailing frequency, channel 16. To operate the radio, simply press the button on the side of the handset (point to button) and keep the button held down, wait a beat and then speak loudly and clearly into the microphone. Give the approximate location, name of the vessel and nature of the situation while asking for assistance from the Coast Guard and any nearby vessels. As a side note, Knudson Cove, the marina this tour is operated from is a small, tightly knit family community. Everyone on the water is here to help each other out so in the unlikely event that we should need assistance today it will likely arrive from multiple nearby vessels before the Coast Guard even arrives, so we are in good hands. "

Finally, we do ask that you remain seated while we are underway, if we encounter any points of interest or wildlife along the course of the adventure cruise we will slow to an idle speed and communicate to you that it is an appropriate time to stand up. Also, if you are wearing any loose clothing or a hat or baseball cap, please secure them, our general rule is "we go back for humans but not for hats". Does anyone have any questions? Once everyone is seated we will get started.

Narration 5 – Aboard the Seahawk

(Sources: 1, 8, 9, 15, 16, 22, 23, 24)

Narration is an important part of the ride to the beach. Talk to clients, point out any wildlife and other items of interest. Often the passengers will miss what you see. There is a seal haul out on Clover Island, an eagle nest on Pup Island, a sea bird rookery on Tatoosh and many seals to spot on Tatoosh Islands. It is possible that you may encounter whales or other marine mammals, as well as bird life en route to or from the beach. Make every effort to maintain a proper distance from these animals as required by law.

Eagle Island: Eagle island is unofficially nicknamed such because there is an active bald eagle's nest in the island's tallest tree. The captain will inform guests about the specific mating pair who resides there, as well as some general facts about the bird such as their 20+ year lifespan, lifelong mating habits, the nests themselves, and how long a parent will foster their offspring. Eagle sightings are common here.

Tectonic Uplift: On the western shore of Betton Island an incredible display of tectonic uplift can be seen. The captain will inform guests about the slab of metamorphic rock can is rising out of the ocean at a 45 degree angle due to the crustal uplift that occurred throughout the region up to 200 million years ago when the North American plate and the Pacific plate collided. The Queen Charlotte Island - Fairweather - Chatham fault line currently runs along the west coast of the Alexander Archipelago.

Tatoosh Islands: The Tatoosh Islands, located off the west coast of Betton Island, is a series of islands that form separate, individual islands during mid and high tides but are connected by land only exposed during low tides. Tatoosh Islands are a prime example of "Tidal Islands". The rocky, tidal lands serve as great resting/sunning spots for seals and sea lions, as wells as great rookeries for birds.

Submarine Facility on/near Back Island: Back Island is the location of the Southeast Alaska Acoustic Measurement Facility (SEAFAC), where the United States Navy conducts tests on various acoustic instruments onboard submarines. The two large, rectangular surface barges that can be seen rising from the water suspend submarines at various depths below the surface while tests are performed. The area is subject to sensitive security measures which are heightened while tests are underway. A flashing amber beacon signals when a test is being conducted.

Pup Island: Pup Island is a small island located in the Tongass National Forest and is under the regulation of the United States Forest Service. Part of those regulations mean that no structures can be built on National Forest land, which makes the house on the West side of the island so unique: It was built before the land was annexed into the Tongass National Forest in the early 1900's and has remained in possession of the original owner's family. Once the family moves out, the house and surrounding property will be regulated in accordance to National Forest requirements,

meaning it will go unmaintained until reclaimed by the earth (or a change in policy).

Narration 6 – Island Introduction

Once the passengers have been unloaded, welcome them to Betton and introduce yourself and try to get to know your group a little before beginning the hike. Ask them their names and where they are from. Narration #6 is critical to making the passengers feel like their experience will be a personal adventure. You will provide a brief overview of the hike and that there will be an Alaskan Style snack at the end of the hike. Encourage any questions when you finish. Below is a sample narration:

"Hello, my name is _____, and I'll be your hiking here on Betton Island. Before we get going, let's make sure we're comfortable and ready and all on the same page. If you haven't already, you can remove your PFD and place it on the rocks next to the trail. While on island we will be walking on a boardwalk trail through the Tongass National Forest. The hike is approximately a mile with changes in elevation. At the end of the hike we will have some time to enjoy an Alaska style snack. Alaska Travel Adventures operates this tour by special use permit with the Tongass National Forest.

If everyone feels comfortable, let's go around and share your name and where you are from so I can get to know you guys a little bit before we head on down the trail"

Note: To put some distance between hiking groups, the first group should proceed directly on to the trail and save the beach stop for last. Guides are responsible for maintaining space between the groups.

Narration 7 – The Beach

(Sources: 1 & 9)

Narration #7 is your opportunity to highlight some of the visible living organisms around you. Discuss the different tidal zones, types of seaweed, and the intertidal animals. Allow the clients to beach comb a few minutes and explore a little on their own. Do not allow clients to collect any items. At times the tide will be too high to show the clients many of the intertidal features, so every effort should be made to collect specimens ahead of time. Store them in a 5-gallon bucket and give them a fresh change of salt water every hour. At the end of the day put them back in the ocean. Sample narrative is provided below:

"The Intertidal Zone is a unique ecosystem subject to periods of extreme drought and flood multiple times per day due to a semi-diurnal tide system. Home to a wide abundance of life, from seaweeds, kelps, and algae to bugs, beetles, amphipods, snails, clams, crabs, anemone, sea stars, fish and so much more. We have a dried Shore Crab and Pisaster Star that washed up recently available to show you guys, and I was able to find a few gorgeous moon glow anemones in the tide pools near the water's edge. Come check them out!"

Note: The organisms you've collected, or that are visible at mid-low water levels will guide your discussion. Utilize what is visible as the content of your beach narration. If kelp is visible, base your discussion on kelp. If you have sea stars and anemone to show the passengers, show them these organisms. Further information to build your beach narration can be found in the Tides, Intertidal Zone and Intertidal Zone Species subsections of Section 6: Ecosystem.

Narration 8 – Trailhead & Safety

Remind guests that the trail is just under a mile long, that there will be multiple stops along the way and the hike will conclude in our island camp with a snack. Give a quick safety speech reminding guests of Leave No Trace principles (like staying on the boardwalk), and to not eat any of the surrounding flora. The entire boardwalk trail is located on the Tongass National Forest. Make sure that you mention to the clients that we operate this hike under a permit from the Forest Service. Detailed information on the Tongass is provided in Section 6: Ecosystem.

"We will be walking through the Tongass National Forest and we'd like to respect that by following Leave No Trace practices. Please stay on the boardwalk, don't pick at or pull plants, and, for goodness' sake, please don't eat any berries along the

trail. I'm sure you, your family, and myself don't want to learn about any new food allergies today.

We will be travelling through bear country today on our hike, but as the deckhand and captain may have mentioned by now, there are no brown bears on this specific Island, Betton Island. We are in black bear country, however, and while they are generally more skittish than brown bears, we still need to be aware of what we do when or if we encounter one. First and foremost, remain calm. Second, give the bear as much distance as it wants and slowly back away from the animal. Finally, form a protective circle around your guide… Just kidding. Use that zoom feature on your camera and maintain your safety.

We will be stopping at a total of X amount of locations on the trail, and at each stop we will feature an informative dialogue as well as a chance for questions and, of course, a moment to look around. Let's begin by walking into the woods and toward our first pit stop!"

Narration 9 – Redcedar Tree

(Sources: 1, 4, 5 & 24)

Narration #9 is a chance to show off one of the oldest species in the Tongass. The Western Redcedar on the boardwalk trail is truly unique in terms of height and diameter. This stop is the only opportunity to invite passengers to step off the boardwalk trail. Passengers are permitted to touch the tree, and this is a great photo op location. Some basic narration about the Redcedar is given below and more information about species is found in the Ecosystem section of this manual.

Western Redcedar (Thuja Plicata) trees can grow to be roughly 800 years old, though some have grown older than 1000 years. The largest Redcedar documented in Southeastern Alaska had a diameter of 9.5' and stood over 150' tall. Native cultures used large segments of the cedar trees for canoes, clan house construction, totem poles, and much more because of their rot-resistance and workability. They are most commonly found close to the coast and at lower lying elevations. Considered to be the tree of life by the native cultures in the Pacific Northwest, we'll talk about some of the other, more detailed uses of the Redcedar later on.

Narration 10 – Nursery Log

(Sources: 1, 3, 4 & 24)

Located near the bench, this fallen tree is an excellent example of a nursery log. Guides should position themselves in view of the passengers but should not stand on the nursery log. A basic sample narrative is described below:

"The ability to provide the perfect breeding ground for seeds and fungi is why fallen logs are commonly referred to as "nursery logs". When trees fall over (commonly due to wind) they become a breeding ground for life. Fallen trees gradually get covered up in moss (most likely from the sphagnum family). The shaggy mosses have an incredible ability to hold both moisture and nutrients, so any seeds that fall into the moss land in an environment that fosters germination and sprouting. A spruce log 30 inches in diameter may take over 50 years or more to fully return to the soil. In addition, fallen logs help prevent the erosion of forest soils, especially on steep slopes. Because so many fallen trees have grown out of nurse logs you will see many with the root systems exposed.

Because of the high amount of rain that falls upon the landscape, decomposing organic material is washed away before enough can accumulate to form soil. Since the process of decomposition has been disturbed due to wind and rain for thousands and thousands of years, a quality layer of soil has yet to build up requiring new trees and bushes to germinate in the moss that forms on dead and dying trees. The roots of the new seedling will begin to grow down and around the nursery log and eventually down to the forest floor where they will tangle with other root systems and form tight clusters."

Narration 11 – Exposed Roots

(Sources: 1, 5, 6 & 24)

This stop provides an excellent opportunity to discuss how the old growth forest propagates itself (you should tie in the nurse log at the prior stop to this stop). This is the widest portion of the boardwalk trail and you should encourage the group to congregate.

"Due to the shallow depths of the top soil in the Tongass National Forest, tree roots aren't able to grow down into the earth. Instead, they grow horizontally along the forest floor, anchoring themselves to whatever they can. Oftentimes, tree roots will intertwine and grow around each other creating an interlocking or interconnected root system.

Each habitat has its own disturbance regime, which makes changes and recovery of the habitat a common occurrence. In Southeast Alaska such a disturbance is the wind. High winds can grow powerful enough to knock over entire trees, sometimes uplifting the entire tree rather than it breaking mid-trunk. Here we can see the bottom of a Redcedar root system, with the trunk of the tree hiding behind the root wall. The second factor is the tree is usually weakened by insects and fungus. Because of the codependency created by intertwining roots, quite often when one tree is blown down, the trees surrounding it will soon follow in a domino like effect. Once the tree has gone down it will begin to rot and become an ideal nursery for other trees due to the factors mentioned in the nurse log summary. In addition, the hole created in the forest canopy allows sunlight to reach the forest floor and a new generation of trees will race upward to fill the gap left open by the downed tree. It is the constant cycle of regeneration that creates a healthy, multi-aged, old growth ecosystem."

Narration 12 – Notched Spruce

(Sources: 1, 5, 6, 7, 23 & 24)

At this stop you should discuss the springboard logging techniques that were the standard practice in the 1940s and 50s. During pre-tour procedures, a guide should hike a board up to this stop so that the narrative can be delivered while standing on a "springboard". The board should be removed at the end of the day of tours while waiting for the Seahawk to arrive for the guide run.

"From the time the Russians started settling near Sitka up until the mid-1990's, logging was a common occurrence in the region. Hand logging was the only method of falling trees until the post WWII era, with springboard logging being the most common. Loggers carved notches into the tree a few feet high that could hold a long, flat board (springboard) that the loggers could stand on. Elevating the sawing position allowed the loggers to cut less tree (since roots grow out, not down, the closer to the ground the logger is, the more diameter they have to cut) and give the landscape more stability, as clear cut areas tend to be prone to landslides

Sitka Spruce was a prized tree during the World War era because the strong, yet lightweight, wood was an alternative to combat the steel and metal shortages of the era. Many aircraft, wings in particular, were made out of Sitka Spruce. The tight, straight grained and large pieces of timber were easy to work with and didn't splinter apart when struck by a bullet. Other modern uses of spruce include wood pulp and musical instruments such as guitars and violins. Historically, the new-growth spruce tips were harvested and brewed into tea because of their high Vitamin C content."

Narration 13 – Culturally Modified Tree (CMTs)

(Sources: 1, 3, 4, 5, 6, 7 & 24)

Narration #13 focuses on Native Cultures and their use of the forest for everyday living. This stop is near the highest elevation of the trail and has a fantastic overlook to the water. Guides can deliver additional information about the Dwarf Mistletoe if they sense the group needing a longer break at this stop.

"This Redcedar right here is what we call a CMT or a Culturally Modified Tree. What that means is that the tree has been "modified" in a way that is typical of the cultures in this area. Harvesting the bark from a tree does not kill it, but the bark will not grow back. Harvesting only the sheltered side of the tree allows the side commonly exposed to wind and weather to remain protected. Native cultures harvested the thin, vertical strips of bark to weave into hats, water-tight clothing, and more. Strips of bark interwoven with duck or goose feathers would be fashioned into insulated clothing, hats, or blankets. Small, flexible, and strong branches and roots were also woven into some larger things like baskets and baby cradles.

Take a look up towards the canopy, it looks a little funny, right? Why? It looks like there's strange clusters of branches. That specific tree and some

other trees above us (carefully look up) are affected by a plant called dwarf mistletoe. Dwarf Mistletoe is a small parasitic plant that steals water, minerals, and sugars from the host species (a hemlock) causing the tree to become weaker and more susceptible to other ailments like fungal infections or insect invasions. Dwarf Mistletoe can shoot its seeds up to 65 feet because of an extreme buildup of water pressure within the plant and can spread quickly as a result."

Narration 14 – Alder Trees

(Sources: 3, 4, 5, 6 & 7)

Guides may talk about Red Alders at various locations along the trail. This narration leads nicely into the snack which includes smoked salmon.

"These trees growing along the trail are red alders. The red alder is the most popular wood for smoking fish; tell your group that they will get to try some smoked salmon at the end of the hike. Alder wood is soft and even grained and has been used for hundreds of years to make such crafts as bowls, masks and rattles by the coastal tribes of Southeast Alaska. The bark of the tree also had many uses to the native people. It was used to make a red dye, which was then used to color many of the crafts they produced. The name red alder may have been derived from this use. Many different shades of dye could be produced according to the age and quantity of bark used. The inner bark was used as a food source in early spring by some coastal people. Alder bark was also highly valued for its medicinal qualities. A solution of the bark was used to fight tuberculosis and other respiratory disease and was credited with saving many lives. It was also used as a wash for wounds and other skin infections. The bark is known to have strong antibiotic properties."

Narration 15 – Alder Trees

Southeast Alaska frequently sees strong winds that can severely damage and alter a small patch of forest. Due to the density of the forest, when one tree falls, it often brings down several others. The Betton Blowdown zone is a relatively new feature decipherable to the lack of moss on the fallen hemlocks. When moss begins to grow, it will become a nursery log. Unlike the exposed root system stop that featured a relatively small "new opening" in the forest canopy, this stop displays a larger scale disturbance that has cause the entire hillside to form a "new opening" in the canopy.

As these trees begin to decompose, the often house many types of tree fungi such as the Conk fungus, Turkey Tail, and other types of Shelf fungi visible here. Tlingit, Haida, and Tsimshian peoples would hollow out the fungi and use the white bottom as a bowl to carry embers in. Totem carvers used the bottom part of the fungi to etch a rough draft, giving the fungi the nickname of the Artist's Conk."

Narration 16 – Gathering Area

As you finish the hike, lead the group into the Gathering Area. Welcome the group to cook camp while you stoke the fire and invite them to warm up by the fire. Let them know you will have a "Alaskan Style SNACK" ready for them shortly and start the stove. Next, put on gloves and begin to set out the prepared food trays and supplies and cut the apples. Introduce the snack consisting of crackers, smoked salmon, cheese, apple slices, Andes mints, hot chocolate, coffee, apple juice, and water. Serve hot drinks from the prepared thermos of coffee and hot chocolate. Use this time to talk casually with the clients or to answer questions.

Other Narrative Information

During slow times or lulls in the conversation other topics can be discussed. These may include other ports and ATA Tours, the customers' experiences on the ship, history of Knudson Cove, how you came to be working in Alaska for the season and general differences between living in Ketchikan and the lower 48. Please remember to be positive and professional in your conversation.

Topics that are better left for driver guides include the founding of Ketchikan, Native influences in town, logging industry, changing economics of Ketchikan, and restaurants in town.

Section

V

Ecosystem

Chapter 1

Earth Systems

Learning Objectives

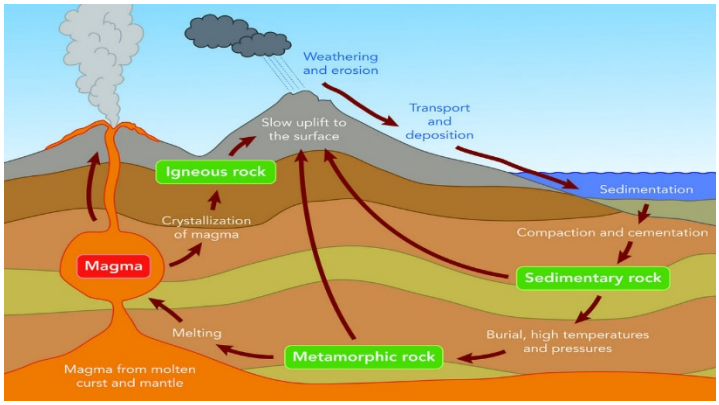
- ✓ Build field staff's depth of knowledge in content areas they will be delivering
- ✓ Understand how natural phenomena have affected Ketchikan and the surrounding area.

Introduction

(Sources 1, 21 & 22)
The Tongass National Forest is one of the world's most unique areas due to the incredible landscapes and scenery, as well as the abundance of life. All of the flora and fauna of this area; from humpback whales feasting on schools of herring to bears fishing for salmon to the complex cultures that have enduring communities throughout the region to the Eagle, Wolf and Raven whom the clans are named after; are a product of four environmental systems that create the biosphere (1). The Lithosphere, Hydrosphere, and Atmosphere, all combined with solar energy, come together to create the unique biosphere we know as the Tongass National Forest.

Lithosphere: Physical Earth

Driven by solar energy (both radial heat from the surface of the sun and tidal heating from gravitational pull), the earth is in a constant state of



change. This constant state of change is best demonstrated by the rock cycle, illustrated below:

Most of the change that occurs to the physical earth occurs along tectonic plate boundaries (the major global tectonic plates are illustrated below)

If we zoom in on the map, we see a lot of tectonic activity in the Pacific Northwest:

If you look at the map, a major fault line runs up the California coast before continuing Northwest into the Pacific Ocean. While obscured slightly from the Juan de Fuca plate, the fault line continues North into the Kenai peninsula off the west coast of the Alexander Archipelago. This fault line was created when the Pacific Plate was driving east, unopposed, until 180 million years ago. The eastbound motion deposited much of the sediment and material that would later become the Rocky Mountains

About 180 million years ago, the North American plate began its westward migration. The opposing forces, combined with the sediment collected from over hundreds of millions of years, created the Rocky Mountains. The North American plate has proven to be the stronger plate over time, causing the fault line, or "collision" line, to move further and further west, creating more mountain ranges and island chains along the way.

One interesting thing to note is that since the two plates have collided, and continued to move west in a linear pattern, the main geological "scars" or features of the fault migration are all North-South in orientation. The Rocky Mountain range stretches from Mexico, through the United States and into Canada in a vertical manner; the West coast of the North American continent is, for the most part, vertical; the Alexander Archipelago and its waterways (Tongass Narrows, Clarence Straight, etc.) are all vertical; and most of the islands throughout the Southeast are longer than they are wide.

Glaciers have also caused a dramatic change to the physical composition of the landscapes around us. In the Ketchikan area, glacial retreat is a relatively recent occurrence, however, there are no current glaciers on Revillagigedo Island. Despite there being no glaciers on the island, there are many active glaciers nearby. Some examples of active glaciers include the Soule, Through and Chickamin glaciers on the mainland portion of Misty Fjords National Monument. The Mendenhall Glacier in Juneau is another famous glacier and all of the AMHL Ferry boats are all named after some of the more prominent glaciers of Southeast Alaska.

Locally, we can see evidence of glacial retreat along Revilla Road out toward Harriet Hunt. While the valley that the road travels through is not accessed on the Rainforest Island Adventure tours, guides will see this valley firsthand when driving to and from the lake. The glacial valley features rounded hillsides, a U-shaped valley floor, and a series of multiple lakes in a cascading manner. While the lakes in this valley (Talbot Lake, Connell Lake, Ward Lake, and the Frog Ponds) are all connected by a creek, valleys that are formed via rain runoff have a V shape to the valley with a river being the main feature. Examples of runoff or river valleys include the Grand Canyon and the I-70 Corridor if you've

ever gone skiing in Colorado at any of the resorts not named Steamboat or Aspen.

Tectonic motion and uplift and glaciation occur over a very large period of time. Zooming in on the scale of these tectonic battles, we see many different rocks in our area that are a result of these physical changes. Some examples are highlighted below.

Quartz Diorite is the most common type of rock found in the Ketchikan area, as well as the western side of Betton Island where the trail is located. Quartz Diorite is an igneous rock, meaning it is formed from the heating and cooling of magma. Quartz Diorite is a felsic rock, meaning it is very mineral rich. Specifically, as the name implies, with the mineral quartz (5-20% of composition)

Phyllite is a unique type of metamorphic rock that has undergone multiple changes in its 30-million-year-old life cycle. It begins as simple sediment from inland rivers and streams that eventually has more and more weight added on to it, pushing it further and further below the surface of the earth. With time and pressure, it changes into a type of shale. As time continues, as depth and pressure increase, and as more elements and minerals are added, the rock is recrystallized, and eventually pushed back to the surface of the earth due to tectonic uplift. Phyllite is a grayish colored rock, very finely layered, with speckles of shiny crystallized minerals that look much like gold or fool's good (aka pyrite) (It's basically fools' fool's gold. It's not even the "real" fake stuff.)

Black Slate, a metamorphic rock, and Greywacke, a sedimentary rock, are both commonly found in the area as well. As far as precious metals and stones go, Jade, Gold, Silver, Copper, Lead, Granite, Marble, and others.

Hydrosphere: Liquid Earth

The Hydrosphere can be broken down into a relatively simple system: the ocean (Since weather and precipitation occur in clouds as part of the atmosphere, we'll include rain and the water cycle in the Atmosphere section despite water evaporating from the ocean to start the rain/water cycle). While the oceanic portion of the biosphere is incredibly complex and diverse, the ocean itself is relatively stable and predictable. We read tide charts as a team every morning to understand when and where the tides will be. The tide levels, though they can change from a high tide of 10' to a high of 19' two weeks later, are generally the same. They seldom go above 19' and seldom below -3.5' at any point in the year. Downtown Ketchikan and hundreds of businesses and residences on the island are built along the coast, high enough above the water so they are safe, but close enough to the waters' edge for easy access and aesthetics.

While relatively routine on an annual basis, here in the Ketchikan area, we experience dramatic tide swings on a daily basis. We have a semi-diurnal tide system, meaning two high tides and two low tides per day, roughly 6 and a half hours apart. Of the two high tides, one is higher than the other and the same can be said for the low tides. Sea level is determined by the average low-low tide (known as Chart Datum or MLLW - Mean Lower Low Water) for the year. Depending on the lunar phase, seas can swell to be over 19 feet above Chart Datum and can be as low as -4 feet below Chart Datum. This means that the tides can change a full 23 feet in a mere 6 hours some days.

The tides themselves are a product of the gravitational pull from both the sun and moon. The moon orbits the earth, and the earth orbits the sun. When the moon, sun and earth all line up perfectly, the tides are at their strongest because they have two forces, the sun and moon, working together to try to "steal" the water away from the earth. During a New Moon and a Full Moon, the sun, moon, and earth are all in line, so during or near these lunar phases we have "spring tides" where the range between the highest high tide and the lowest low tide for the day can be up to 23.5'. When the moon is at its crescents (the waxing and waning crescents halfway between new and full moons), the gravitational pull from both the sun and moon are both affecting the earth's oceans, but not as dramatically. During these periods, known as "neap tides", the lows aren't as low, and the highs aren't as high (Neap is a nautical term derived from the

Middle English word “neap”, meaning “small”, so a neap tide is a “small tide”).

While the gravitational pull from the sun and moon affects the physical motion of the oceans, the tidal heating that occurs with it, combined with the radial heat from the sun, creates larger-scale movements in the ocean where warm water and cool water cycle in large gyres. The major oceanic currents and gyres of the world are illustrated below. In general, we see warm water migrating away from the equator along the east coast of the North American and Asian continents. We also see cool water migrating toward the equator along the west coasts of the United States and Europe/Africa (‘cause… you know… heat rises and all…)

Zooming into the Pacific Northwest, we see two warm water currents moving from the west to the east: The Kuroshio Current and the North Pacific Current. Closer toward Ketchikan, we see the Alaskan Current cycling warm water up the coast, and cool water declining in latitude in the open ocean. The convergence of these three major oceanic currents occurs off the west coast of North America near the Vancouver Island, Haida Gwaii area. As the warm water migrates north toward the Kenai Peninsula, moisture begins to evaporate out of the ocean to form the pregnant clouds that so generously rain down upon the first few landforms that they encounter.

Atmosphere: Gaseous Earth

To continue from the Hydrosphere section, since the southern part of the Alexander Archipelago features the first land masses that these moist pockets of air encounter, they see the most rain. Mountains and hillsides “push” and “lift” (via a process called Orographic uplift) air and moisture to higher elevations, where it cools, condenses, and turns to rain. Ketchikan, in the southern portion of the Tongass, receives an average of 141” of rain annually. In the central Tongass, Juneau receives about 62” of rain annually, and Skagway, at the north end of the Tongass, receives 27” of rain each year. As rain falls onto the first land masses, less and less moisture is left for any preceding mountain ranges. Also, as the oceanic current moves north, it cools, causing less water to evaporate.

Solar Energy

Solar energy from both radial heat from the surface of the sun and tidal heating from its gravitational pull (along with subsequent lunar energy) is the driving force behind the rock cycle, the major oceanic currents, and the water cycle, which all come together to create the biosphere.

Biosphere

A global sum of the physical, liquid, and gaseous earth, along with the solar energy that drives their continuous changes, the biosphere can be broken down into several different habitats, ecosystems, groupings, and families. Some of which are outlined below/following.

Chapter 2

Intertidal Zone & Species

Learning Objectives

- ✓ Build field staff's depth of knowledge in content areas they will be delivering
- ✓ Understand how natural phenomena have affected Ketchikan and the surrounding area.
- ✓ Gain an understanding of the various flora and fauna of Ketchikan.

Intertidal Zone *(Sources: 1, 4 & 9)*

Intertidal areas may seem like rocky, sandy or muddy wastelands upon first glance, however they teem with life, large and small, complex and simple, colorful and camouflaged. Because of the biodiversity, the intertidal area is easier to understand when broken down into smaller sections, or zones.

Splash Zone - The "splash zone" is everything that is subjected to saltwater spray from incoming ocean currents and waves but rarely is submerged, even with the highest of tides.

Upper Intertidal Zone - The "upper tidal zone" is the top third an area affected by the tides. It encompasses areas that are mostly above water but does flood for a few hours each tide cycle. Some of the inhabitants of the area include barnacles, limpets, periwinkles, and lichens. This is the most barren area in the intertidal zone due to the lack of water for marine creatures, and the high salt content, which keeps most land plants and animals from inhabiting the area.

Mid Intertidal Zone - The "mid-tidal zone" is an area that is submerged for more or less the same amount of time that it is exposed during a tide cycle and is the best area to find tide pools. Some of the more common sea creatures you will find include hermit crabs, anemones, sea stars, mussels, chitons, and small fish called sculpin.

Lower Intertidal Zone -The "lower tidal zone" is everything that is submerged more often than not. The lower intertidal zone is the most obscure of all the intertidal zones as it is only visible at very low tides and for a short time. In this area you will find sea urchins, shrimp, crab, sponges, hydroids,

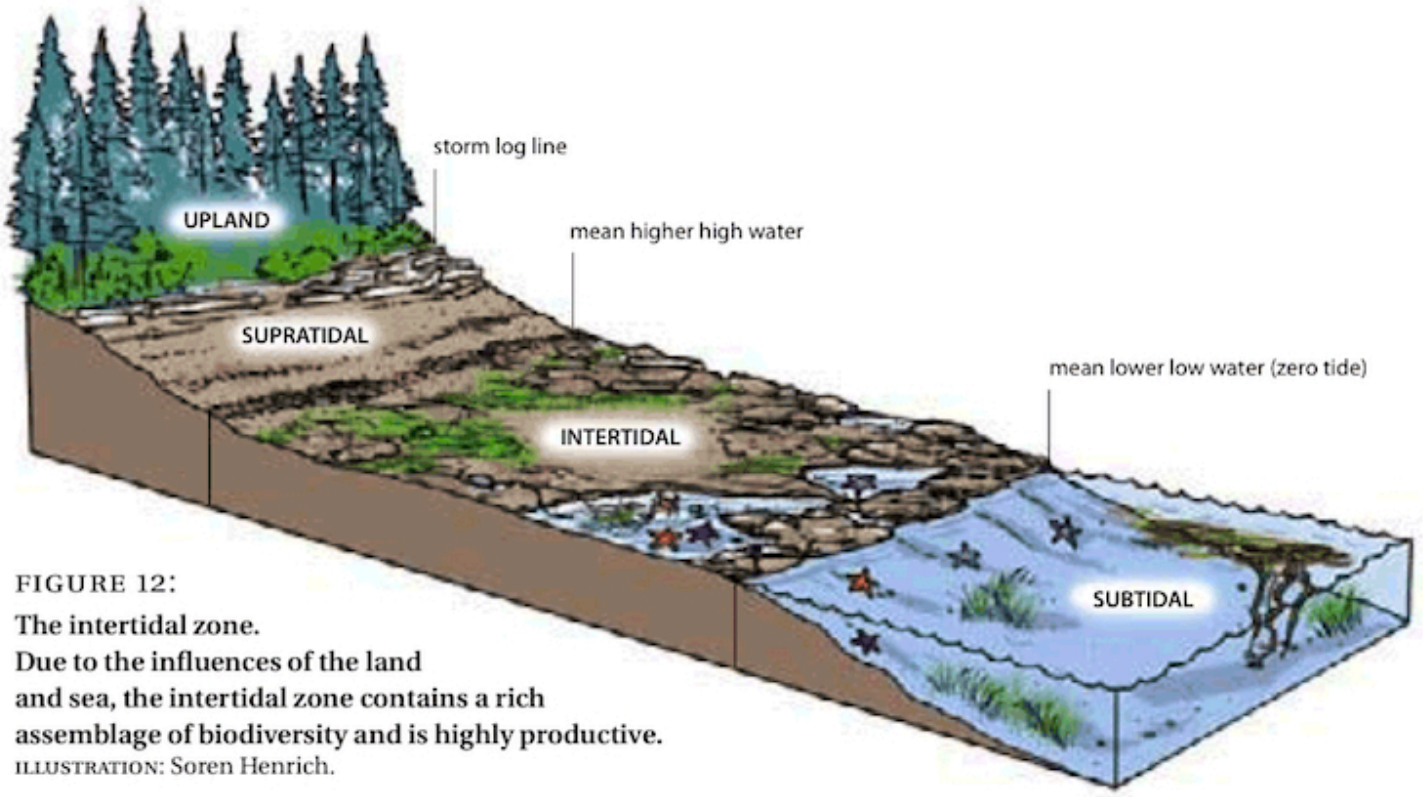


FIGURE 12:
The intertidal zone. Due to the influences of the land and sea, the intertidal zone contains a rich assemblage of biodiversity and is highly productive.
ILLUSTRATION: Soren Henrich.

octopus, sea cucumbers, brittle stars and many types of fish in addition to all the marine life listed above. This is also where kelp will first start to grow. When you get the opportunity to take clients into this area, warn them to watch their footing; the kelp can be very slippery.

Sub-Tidal Zone - Finally, the "sub tidal zone" is the area just beyond what is influenced by the tide.

Ketchikan experiences 20'+ tide swings routinely (on spring tides - near new and full moons), we also experience tide swings as low as 10' (on neap tides - near quarter phases of the moon). Therefore, the five zones of the intertidal area are not "hard and fast" nor clearly defined. They are simply generalities.

While there are hundreds upon hundreds of species that can be found in intertidal zones, below are a few selected species or families of species that will aid in educating our guests about these incredible areas. Since the biology of intertidal areas is so diverse, we'll take a "top-down" approach, starting first and foremost with the creatures and organisms one can find in the upper tidal zone. (Yeah, we're ignoring the splash zone. There's not enough exposure to ocean water to harbor intertidal life and the salinity of the breaking waves kill any species reliant upon freshwater like trees, berry bushes and ground cover plants.)

Upper Tidal Zone Species

The upper tidal zone is typically dominated by rocks that are covered in acorn barnacles. Many gastropods can be found along the exposed rocks or in the tide pools left behind by the receding tide. Moving towards the mid-tidal zone, hermit crabs and chiton become easy to find.

Acorn Barnacle (Balanus glandula)

Believe it or not, barnacles are in the same family of species as crabs and shrimp. They are arthropods, meaning they have jointed limbs and an exoskeleton that covers the body like armor. Acorn barnacles have specialized legs that sweep through the sea catching

plankton for the animal to eat. Acorn Barnacles are typically white in color but can be an ashen or grey color as well. They are no larger than 3/4 of an inch in diameter and 3/8 of an inch tall

Gastropods


Plate Limpet (left) Ribbed Limpet (right))


Mudflat Snail (left) Channeled Dogwinkle (right)

The word gastropod means "stomach foot", so anything in this family is defined by a "foot" that transports the animal via locomotion. Snails and limpets are the most common examples of gastropods found in the intertidal areas. While there are dozens upon dozens of subspecies that can be found, below are a few pictures of snails and limpets.

Chiton

Like snails and limpets, there are many subspecies of chiton in the intertidal areas around Ketchikan and Betton Island. Chiton, regardless of size or color, all have a series of 8 plates that line their back. These plates, or valves, are bound by an outer girdle. Depending upon the subspecies, chiton can be incredibly bright and obvious or camouflaged in natural colors. The Lined Chiton (pictured: Tonicella lineata) is one of the most common and colorful.

Mid-Tidal Zone Species

The mid-tidal zone can host all sorts of life. Upper tidal creatures can blend and merge and coexists with species found in lower zones, and curious creatures from the deep can rest in shallower areas as well. The Thatched barnacle can be found in the mid-tidal zone, as can the Pacific Blue Mussel. Eelgrass and Rockweed become common too.

Thatched Barnacle (Semibalanus cariosus) –

The Thatched barnacle is very similar in appearance to the Acorn barnacle, just larger (as seen in the photo to the left). They grow to be up to 2.5 inches tall and can be 2 inches in diameter. They have the same color range as the Acorn barnacle but tend to be more of an off-white color rather than the milky-white color of their smaller relatives. The Thatched Barnacle is often found at lower sections of tidal areas than the Acorn Barnacle, but the two can commonly be found occupying the same area.

Pacific Blue Mussel (Mytilus trossulus) –

As its name implies, this mussel is predominately blue-black in color and may have some brown coloration as well. The Pacific Blue Mussel can grow to be 4.5 inches long and has a distinct smooth shell. The animal feeds on plankton by filtering up to 3 liters of water through its gills per hour. This mussel was an important food source to many northwest cultures and can still be harvested today, however any and all shellfish harvested in the Ketchikan area should be tested for Paralytic Shellfish Poisoning before being consumed. PSP is a common toxin in shellfish that forms when the "perfect cocktail" of various different algae accumulates within the species, making it unfit for human consumption.

Surf Grass *(Phyllospadix scouleri)*

Surf Grass and other types of eelgrasses (Zostera genus) inhabit rocky areas of coastline and provide important habitat for many invertebrates and small fish. The plant also serves as a valuable food source for some oceanic life, and the Salish and Haida were known to eat the sweet flavored grass either raw or dried for winter consumption.

Rockweed (Fucus gardneri)

Rockweed with deflated receptacles can be seen on the left, while inflated receptacles are displayed on the right.

Also known as bladder wrack, pop weed, popping wrack, Rockweed commonly anchors onto rocks in the mid-tidal zone, but can also be found washed up on the shoreline, marking previous high tide marks. The plant has yellow green to olive/brown-green blades with a visible midrib. The swollen tips of the blades, or receptacles, contain the reproductive gametes of the plant. The receptacles shrink when the tides recede and squeezes the gametes out (gametes are male or female germ cells that can attach to the opposite gender and reproduce). When the tides come back in, the gametes pair and reproduce.

Lower Tidal Zone Species

The lower tidal zone features many of the "exciting" creatures that most people associate with intertidal areas. Things like sea stars, anemones, crabs, sea urchins, sea slugs, and much more call this area home.

Lower Tidal Zone - Anenomes

Plumose & Giant Plumose

(Metridium senile and Metridium giganteum)

The Giant Plumose is seen in both its white and orange colorations on the left while a Plumose is resting just below the water in a tide pool at Bugge Beach.

These are the two main types of anemones that cover the dock pilings at Knudson Cove Marina. They've been noted to be especially fond of pilings but can also be seen anchored to steep rocks in the lower tidal zone. They can be white, yellow, orange, or a rusty color. The Plumose anemone is seldom larger than 4 inches tall and has less than 100 tentacles, while the Giant Plumose can be up to 40 inches long and often has over 200 tentacles. Two cool facts are that they can migrate, and that clones can grow from tissues that are left behind when the animal moves.

Moon Glow Anemone *(Anthopleura artemisia)*

Also known as the burrowing anemone, the Moon Glow is an incredibly vibrant anemone that can be any color of the rainbow is easily identifiable by the white bands that wrap around the animals' tentacles. These bands give the anemone a radiant or "glowing" appearance. They can be up to 2 inches in diameter and are often found in tide pools or in sandy areas, and commonly have sand or bits of shell covering them. They become visible, though sparsely, at the mid-tide zone but are much more common in the

lower and sub-tidal zones. Can be observed as individual or in clusters.

Giant Green Anemone
(Anthopleura xanthogrammica)

This emerald green anemone gets its unique coloration due to microscopic green algae that live inside of the animal's tentacles. They grow to be 12 inches in diameter and can be 12 inches. They reside in rocky areas of the lower tidal zone down to 50 feet below sea level. While the Giant Green Anemone can reach full size at age 14-15 months, they can live up to 30 years in captivity. The anemone can be seen in the photo to the left.

Lower Tidal Zone - Sea Stars

Sea stars are commonly found attached to rocks that are within a few feet of the water level at low tide. While Southeast Alaska is home to a wide array of these mostly carnivorous creatures, two species of stars are far more common and visible to our Betton Island guides. One is the Leather Sea Star, seen in the photo to the left stalking its favorite meal, the Giant Green Anemone. This photo was taken while the tides were at ebbing (receding) at 3 feet, with the anemone being about 8 feet below the waterline.

Leather Star *(Dermasterias imbricate)*

Also known as the Leatherback or the Garlic Star, Leather Stars get their two common names because the star itself feels like wet leather and has a tendency to smell slightly like sulfur, or garlic. It ranges in color from grey and brown to orange and a rusty red, often in a mottled pattern. They reside in the lower tidal zones to depths of 500 feet below sea level and feed on various anemones and urchins.

Purple Star (*Pisaster ochraceus)*
Also known as the Common Star or the Pisaster Star, the star can be orange, yellow, white or brown (despite their name). Purple is by far the most

common color with orange being the second most common. They typically have 5 arms but can have anywhere from 4 to 7 limbs. They are easy to identify because of their network of white calcareous plates that line and stiffen the body. Purple stars can be found from the mid-tidal zone down to 300 feet below sea level. Their diet consists of a lot of shellfish or bivalves, such as mussels, barnacles, snails and chiton.

Sub-Tidal Zone Species

The sub-tidal zone is an incredibly diverse and active area just beyond what is affected by the tides. Kelps, algae and other plants create homes for a wide array of life including small schools of fish who seek protection from larger predators. Many other species of oceanic fish or mammals, like the halibut, feed in these shallower waters. Since we discuss the various types of mammals and fish that may reside or feed in the sub-tidal zone in another section, we'll keep it simple and highlight two common and important plants

Bull Kelp *(Nereocystis luetkeana)*

Also known as Bullwhip Kelp, this amazing plant anchors itself to the rocky ocean floor with a small but strong holdfast that connects to the main, singular stipe that can grow up to 118 feet on its own. At the end of the hollow stipe, or stalk, is a circular float that can be up to 7 inches in diameter. Elongated blades extend from the float for up to another 15 feet. Overall, this plant can grow to be over 130 feet in length. What even more amazing is that the entire thing is edible. The blades can be dried and consumed like any other type of kelp chip or crushed into salads. Dried seaweeds and kelps are high in iron, which is known to help remove radiation from the body, which could be especially useful after surviving chemotherapy for some individuals. The stipe can be pickled, cooked, or eaten raw. In addition to its edibility, Bull Kelp often grows in large thickets known as "kelp

forests" which provide habitats for various small fish, gastropods, and much, much more. When the plant is dislodged or detached from the holdfast, it floats to shore with incoming tides. Since the end of a stipe, float, and the start of the blades resemble a torso, head and hair, the kelp would be used to make dolls and other toys for children of all ages, across all time frames.

Small Perennial Kelp (*Macrocystis integrifolia)*

Also known, ironically, as the Giant Kelp) - With "macro" in the scientific name and "Giant" in its secondary common name, why this plant is known as the "small" perennial kelp is slightly confusing and beyond me. Compared to the Bull Kelp which can grow to be well over 130 feet in length, this kelp could be considered "small", maxing out at roughly 100 feet in length. It is a well branched, brown to olive-green plant that has numerous floats or air bladders per stipe with blades extending off of them. The Pacific Herring commonly lays its eggs on these blades and seek shelter within large clusters of the plant from other predators. This plant is also edible, as most brown and green "seaweeds" or plants are. Drying the blades is the most common way to prepare the plant, however some Asian markets tend to view egg-laden leaves to be a delicacy.

General Kelp Information

Bull kelp and ribbon kelp are the two most common kelps you will see. Both are edible, and the bull kelp is often made into pickles. Bull kelp can grow to be over 100 feet long in just 3-4 months. Its thin stipe is buoyed on the surface of the water by a float that is the size and shape of a light bulb. Bull kelp usually lives only one year, breaking loose in the storms of winter and ending up on beaches in long mats, where it provides a home for sand fleas.

Edibility - Kelp is a favorite food of spiny sea urchins and can be eaten by humans. The kelp is dried (90% of its weight is water) and the blades become brittle. After soaking in water, they can be used to wrap sushi, or as a substitute for cabbage in cabbage rolls. Different kelps vary in flavor, but all have the salt and iodine tang of the sea. It is definitely an acquired taste. This dish is also popular in sushi bars. Japanese love to eat raw kelp coated with herring eggs. Recently this has led to an extremely lucrative commercial fishery, almost entirely for export to Japan.

Traditional Uses - The Native people of this area traditionally depended on kelp. They would stretch and twist the stipes of bull kelp into strong fishing lines. The hollow bulbs and thicker ends of the stipes were dried and used as "bottles" to contain eulachon oil, a prized condiment.

Herring - Kelp beds also provide ideal surfaces for herring to deposit their eggs when they spawn, and kelp blades coated with a thick frosting of spawn have always been a popular food among west coast Native cultures.

Nutrition & Medicine - Kelp also has some nutritional and medicinal uses. Kelp tablets are a natural dietary supplement providing a broad range of vitamins and minerals. Kelp flakes can be used as a low-sodium salt substitute. Recently, French and Japanese scientists found that some compounds found in kelp are very potent anti-tumor agents used in cancer therapy. Kelp is also used to make ice cream cones and it is an ingredient in some lip balms as it inhibits cold sores.

Chapter 3

Flora

Learning Objectives

- ✓ Build field staff's depth of knowledge in content areas they will be delivering.
- ✓ Gain an understanding of the various flora of Revillagigedo Island & SE Alaska

Trees *(Sources: 1, 2, 3, 4, 5 & 20)*

Sitka Spruce (*Picea sitchensis*)

Some historical uses for the Sitka Spruce include canoes (cedar was preferred, but spruce was also used because of the size of the timber), canoe paddles, bentwood boxed, and in the construction of fish traps. More modernly, it was used by the Russians in shipbuilding/ship repair and made for great masts. It was used as a replacement to steel in the World War era due to it being very strong, yet very light, and also the wood not splintering apart when struck by bullets. Sitka Spruce is also used in some musical instruments like the interior of pianos and guitar necks. It is widely appreciated for being a very straight grained wood with few knots

Physical Description: Blue-green, sharp needles that encompass the entire twig

Age Range: 600-700 years old is a good upper average. 900+ year old trees have been recorded, though rare

Size: 6-8' diameter and 150-200' tall is common for older trees. They can grow larger, as the biggest Sitka Spruce was recorded at 14.9' in diameter and 248' tall.

Habitat Range: Central California coast to northern Alexander Archipelago and westward throughout the Kenai Peninsula.

Elevation Range: Up to 3000' in the southern Tongass; up to 1000' in the northern Tongass.

Western Redcedar (*Thuja plicata*)

"The tree of life"

Historical uses include "fire trees", totem poles, canoes, timber for clan houses, bent wood boxes, fire-drills etc. The strips of bark were woven into a wide array of goods including baskets, bowls, mats, hats, ceremonial headbands, clothes, blankets and much more. Weave the cedar with goose or duck feathers to create insulation for warmer clothing and blankets. Small roots could be woven into baby cradles and much more. Long, thin, young roots were woven into a strong rope or cord that would be used in fishing nets or to haul larger maritime catches (like whales) back to the village. New buds were harvested and brewed as a tea to cure coughs, colds and other respiratory ailments. Modern uses include shingling, siding, decking material, wood flooring, cabinets, furniture and so much more. Cedar, both the Alaskan Yellow-cedar and the Western redcedar, are choice woods for wood workers and consumers. Telephone poles, dock pilings, ships masts for Russian boats in the 1800's... all sorts of things.

Physical Description: Brownish-red, stripy bark that twists/rotates as it moves up the tree. Leaves are scale-like, rounded, and cling close to a flattened twig.

Age Range: While 800 years old is an accomplished age for a mature tree, Redcedars of 1460-1600 years old have been recorded, though very rare.

Size: Extreme examples include 160-180' tall and 16-18' in diameter. The redcedar on Betton Island is "above average" and quite extraordinary. The fallen cedar connected to the root ball on Betton appears to be larger than the standing redcedar a few stops prior. 7-10' diameters and 100-120' in height is a more average estimate of mature trees

Habitat Range: Rarely occurs in the north half of the Tongass but is common throughout the southern half of the Tongass. Spreads south through British Columbia, Washington, Oregon and can be found in Northern California near coastal areas.

Elevation Range: Grows to the tree-line in our area. (which is typically 1500-2500' in elevation)

Alaska Yellow-cedar

(*Cupressus nootkatensis*)

While not as common or large as the redcedar, Yellow-cedar is still used in much the same manner: canoes, totem poles, rope/twine, baskets, clothing and other woven materials, and more. Modern uses include decking lumber, shingling and siding material. The

red house on Creek Street with the water-wheel was originally an incredibly productive shingle mill. Cedar is also a "choice wood" for things like cabinets, hardwood floors, furniture and other products.

Physical Description of Leaves: Angulated twigs covered in pointed, scaly leaves.

Age Range: The longest living tree in the Tongass. 700-1200 years old is a good average for mature trees. Yellow-cedars of over 1800 and 1600 years old have been recorded in British Columbia (Sechelt Peninsula and Vancouver Island)

Size: One of the largest recorded Yellow-cedar species was roughly 200' tall and 13.6' in diameter. A more **common size for a mature, old tree is about 130' tall by 6.5' in diameter.**

Habitat Range: Olympic peninsula east into the Cascades, then north to the Chugach National Forest area.

Elevation Range: Can grow up to 1000-1200' in the southern end of the Tongass, but resides at lower, coastal elevations in the north.

Notes:

- Scientific name changed after DNA testing in 2010 proved the species was in the Cupressus family, not the Chamaecyparis family.

- The Yellow-cedar has a hyphenated common name with a capital "Y", while the redcedar has no hyphen, no space and no capital "R".

- The Alaskan Yellow-cedar has been dying off recently due to changing environmental conditions. In the winter, snow acts as an insulation blanket, so the more snow that lies on the ground, the bigger the blanket is for everything at or below ground level. Over the past several decades, the snowpack in the Tongass and the Ketchikan region has been decreasing and becoming more inconsistent, causing the snow blanket to be too thin to shelter the sensitive Yellow-cedar tree roots from the freezing and subfreezing temperatures of winter. These cold temperatures have a tendency to shock and injure the roots of the Yellow-cedar. Injured or weak roots aren't able to supply the tree with adequate nutrients come summer, and the tree slowly begins to die off. While other tree species such as spruce and hemlock are affected by parasitic fungi, plants, or (though rare) insects/bugs, the Yellow-cedar is the only tree species affected by the decline in snowfall. These trees tend to stay standing for multiple decades even after the tree has largely died and lost all leaves, showing how rot-resistant and strong of a wood the Yellow-cedar is. Hence the use of the timber for canoes or more modernly, residential shingling, siding and decking. Remember, "climate-change" and "global warming" are two different topics that can both become political and personal to guests very quickly. Do not use this as an opportunity to express political beliefs or opinions. While the causes of a changing environment and climate are still not concretely proven, climate change is a very real thing that we see daily in Southeast Alaska. Once upon a time, the lake was under hundreds of feet of ice. The rounded hills, secession of lakes without a connecting river and extreme topography of the land around the lake are the evidence to support this claim. Obviously, great change has occurred to the location over the years, and those changes are continuing.

Red Alder (*Alnus rubra*) –

Is historically known in the region as being the best wood to smoke salmon with. It is currently used commercially for various purposes, mostly related to flooring and furniture. It is recognized as the best hardwood tree to come from the Tongass. The red alder is a very important species to the landscape because it is a "pioneer species". Pioneer species are the first plant species that grow in an area after it has been disturbed in some way (roadsides, clear-cut, large scale blow downs, areas damaged by floods, fires, etc.). The Red Alder is especially important because it puts nitrogen back into nutrient poor soils that are often associated with disturbed sections of forest. The alder helps fertilize the soil through nitrogen-fixing bacteria that live on the roots of the tree. Fireweed, another plant that restores soil quality through nitrogen-fixation, and Red Elderberry are two common plants that associate with the Red Alder.

Physical Description: Simple, alternate, finely toothed, oval leaves. Conical crown if it has open access to sunlight (no surrounding canopy)
Age Range: Seldom older than 80-100 years
Size: 70-120' tall, 1-3' in diameter
Habitat Range: Bay Area, California north into the Chugach National Forest
Elevation Range: Can grow to at over 3000' in elevation throughout most of its habitat range yet grow barely beyond 1000' in the northern region of its habitat range. Here, it can grow up to the tree line (anywhere between 1500-2500')

Mountain Hemlock *(Tsuga Mertensiana)* -

Found in areas that favor colder, snowier winters and high elevations, this tree wasn't as abundantly available as the other species in this area. Mountain Hemlocks have been used recently as a gardening/landscaping tree in the United States.

Physical Description: Soft, rounded, flat needles growing in an alternating pattern encompassing the entire twig
Age Range: Trees up to 800 years have been recorded, though not often. Around 500 years is more common
Size: Slow growing, maxing out around 130' tall and 4.5' in diameter.
Habitat Range: Olympic Peninsula up to the Chugach, as well as the Rocky and Cascade mountain ranges
Elevation Range: Sub-alpine tree that grows to the tree line in a lot of areas throughout its habitat range

Western Hemlock (*Tsuga heterophylla*)

The Western Hemlock is the most common occurring tree in the Tongass, composing roughly two thirds of the forest. While cedars and spruces crowd the upper canopy, the Western Hemlock is an understory tree that can survive for centuries before joining the other conifers at the top. Hemlock was historically used for canoe paddles due to the abundance of the timber. More recently, it has been harvested to use as general construction lumber like 2x4's. The Ward Cove Pulp Mill specialized in turning the Western Hemlock into pulp, which is used to create various paper products. The sap is also very sweet, more so than any other tree in the forest, causing it to be a favorite for woodpeckers. Red Breasted Sap Suckers, the most common type of woodpecker in the area, drills holes into the Western Hemlock, which will then run its sweet sap to heal the wound caused by the bird. As that sap runs, it attracts and collects tiny insects for multiple days. Eventually, the Sap Sucker will return to the tree and, as the name implies, sucks the sap that is now full of nutrient-rich insects and bugs.

Physical Description: Soft, rounded, flat needles growing in an alternate, flat pattern along the twig. The top of the tree is easy to identify because of the "drooping leader". The leader branch (tallest branch of the tree) droops downward like a human hanging their head.

Age Range: Can live to be 1100-1200 years old, though that's rare. Most mature trees reach about half that age.

Size: Commonly, mature trees are about 100-150' tall and 2-4' in diameter. Some of the largest Western Hemlock individuals have been measured at 230' tall and 6.5' in diameter as well as 180' tall and 8.5' in diameter

Habitat Range: From the Chugach down into the California Rockies

Elevation Range: Up to about 7000'

Shrubs & Berries *(Sources: 1-4, 20)*

Blueberries

Blueberries are very common in the Ketchikan region and numerous varieties exist. Two of the most frequent subspecies

are the Alaskan Blueberry (Vaccinium alaskaense) and the Oval-leaved Blueberry (Vaccinium ovalifolium).

Description: Both have oval to egg shaped, alternating green leaves. Alaskan Blueberry leaves tend to be the larger of the two and often has darker flowers, while the Oval-leaved Blueberry generally has a redder stem.

Edibility: They are both edible, being commonly eaten by aboriginal cultures throughout the Pacific Northwest. Wild blueberries tend to be tarter than their grocery store counterparts, but the Alaskan Blueberry seems to be the more palatable of the two subspecies.

Red Huckleberry (*Vaccinum parvifolium*)

Description: Bright green, strongly angulated, smooth to slightly hairy stems. Alternating, ovular, green leaves. Mostly deciduous, some evergreen leaves stay.

Edibility: Edible, though sour. Can be consumed fresh, dried, mashed or as a delicious jam. Tend to be "mushy" or "gooey" when baked into items like muffins, scones, breads, etc.

Other uses: Red Huckleberries have historically been used in streams as fish bait

Dwarf Dogwood/Bunchberry

(Cornus Canadensis)

Description: 4-6 leaves and a common ground growth plant with white 4 pedaled flowers that bloom in the summer. "Drupes" or clusters of red berries will develop at the center of the flower after the pedals fall off.

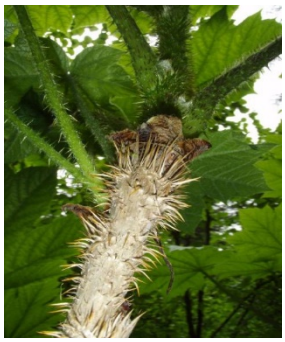
Edibility: Edible. Dwarf Dogwood berries are often sweet, and easy to find. They are pulpy have a large seed in the center but are commonly mixed with other berries and consumed raw or baked into goods. Historically, they were combined with other berries and mashed into cakes.

Devil's Club *(Oplopanax horridus)*

Description: Large, maple-like leaf. The veins on the underside of the leaf are covered in thorns. The stalk and stem of the plant are covered in thorns. The plant, like the name implies, looks very menacing. White flowers grow in conical clusters above the leaves. Red fruits develop at the flower sites.

Edibility: Bears seem to enjoy Devil's Club berries, however they are inedible to humans

Medical Qualities:



Numerous. Pieces of Devil's club were hung in doorways to ward off evil entities. A face paint created from the charcoal of the plant was used to protect dancers from evil spirits during ceremonial and religious performances. The roots were brewed into a tea or made into a salve to treat arthritis, ulcers, diabetes, digestive tract ailments, coughs, colds, inflammation and more. It was steeped in water for bath that would help alleviate pain and rheumatism.

Red Elderberry *(Sambucus racemosa)*

Description: Pinnate compound leaves of 5-7. Numerous white flowers form in conical clusters. Green berries develop from these flowers, turning orange, then

bright red when ripe in July-September. Often found in new-growth sections of forest with plants like Fireweed and Red Alder.

Edibility: The leaves, stems, seeds and roots contain cyanogenic glyocides that should not be consumed and the fruits cause nausea when eaten raw. Despite this, Red Elderberries were/are commonly consumed. Native cultures collected then cooked the fruits for several hours, then dried into fruit cakes and commonly stored for winter. Many people make wines and syrups out of the berries in the summer and fall. The flowers and fruits can be steeped in water as a tea or part of an herbal blend.

Medicinal uses: the flowers and fruits have been used by many Pacific Northwest cultures as a cure for rheumatism due to their anti-inflammatory properties ("elder"berry)

Other uses: The stems and branches were used for flutes, funnels and bows.

Salmonberry *(Rubus spectabilis)*


Description: Clusters of three leaves. When the top leaf is removed, the two remaining leaves look like the two wings of a butterfly, with the stem being the body. Pink to red flowers produce yellow berries. Salmonberry is generally one of the first flowering and fruiting shrubs in the forest.

Edibility: The berries are edible and taste similar to a raspberry at best. Some can be a little tart. Young sprouts were harvested as a vegetable in the spring, peeled, and then eaten raw. The berries were also mixed with salmon roe and preserved in bentwood boxes for consumption in the winter.

Notes: The name Salmonberry seems to be based on association. The berry was often consumed with salmon, combined with roe and stored for winter, and is an overall abundant berry so fishermen would often take baskets of salmonberries with them on their outings to eat. When the angler would catch a small fish, they would put a berry into the fish's mouth. They would tell it to get big and strong so it can feed people when it is caught again and release it back into the water.

Salal *(Gaultheria shallon)*


Edibility: The fruits are highly edible. Prized and plentiful, they were consumed raw, dried and mashed into cakes, traded, and more modernly, jammed. Salal is considered to be a very important food to many Northwest cultures.

Medical Qualities: Chewing on the leaves can help suppress hunger

Flowering Plants *(Sources: 1-4, 20)*

Skunk Cabbage *(Lysichiton americanum)*

One of the first plants to bloom each and every spring, Skunk Cabbage is characterized by large, ovular leaves that can be up to 3' tall and 18" wide. It produces numerous green-yellow flowers that cover a spike that is surrounded by a bright yellow spathe. As the name implies, it does have a skunky odor, especially when flowering.

Shooting Stars *(Dodecatheon family)*

There are many subspecies of shooting star flowers in the Tongass National Forest, yet they all look about the same. 4-5 petals

sweep backwards from the stamen and sepals to create the image of a purple-colored shooting star flying towards the earth. One of the prettiest flowers in the forest, they are most often purple in color but can be magenta, pink, and white as well. Deer Cabbage and asters are common neighboring plants. (Found at Lake Harriet Hunt, most hiking trails above 500')

Yellow Pond Lily *(Nuphar polysepalum)*

One of the only fresh-water flowers in the region, the yellow pond lily produces a brilliant yellow flower in the shallow sections of Lake Harriet Hunt in the first half of the summer. The roots of the plant are believed to have medicinal qualities and the seeds stored in the center of the flower were consumed by some cultures throughout the Northwest. Horsetail is often grows in the same areas as the pond lily. (Found in Harriet Hunt, most freshwater lakes on the island)

Sundew *(Drosea rotendifolia)*

A small plant that grows in small clusters along patches of water that occupy muskeg environments, the central stalk of the plant is crowned by a circular leaf that is covered in numerous red hair-like glands. One of the only carnivorous plants in the Tongass National Forest, Sundew attracts and digests insects to make up for the nutrient deficiencies in the soil. Insects are enticed by the dew-like droplets of acidic fluid at the end of the glands. These glands secrete a digestive enzyme that is later absorbed by the plant along with the nutrients (mainly nitrogen and phosphorus) from the insect. The carcass then floats away in the breeze. (Found near the Harriet Hunt parking lot, backside of Blueberry Island)

False Azalea *(Menziesia ferruginea)*

Also known as Fool's Huckleberry, and confused as a subspecies of Huckleberry, False Azalea produces small, green, oval shaped leaves that grow in a whorled pattern of 5 leaves. This is especially true in the flowering phase, when both plants display numerous pink, bell shaped flowers. False Azalea will produce a fruit however it is an edible, dry capsule. (Found along the Betton Island trail, the Harriet Hunt trail, and all throughout Revilla)

False Lily of the Valley

(Maianthemum dilatatum)

Found in all coastal areas of the northern Pacific Ocean, False Lily of the Valley is a ground cover plant that produces clusters of small, white, star shaped flowers that rise above heart shaped leaves. The flowers turn into red berries when fully ripened and were eaten by some tribes in the southern Pacific Northwest. The berries are not nearly as sought as the leaves of the plant are in terms of edibility. Many cultures would eat the leaves after cooking them to reduce the bitterness of the flavor, but it can be consumed raw as well. A great modern use for the plant is to add some of the leaves to a mixture of other salad green to add some zest. (*Also known as Snake Berry and Deer Heart)*

Fireweed *(Chamaenerion angustifolium)*

An amazing plant commonly found along roadsides and other disturbed areas of land, Fireweed is another plant that helps re-establish forest soils through the process of nitrogen fixation like the Red Alder tree. The pioneer species has a spiraling arrangement of narrow leaves that spread from a single,

central stalk. Near the top of the plant, magenta colored shoots begin to develop early in the summer. They begin to bloom into 4 petaled flowers with 4 sepals separating the pedals. Seed capsules will begin to separate from the flower in the late summer, exposing many small brown seeds in the process. Each seed has silky white hairs that aids in wind dispersal. A single plant can produce up to 80,000 seeds per season, so Fireweed does tend to take over disturbed areas and become the dominant plant. Despite this, the plant reaches “peak colonization” after about 5 years and begins to be overtaken by larger tree and bush species.

Firewood was formerly listed in the Epilobium before being reclassified due to the arrangement of the leaves - spiraling, not whorled.

Fireweed is common throughout the northern hemisphere and can be found in the Pacific Northwest, the Rocky Mountains, and is even considered to be a common weed in parts of England. Fireweed also has many, many uses after cultivation:

- Leaves - rich in vitamin C. Often used in teas
- Flowers - Young flowers are very fragrant and were used as a scent/flavoring in lotions, oils, candles, soaps, chap-stick, ice cream, tea and more (similar in applications to lavender and mint). After the shoots bloom, the bright colored flowers produce a lot of pollen, which in turn attracts bees to the plant, resulting in some delicious and sweet flavored honey.
- Seed fluff - often mixed with wool or feathers to create a stuffing and/or insulation for things like pillows, blankets, clothing, and more.
- Stem Fibers - woven into cord. Fishnets were a great application for the light, flexible and strong cord.

Chapter 4

Fauna

Learning Objectives

- ✓ Build field staff's depth of knowledge in content areas they will be delivering
- ✓ Gain an understanding of the various fauna of Ketchikan and SE Alaska

Marine Wildlife *(Sources: 1, 17 & 19)*

Orca Whale *(Orcinus orca)*

The Orca Whale has a predominantly black body except for a white belly and a few white patches behind the mammal's eyes.

Males are generally larger than females, averaging about 13000 pounds. and 27 feet in length. Females are slightly shorter at 23 feet in average length and generally weigh half as much as males. Males also have taller dorsal fins, reaching up to 6 feet high while female dorsal fins are generally smaller than 3 feet. Despite being much smaller overall, females can live up to 80 years in the wild which is about 30 years longer than the opposing gender. Based upon the health of the pod Orcas have a long gestation period of 16-18 months, and most births occur between fall and spring. Females become sexually active around 11-18 years old and have offspring every 3-8 years.

They can live, travel and hunt in pods of up to 40 other whales and feed cooperatively. They can be both brutal and cunning, as they have been known to attack larger mammals like the humpback whale from multiple angles in addition to temporarily beaching themselves along the shoreline to grab a seal or sea lion resting upon a rookery. The orca habitat is believed to be world-wide, yet they

generally seem to favor colder waters over warm waters.

Humpback Whale *(Megaptera novaeagliae)*

The Humpback Whale is another relatively common mammal to see in the oceans. Known for their spectacular displays of "bubble feeding", this massive mammal can eat up to 1.5 tons of krill and fish in a single summer day. They can weigh over 35 tons and reach lengths of over 50 feet. They have a 40–50-year lifespan and migrate great distances each season, going from fertile feeding grounds off the Alaskan coast in the summertime to warmer waters near California and Hawai'i in the winter time (not all whales migrate, as Humpbacks can be seen year-round off the Alaskan coast). The Humpback will mate in the wintertime, with groups of males encircling a female and take turns competing for the female by breaching, tail slapping/flapping and potentially even singing. Humpback songs are often long and complex, lasting 10-20 minutes and can be repeated for hours. The songs vary by population and gradually change over time.

Humpbacks sometimes form small groups or partnerships during their migrations or while hunting in the summers, but they generally travel or hunt individually. Bubble feeding is their most common type of feeding method. The Humpback will swim under a large school of fish in a circular motion, blow bubbles along the way. As the bubbles rise, they trap and enclose the fish allowing the whale to swim straight to the surface from below the pod with an open mouth, catching hundreds, if not thousands, of fish in a single mouthful. Unlike the Orca whale, the Humpback has baleen instead of teeth, allowing the mammal to strain the water out of its mouth while trapping the fish inside.

Seals & Sea Lions

There are a few different types of seals and sea lions that are found in Southeast Alaska, but the two most common are the Harbor Seal and the Steller Sea Lion.

Harbor Seal *(Phoca citulina)*

Also known as the Common Seal. The color of the Harbor Seal varies, with some individuals being an off-white color while others can be a dark grey or brown. Most Harbor Seals have multiple colors along their body in addition to several spots of varying sizes and color. Mature seals are 5-6 feet in length, weigh 180-300 pounds, and can live for up to 35 years. Males are generally larger than females.

They are very opportunistic feeders, mainly consuming various types of fish like Herring or Salmon. Known as being agile and graceful swimmers, they can dive up to 1600 feet deep for a duration of 20 minutes and spend up to 80% of their time in the water during winter. In the summer months, they will spend less time in the water and more time on land as seals give birth to pups in the early summer (May – July). Females have one pup per year and the pups can swim shortly after being born.

Steller Sea Lion *(Eumetopias jubatus)*

Also known as the Northern Sea Lion) - The Steller Sea Lion varies greatly in size between males and females. Females weigh close to 600 pounds on average while males can weigh over 1200 pounds. Females tend to live up to 30 years in the wild, which is about a decade more than the average male. They reside in the northern region Pacific Ocean and can swim up to 75 miles non-stop before resting on rocks or rookeries. Pups are born in June and will be reared by their mother for up to 3 years.

Steller Sea Lions are listed as a "near threatened" species by the International Union for Conservancy of Nature (IUCN). Historically, they were hunted for both their meat and their skin. Sea Lion skins would be made into clothing, or stretched and wrapped around kayaks and canoes to allow the vessel to move more easily in the water. Despite being an important animal to many native cultures, populations of the mammal didn't begin to noticeably or severely decline until the 1970's. With the rise of commercial fishing, many of the fish species Sea Lions historically have eaten are less abundant than before, causing the animal to shift its diet away from fatty fish like herring and salmon to leaner fish like sturgeon. The leaner diet doesn't allow for the mammal to accumulate enough fat to last the winter, causing a decline in the population. This is known as the "junk food theory".

Fish *(Sources 1, 9, 10)*

The waterways and fisheries surrounding Ketchikan and Revillagigedo Island are some of the most productive in the world. While there are many types of land and marine mammals in addition to numerous types of fish species, the salmon is considered to be the keystone species of the Tongass National Forest. Humans, Bears, Eagles, Sea Lions, Whales, scavengers, and various other species consume the salmon both out in the open ocean and annually in the freshwater rivers, creeks, and streams that scatter the Pacific Northwest.

Ketchikan and southeastern Alaska is one of the only watersheds in the world to have all five types of saltwater salmon reside locally. While each of the five types of salmon are anadromous, meaning they migrate from saltwater to freshwater to spawn, they have different and distinct spawning cycle. Despite this, all Salmon species follow the same general phases: When an adult fish is ready to spawn, they swim from the salty ocean into the freshwater stream they were born in. They stop eating and swim against the current until they find an ideal location to dig a Redd. A redd is a small hole or depression in the sand or bedrock of a stream where the female will lay the eggs. Once the eggs hatch, they are in their Alevin stage. They remain under the soil and gravel and receive nutrients from the remains of the eggs they hatched from. Once they emerge from the bedrock, they are called Fry. The Fry develop quickly and begin to get their distinct patterns and colorations when they enter the Parr stage. Parr can spend 1-3 years in freshwater streams or lakes (depending on the specific subspecies) before turning into a smolt and heading out to sea. When a fish is ready to begin the migration into salt water, it becomes a smolt. Smolts leave their freshwater homes weighing only ounces and grow rapidly once they reach the sea. Each subspecies of salmon is outlined below:

Chum *(Oncorhynchus keta)*

Also known as the Dog or Calico Salmon. The top photos is a Chum spawning male and the bottom photo is a Chum in its ocean form.

The Chum is the most widely distributed subspecies of salmon. An average adult Chum will weigh 10-13 pounds and is about 24-28" long (size varies, as some have weighed over 30 pounds). In the ocean, the Chum has a blue-green, speckled back as well as a light colored stomach. Their tail is highly forked

with no speckling of spotting on it. Chum change color upon entering freshwater to spawn. They develop a kype (a hooked snout) as well as a green, yellow, and red color scheme. Vertical striping is visible on the side of the fish.

The Chum spawning season typically lasts from July until November, making it one of the longest and latest spawn cycles for salmon. Fish stop eating upon entering freshwater creeks and swim upstream until they find an ideal spot for their redd. Once the female digs a redd, it will lay her eggs, wait for a male to fertilize them, cover the redd, and guard it until the fish is too weak to hold its position in the stream. Embryos hatch after 3-4 months. Alevins emerge after an additional 2-3 months in the gravel and head to sea shortly, thereafter, forgoing the year or two that some salmon species spend in lakes or streams. Their average life span is 3-4 years.

Sockeye *(Oncorhynchus nerka)*

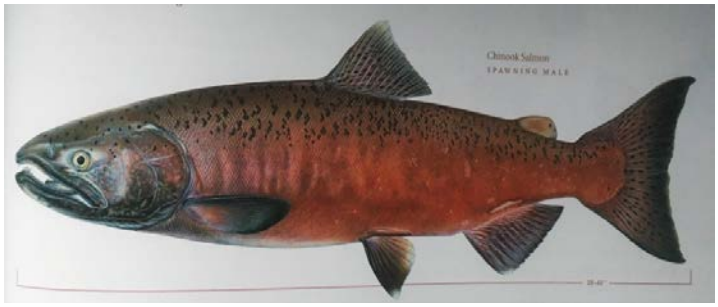
Also known as the Red salmon. The Kokanee salmon is the landlocked relative of the Sockeye in the continental United States/Canada.

Averaging about 6 pounds in weight and 24 inches long, the Sockeye is one of the most recognizable species of salmon. In the oceans, Sockeye have a dark green back with no spotting or speckling and turn a magnificent red color throughout most of their body when they enter rivers to spawn. The head, end of the tail, tip of the dorsal fin and sometimes the stomach of the fish are an olive-green color.

The Sockeye spawn usually starts in July and lasts until September. Females will lay 2000-5000 eggs in redds that will hatch over the winter. The alevin emerges from the gravel in spring and spend anywhere from 1 to 4 years in freshwater lakes or streams as fry before beginning their migration to the ocean. Despite the duration of their stay in freshwater, sockeye smolts weigh only ounces when they enter the oceans and grow rapidly throughout the next 1-3 years of their life. In total, a sockeye can be up to 7 years old when it spawns.

The largest and longest Sockeye recorded weighed 16 pounds and was 31 inches in length. They are notoriously hard to catch with fishing lures because they feed on plankton rather than other fish.

King *(Oncorhynchus tshawytscha)*



Also known as the Chinook or Black mouth salmon.

Another long living subspecies, the King salmon can live to be 3 to 7 years old when it spawns. The local Charr King Salmon Derby is the official start to salmon season for the summer and typically occurs during the last two weekends in May, as well as the first weekend of June. Their spawning season lasts until September, however fishing seasons for the King salmon are usually restricted and shortened in order to protect and preserve the fish. It is typically

the most sought-after fish on sport fishing excursions, along with the halibut, and can weigh as much as 126 pounds. On average, they typically weigh about 30 pounds. The Charr Derby overall winner usually sits around 42-45 pounds each year, with a comfortable couple pound lead on the second and third place fish.

King Salmon have a yellowish-green back with large spots on both the back and tail when they are in the ocean. They have black coloration on the inside of their mouth, giving the fish the nickname of "black mouth" (in addition to Chinook). When they enter the rivers and start to swim to their spawning grounds, they will develop a yellow and red hue on the sides and belly of the fish. Females will disperse anywhere from 3000-14000 total eggs in multiple redds before becoming too weak to maintain position in the stream. Like the rest of the salmon species, eggs will hatch after 3-4 months and alevins will emerge after an additional 2-3 months in the bedrock. King salmon will rear in freshwater lakes or streams for a year before migrating to sea as smolts. They spend anywhere from 1 to 5 years in the ocean before swimming upstream to spawn.

Silver *(Oncorhynchus kisutch)*

Also known as the Coho

Coho and Chum salmon are very similar in terms of size: the Coho or Silver salmon averages 8 to 12 pounds in weight and is 24-31 inches long. The largest Coho caught and recorded weighed 31 pounds. One amazing fact worth mentioning is that the silver salmon can "leap" up to 6 feet in the air. Obviously, that can be a very useful skill as the salmon tries to navigate potentially rocky and shallow sections of streams on their way to their spawning grounds.

Silver salmon spawn from July until November and prefer to enter river and creeks during times of runoff. Females lay between 2400 and 4500 eggs in redds before the male comes and fertilizes them with his milt (sperm). Embryos will hatch after 90-120 days. An additional alevin period of up to 3 months occurs. Silver salmon will spend 1 to 3 years in the creek or stream it was born in before migrating to a freshwater lake where it can spend up to 5 years before heading to the sea as a small smolt. Some Coho only spend 6 months at sea before returning back to the freshwater spawning grounds, but two years in the oceans is more common.

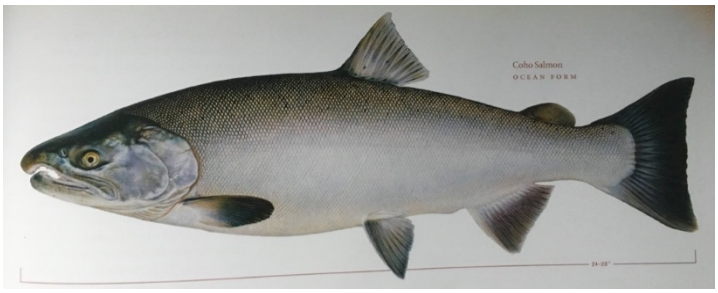
Silver salmon have large, dark spots scattered throughout the steely-green section of their upper back. Much like a King salmon, the Silver salmon have a swath of yellow then red coloration develop under the existing green of their backs when they start to spawn. The two are easy to tell apart however, because the King salmon has large, dark spots on its back *and* tail while the Silver salmon only has spots on its back.

Pink *(Oncorhynchus gorbuscha)*

Also known as the Humpy or Humpback

Ironically enough, the pink salmon is the least colorful of the salmon species. It has a steely-blue hue to the top of its back, along with large, black spots that continue through the tail. The average

size of a Pink salmon is about 5-8 pounds and roughly 18-24" in length.

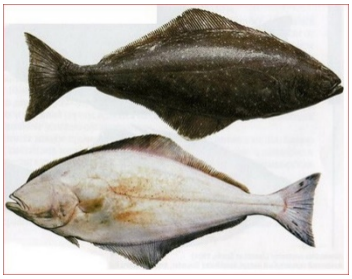


The Pink salmon has the shortest lifespan on average of the salmon species. Adults will begin to their spawn in June and will lay/fertilize up to 2000 eggs before dying off. Once Alevins emerge from the gravel bedrock of the stream they were hatched in, they quickly smolt and head to the sea where they will live for roughly 18 months before beginning their migration back into freshwater. When a Pink salmon enters freshwater, their appearance and shape change as the coloration on their back depends into a rich, vibrant blue. They develop a large "hump" between their head and dorsal fin (hence the nickname "Humpy") in addition to a hooked snout (kype).

Pacific Herring *(Clupea pallasii)*

One of the most important fish to the ecosystem, the Pacific Herring is a small, schooling fish that is silver in color. They are the main source of prey for almost every fish or mammal in the ocean. Salmon, whales, seals, and sea lions consume large amounts of herring and are used by humans as a bait fish for salmon and various bottom feeders such as halibut and crab. Herring spends their days in deeper sections of water and feed in shallow bays and coves at night. Herring fertilizes externally, with eggs attaching to underwater vegetation and rocks. The Juvenile fish stay in separate schools in sheltered bays and coves until they are 2-3 years old before migrating out to sea to join other schools of mature herring.

Pacific Halibut *(Hippoglossus stenolepis)*



Halibut have been recorded at over 8 feet long and 500 pounds but are typically considered "too fatty" for palatable human consumption when weighing over 120 pounds. They are born as upright individuals with eyes on opposite sides of their head (much like any fish) but begin to settle along the ocean floor by the age of 6 months. As they settle, one eye begins to migrate to the opposite side of the head. (They are opportunistic omnivores who are believed to have settled on the bottom of the ocean to easily watch potential prey swim above. Settling along the bottom also allows the fish to efficiently search the ocean floor for crabs and various shellfish.) The fish also loses all coloration on the side of its body that is closest to the ocean floor. Halibut prefer water temperatures of 35-45 degree Fahrenheit and generally live less than 1000 feet deep. Mature Halibut will spawn in deeper waters, and feed in shallow waters. They spawn from November until March and can lay up to several millions of eggs depending on the size of the fish. The eggs are fertilized externally, hatch after 15 days, and can potentially drift hundreds of miles in the ocean's currents from where they were fertilized. They occupy most of the North Pacific Ocean, being found off the shores of California and Japan and as far north as the Bering Sea.

Mammals *(Sources: 1, 17, 18)*

Revillagigedo is a modest sized island, roughly 35 miles wide and 50 miles long. It is the 12th largest island in the United States yet is not large enough to support populations of Moose, Brown Bear, Elk, Mountain Lions, Bison, and other large mammals. In contrast to the incredible biodiversity and bio density of the oceanic and plant worlds, Revilla

simply doesn't have as wide of a variety of wildlife in terms of mammals.

Dall Black Bear

(Ursus americanus pugnax)

The black bear is the smallest of the bear species, and the specific subspecies of black bear in the Tongass, the Dall Black Bear, is one of the smallest. Standing 29" tall at the shoulder on average, these bears are roughly 5' from nose to tail and weigh up to 350 pounds. They, like the Bald Eagle, reside in all American states except for Hawai'i. Bears will become sexually active at age 3-6 years old and will generally raise their cubs for roughly a year, allowing females to have a new litter every other year. In extreme or marginal environments, mothers will foster their cubs for an additional year before having a new litter in the 3rd year. Bears will mate in June and July and the cubs will be born after a 7 month gestation period. Born during hibernation, the cubs will nurse on the mother's milk before emerging from their den in spring.

Upon waking from hibernation, bears will eat skunk cabbage, green sprouts and shoots, as well as roots. As the summer progresses, the bears will begin to eat berries when they bloom and salmon when they begin to spawn and fill the creeks.

Sitka Black-tailed Deer

(Odocoileus hemionus sitkensis)

Due to the geographic isolation of the area and the harsh environment, this subspecies of the mule deer is often smaller than its relatives. Males are about

120 pounds on average while females are closer to 80 pounds and can live for 10-15 years. Females will produce fawns annually starting at age 2. Mating occurs in November and fawns are born in June. Sitka Black-tailed deer fawns are incredibly cute and furry when born, weighing in at 6-8 pounds and standing no taller than a large house cat. Deer and fawn are common to see along Revilla Road on the way out to Lake Harriet Hunt, especially in the mornings.

Alexander Archipelago Wolf

(Canis lupus ligoni)

A rare yet important species to the ecosystem, the Alexander Archipelago wolf is thought to be a relative of the Great Plains Wolf (Canis lupus nubilus) and arrived in Alaska after following the migrations of deer (eventually becoming the Sitka Black-tailed Deer) north. They are 30 to 50 pounds in weight and have an average height of 2' tall. From nose to tail, they are roughly 3.5' long.

As a keystone species of the local environment, wolves are the ultimate predator and help keep populations of deer and even black bear at healthy capacities. The Alexander Archipelago wolf is currently being studied to determine its status as an endangered or threatened species, as a 1994

population survey estimated that roughly 900 wolves lived in all of Southeast Alaska.

Mountain Goat *(Oreamnos americanus)*

Mountain Goats can live to be about 18 years old, but a 12 year life span is closer to the average. Males can weigh around 300 pounds while females are usually just shy of 200 pounds. They are excellent climbers and live along the ridgelines and mountain tops of the island. While hiking Dude Mountain, The Minerva/Perseverance trail, the traverse, or any other area of elevation, be on the lookout for these goats. They breed from late October to early December and offspring are born around May and rarely have twins.

Birds *(Sources: 8, 9, 16)*

Steller's Jay *(Cyanocitta stelleri stelleri)*

About 8-12" tall, this beautiful bird is a relative of Ravens and Crows and is also very intelligent. It features a black body with a blue, crested head. They are opportunistic carnivores in the wild, but they will eat almost anything the chef sets on the table at Cook Camp (again, related to scavengers like the Raven). Steller's Jays are often in small groups of 3-4 at the lake but are commonly spotted in larger groups elsewhere. They coordinate strategic attacks and assaults from multiple fronts upon the helpless chef, who can only cover the food in defense.

The Steller Jay, like its relatives, is a very common bird throughout much of the hemisphere. As such, multiple subspecies have formed within the "Steller's Jay" family. Cyanocitta stelleri carlottae is the subspecies common to the Haida Gwaii area, and C. stelleri macrolopha is common in the southern Rockies. Here, we have C. stelleri stelleri.

Raven *(Corvus corax)*

Averaging 24" from head to tail, this all-black bird is one of the most common and well known birds of the Pacific Northwest, as with many other regions of the world. The raven is a very playful and intelligent bird that has been observed sliding down snowfields, using their bodies as a sled. They have

been known to carry and drop sticks in the air for another bird to catch and do the same back to them in a game of catch that any child or dog would be envious of. Ravens have been known to recognize specific individuals, both human and raven, and are known to playfully interact with other animals like bears, wolves, and seals. They are opportunistic omnivores, meaning that they will play the scavenger role if there is an easy target like a dead salmon stuck on some rocks or French fries in the Plaza parking lot.

Ravens have a 20–25-year life span, and mate for life. They court in January and nest in March. The

female will stay in the nest and be fed by the male while incubating the eggs. Three to seven eggs will hatch after three weeks and the chicks will be helpless, featherless, and blind (altricial). The chicks develop quickly and are flying after about 4 weeks (usually sometime in June).

Ravens are an important bird to many native cultures throughout the Pacific Northwest. Known as the trickster in many myths, the raven is responsible for some awful things, yet is also responsible for some very positive things. Ignoring the negatives and focusing only on the positives, the Raven is credited with stealing the sun, moon, and stars one at a time from a chiefs' bentwood box in many variations of the myth regarding the creation of light on earth. The Raven is also one of the two main clans in the Tlingit culture. Following a matrilineal system, if a person was born from a Raven clan mother, they would be considered a Raven and have to marry into the opposite clan (Eagle clan).

Seagulls *(Laridae family. Many types)*

While there are many different types of seagulls in the area, the family is notorious for being intelligent and complex birds. They stomp on the ground to stimulate rainfall which brings worms to the surface of the earth and have been known to drop shelled creatures onto rocks to break them and eat what's inside. They mate for life, and unlike the ravens, both the male and the female will take turns incubating the eggs. Seagulls have complex verbal and nonverbal communications and are one of the few birds to be able to drink salt water. A special gland located above their eye flushes the salt from their system through an opening near the base of the beak.

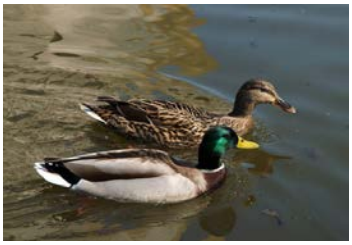
Bald Eagle *(Haliaeetus leucocephalus)*

Bald Eagles are the national bird of the United States of America and can weigh between 6.5 and 14 lbs at maturity. They have wing spans ranging from 70 to 90 inches (5'10" to 7'6") and excellent eyesight. Eagles in the Ketchikan area will perch on large, tall trees along the shoreline and watch for salmon swimming below. They will swoop down and catch a fish with their strong talons and fly back into the surrounding canopy to eat the fish. Snagging their fish from the water is not always the best fishing method, as captain Paul likes to point out on tours; "sometimes their eyes are bigger than their stomach and they have to swim their catch back to shore".

Bald Eagles mate for life and not only reuse their nest, but add onto it each year. The size of the nest near a mating pair is a good way to guess the age of the birds, as younger birds will inevitably have smaller nests. Eagles will mate in April and May by circling each other mid-air, locking talons, and free falling to earth in a spiraling path. The two birds let go moments before reaching the earth/sea below and will fly away to reproduce. Incubation lasts roughly 35 days and 2 or 3 eggs total are laid a few days apart from each other. Typically, only the strongest will survive. "Weak" individuals are either starved or thrown from the nest.

Juvenile Bald Eagles will begin flying roughly 75 days after hatching and generally become independent creatures shortly thereafter, allowing the parents to reproduce again next spring. The Juvenile phase will last for 3-5 years, at which point the eagle will lose the multi-toned brown, fluffy plumage and gain its symbolic white head and tail, separated by a brown body. They can live to be about 30 years old.

Ducks



There are many different types of ducks that are commonly found at Lake Harriet Hunt, Knudson Cove Marina, and all throughout the Ketchikan Gateway Borough. Pictured below are a few examples of the various duck species in the area. Pictured from left to right with the male being the more colorful bird are the Mallard (Anas platyrhynchos); Harlequin (Histrionicus histrionicus); and Bufflehead (Bucephala albeola)

Loons

Loons are diving birds who feed on fish and are more commonly found at Lake Harriet Hunt than Knudson Cove Marina. They have an eerie call that will become recognizable very quickly to guides who find themselves at the lake in the morning. Below are the Pacific Loon (Gavia pacifica, left) and the Common Loon (Gavia immer, right)

Red-breasted Sapsucker
Rufous Hummingbird

(Sphyrapicus ruber and Selasphorus rufus)

The Red-breasted Sapsucker is the most common woodpecker seen in the forest here. It has a red head and breast region, a black back and wings, and a mottled grey and black stomach. Females have some white spotting or coloration on their back and wings and juveniles will have brown heads. They nest in cavities of various trees and lay 4-7 eggs per year. Sapsuckers will fly to a tree, typically a western hemlock because of the particularly sweet sap, drill into the trunk, and drink the sap just below the bark. The Rufous Hummingbird is commonly found near the Red-breasted Sapsucker, as they often feed from the same holes as the woodpecker

has already carved. A migratory bird that spends winters in the south, the Rufous Hummingbird is an opportunistic feeder consuming sap and nectar from various flowering plants. Males are typically a bright orange color, while females tend to have green backs, a mottled white and grey neck/stomach area, and orange swaths of color under the wings and on their side.

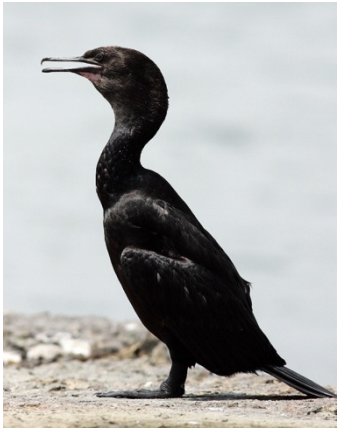
Songbirds

With so many different families and groups of birds in the Tongass National Forest, this is the largest and broadest category of birds encompassing various species of Thrush, Warblers, Buntings, Swallows, Sparrows, Chickadee, Juncos, Wrens, and

so much more. Below are a few pictures of birds within this category that are commonly seen in the locations ATA operates out of. From left to right is the Barn Swallow (Hirundo rustica), Swainson's Thrush (Catharus ustulatus) and the American Robin (Turdus migratorius).

Marina Birds

Found along the saltwater coastline more than near bodies of fresh water, the Belted Kingfisher (Megaceryle alcyon) and the Pelagic Cormorant (Phalacrocorax pelagicus) are commonly seen while



taxiing out of Knudson Cove Marina. They both target small fish like the Pacific Herring or salmon smolts just reaching the sea. The Belted Kingfisher (bottom left) can be up to 13 inches tall and the Pelagic Cormorant (bottom right) can be up to 26 inches tall

Great Blue Heron *(Ardea herodias)*

The Great Blue Heron is a large bird that can stand up to 4 feet tall and have a wingspan of up to 6 feet. They tend to nest in colonies in the upper canopies of old growth forests hunt for fish by either perching on a branch above the water, or by standing on an object just above the water like an exposed rock in a rolling creek.

Section

VI

How to Make a Tour

Chapter 1

How to Make a Tour

Learning Objectives

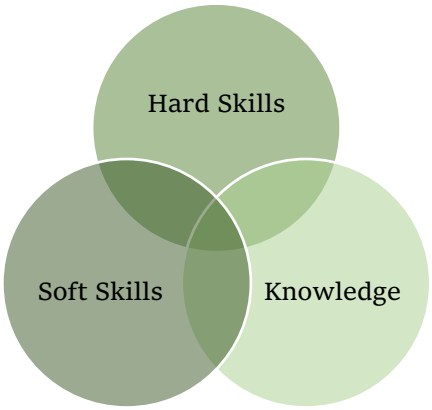
- ✓ Make each and every tour an amazing experience!
- ✓ Understand how Hard Skills, Soft Skills & Knowledge combine to make the ultimate ATA Team member.
- ✓ Identify areas that staff members should self-evaluate and look to improve
- ✓ Understand criteria for which staff will be evaluated.

Introduction

Who is the Ultimate ATA Staff Member? You can be. What makes an individual the ultimate staff member? Someone who embodies the notion of a "positive & contributing Member of the ATA Team in Ketchikan who is dedicated to the success of our operation". No single personality type, gender, age or background makes an individual the ultimate staff member. Furthermore, we as an organization need people from different backgrounds to contribute and come together as a team to make ATA successful!

You have been chosen to be part of a high-performing team in Ketchikan that is dedicated to providing the ultimate tour experience for our customers. It is often the smallest of details or everyday courtesies that can "make a tour". In reading through this manual, there is a large quantity of information to absorb, and it may seem overwhelming. Fortunately, there are team members surrounding you who have the knowledge and experience to deliver our tours at a high level immediately. There are other team members who, through training and time on the job, will develop into a staff member who delivers tours at a high level.

High performing members of our staff, while coming from varied backgrounds and having different personality types, have ownership of **Hard Skills, Soft Skills & Knowledge.** These three professional skills combine to form the necessary skill set to perform the job.



ATA encourages personal development and engages in a system of training, evaluation and feedback which promotes professional development of all staff members. As you seek to grow, and are developed as a staff member, it is important to identify areas of strength and areas of potential improvement. In areas where you have a high level of competence, seek to help other team members to grow. In areas of potential improvement, be intentional in your growth by seeking help from more experienced team members, engaging in study, and practice.

Hard Skills

Guides, Deckhands, Outfitters and Marine Operators all have Hard Skills which must be acquired and maintained in order to perform at a high level.

Vessel Operation & Maintenance - This hard skill may seem specific to USCG Captains who have been hired as Marine Operators for ATA. However, staff members who have been hired as guides work on the vessel as deckhands and must develop skills loading and unloading passengers, tying the vessel off on the docks, location of emergency equipment and assisting the operator in emergency procedures.

Rescue - All Rainforest Island Staff members receive training and drill in rescue procedures including how to deal with a fire and man overboard procedures.

Radio Skills - All Rainforest Island Staff members receive training in the operation of a handheld VHF radio. Marine Operators must have current Radio Operators Permit and be able to competently operate the on-board radio.

Navigation - All Rainforest Island Staff members receive training on using a nautical chart and piloting using landmarks to stay on designated Seahawk routes. Deckhands and hiking guides are also responsible for aiding the Marine Operator in spotting obstructions including floating logs, wildlife and rocks.

First Aid & CPR - All ATA staff members are required to have a current First Aid & CPR certification during their term of employment. ATA staff members should engage in study and practice to remain current on their First Aid & CPR skills.

Incident Management - All ATA staff members receive training on Incident Management policy and procedure. Continue training will be offered throughout the season in management of incidents. This includes the proper filing of incident report forms.

Equipment Maintenance & Upkeep - All ATA staff members receive training on proper equipment maintenance and upkeep and are expected to follow proper equipment handling procedures.

Dealing with Wildlife - All ATA members receive training on proper handling of encounters with wildlife. Specifically, OCEAN Etiquette and Federal Law pertaining to marine mammal encounters and dealing with encounter with Black Bear.

Vehicle Operation & Maintenance - All ATA personnel who drive company vehicles must have a valid license and be registered in the company insurance program. Conservative driving skills are necessary for safe operation of our vehicles.

Personal Equipment & Grooming - All ATA personnel should equip themselves to remain comfortable and as dry as possible. Personal equipment should be maintained to meet ATA Employee Conduct Policy, so our staff looks and acts professional, Clients expect clean fingernails, clean and neat uniforms, calm and informative personnel who know what they are doing.

Camp Set-Up & Food Preparation - All Rainforest Island personnel receive training on proper food handling procedure and set-up of our tour camp areas. This includes fire building and tarp set-up on Betton Island.

Weather & Environmental Awareness - Due to the nature of operating in the Marine Environment, all Rainforest Island personnel should develop a basic understanding of local weather patterns, how to understand a marine forecast and the basic effects of wind and tide on their working environment.

Soft Skills

Soft Skills are the personal attributes that enable someone to interact effectively and harmoniously with other people. As an ATA staff member, your soft skills are directly related to the level of customer service which is offered to our customers. The higher level of soft skills implemented by all staff involved with the tour, the better served our customers will be. Listed below are soft skills which Dock Representatives, Marine Operators, Deckhands, Outfitters and Hiking Guides should constantly self-evaluate and work to improve:

Tour Delivery

As you read through the Procedures and Narrative Sections of this manual, you come to understand that multiple personnel are involved with delivering a high-quality tour experience. Although personnel will have different delivery styles, there are common qualities that all should share:

- ✓ **Be enthusiastic:** If the guide, driver, or escort is enthusiastic about the product, the clients will be also.
- ✓ **Clear Voice** - Speak calmly, clearly and at a level that can be heard by all passengers without "shouting" or "yelling" at the passengers.
- ✓ **Coverage** - Deliver coverage of the material, especially as pertains to safety issues. As you learn your narrative, it is acceptable to use an index card or other aid. If using an aid, be sure to use it discreetly such as looking at the card to remind yourself of the content while walking to the next stop, so you don't have to read off the card while delivering the narrative. Practice your narrative while not leading tours.
- ✓ **Confident Presence** - There is <u>some</u> truth to the saying "fake it 'til you make it". This does not mean you should misinform the customers, but that you should present yourself confidently even though you don't feel confident. If you don't know some specific piece of information, give a general answer. If you have no idea, say so. This is particularly important if someone later in the tour might be able to provide a correct answer to the same question and make you look foolish. Become comfortable with a simple narrative and remember that you will grow as a guide through the season. Remember that tours are fun and have fun with your clients.
- ✓ **Pacing -** Be directive in pursuit of the itinerary and several tools are provided to you so that you are well informed of tour timing. The Dock Representative, Marine Operator and Hiking Guide should always be in control of the group. Never should the clients be asked what they would like to do or be given a choice of alternate activities. In these cases, schedules are missed, some will get what they want but some will be disappointed. It is almost always safer to stick to the plan. If you are directive in the pursuit of the itinerary you will complete the tour at the designated time: If a tour is advertised as one-and one-half hours, a one hour tour will almost always make the client feel cheated, conversely, if the tour goes two hours, the client will often miss connections for lunch, dinner, the next tour, or planned shopping. There is nothing like being on the money, but as a rule of thumb, a near miss is acceptable.

Relating to Customers

A positive experience with their guide "makes" the tour for many customers. Develop positive rapport by speaking directly and shaking hands if possible. Comments should be made loud enough for all to hear, clients should be asked questions about themselves. These are techniques for creating a positive client feeling.

- ✓ **Present a positive attitude toward the product:** Each client has the desire and the right to believe that their decision to purchase a particular tour product was the best possible allocation of their time and money. Don't suggest that other programs, even those operated by our company are of better quality. Also, do not mention that their tour could have

been better if the weather or some other element had been different.

- ✓ **Involve the clients:** Clients should have a sense of participation. Encourage them to participate to the extent of their ability. Even sedate people are bored with a sedate tour program.
- ✓ **Prepare the client for what to expect:** Most people dislike surprises. If you let them know what to expect during the tour, in a positive manner, it will build anticipation, instead of wariness.
- ✓ **Be responsive to the client needs:** To the extent possible within the itinerary, we should be attentive to the need for bathroom facilities, protection from the elements, the need for personal contact, and specific information. At least appear to make the attempt to meet these needs. Avoiding a client that is having a "bad time", reinforces that feeling.
- ✓ **Keep your personal problems personal:** If you have a problem, don't share it with the client, do talk to the management. Clients don't want to know if your mother is sick, you work too hard, etc. Items of this type are sure to make clients feel uncomfortable and bring their spirits down.
- ✓ **Be cautious when talking about yourself:** While clients will often ask you questions about yourself, they don't want a year history. Answer their questions, but not at the expense of your narrative, or letting them talk about themselves. Be sensitive to when they have had enough of any topic.
- ✓ **Be discrete in accepting gratuities:** Even in an offhand manner, begging is tactless and insulting.

Working with Unhappy Customers

There are a variety of reasons that customers may not be a “good place” while on tour. While the vast majority of customers will be pleasant and looking to have an amazing experience, some customers may be unhappy or act unsatisfied. Avoiding a customer who is having a “bad time” is a sure way to continue the negative experience. Being positive and doing your best to provide an excellent experience is the best way to deal with an unhappy customer. When a customer has a specific complaint, following the **BLAST** acronym is the prescribed ATA method for handling the situation:

- ✓ **B - Believe**. When a customer is unhappy, a natural reaction is to become defensive or justify your actions. Your evaluation that a customer is “correct” or “incorrect” is immaterial at this point - the reality is that they are upset. The first step in dealing with an unhappy customer is to come alongside them and believe they have a valid complaint.
- ✓ **L - Listen** Without becoming defensive or declaring they are right or wrong, listen to the complaint. Pay attention and make them know you hear their complaint and understand they are not pleased.
- ✓ **A - Apologize.** Apologize for the error which has made them upset or for the situation that they are in.
- ✓ **S - Satisfy.** Ensure the customer that you will take the next step in dealing with the situation. If possible, be specific.
- ✓ **T - Thank.** Thank them for confiding in you and make sure your follow-up with the action you proposed in the “Satisfy” stage of working with this unhappy customer.

Example of How to Deal with an Unhappy Customer: A Rainforest Island Adventure customer is unhappy that they did not see any whales on tour and voices their displeasure during the last few minutes of ride into Knudson Cove.

***Customer**: I am very disappointed with this tour and am going to go on Trip Advisor and give ATA and my Captain Paul a negative review.*

***Deckhand:** I’m very sorry to hear that sir and understand you are disappointed with our tour. May I ask what we’ve done today that did not meet your expectations?*

***Customer:** I read in the trip description that we were guaranteed to see humpback whale because Juneau has residential pods, and this is their feeding grounds. It has been my lifelong desire to see a humpback in the wild and this was my one opportunity. This has been a terrible disappointment.*

Deckhand: *I'm really sorry to hear that sir. I wish we could have provided you with that experience today.*

Customer: *I want my money back, this is not the experience that I signed up for!*

Deckhand: *I understand you are not happy with today's tour. I wish we would have seen "humpbacks" today! I will speak with my supervisor when we arrive back at Knudson Cove, and he/she will see that you are followed up with. I ensure you that someone from our company will follow-up after this tour.*

Customer: *Ok. I realize it's not your fault we didn't see a whale today.*

Deckhand: *Thank you for letting me know. I really appreciate you speaking with me directly and you will hear back from us.*

In the above scenario, Alaska Travel Adventures, our tour delivery, and ATA personnel have done nothing "wrong", yet the customer is still unhappy. The root of the issue is that information the customer read which applies to Juneau's resident pod of humpback whales does not apply in Ketchikan. The deckhand handles this situation correctly by not embarrassing the customer or pointing out their error but replying that he wishes they would have seen humpback whales on the tour. He/she also handles this correctly by passing the issue their supervisor and not promising a refund. In this way, he/she is acknowledging the customer's issue, has apologized that they did not have the experience they wanted, and he satisfied the customer with the action that will be taken.

Dealing with Negative Situations

If things go wrong, admit responsibility. Often your only chance to save the tour is to assume the blame for an error or omission yourself. It is not easy for the client to stay angry with someone who is not around; but much harder if someone they know openly acknowledges responsibility. Blaming others is unprofessional.

At some point during the season, a negative situation will occur which you are not the direct cause. For example, a bus could get lost on the way to the marina and not deliver your customers with enough time to deliver the entire tour or a co-worker makes a mistake which has affected your tour group. It is important not to engage in "blaming" or "shaming" other staff members or other companies. It is unprofessional, does not reflect positively on you, and "bad mouthing" other people or companies can create issues in the community. Be supportive of teammates, other companies, and products, this shows professionalism, good taste, and improves our image as well as theirs.

When dealing with a negative situation, be positive and always consider how you can make the most of the present opportunity, giving our customers the best possible experience despite the circumstances.

Adverse Weather Conditions

At some point during the season, we will encounter bad weather. How we deal with the situation will determine how the clients perceive the tour and the company. Employees should maintain a positive attitude about the conditions. Never make negative comments about the conditions. Clients often will take on the attitude of the people they are with. If the staff treats it like an adventure, the clients will also. If the staff sees it as being a negative trip, you will inevitably get complaints. Attempt to keep clients as dry as possible. For example, the nature hike should try and stay under cover of the trees and guests should be provided raingear under the cover of the outfitting tent.

Attitude

How you approach the season, and each day of the season, will make your employment a positive or negative experience. If you look forward to each day - the people you'll meet, the beauty of the forest, the wildlife you have the privilege to view, the awesome people you work with - you will have a great season!
Arrive on Time & Be Prepared to Work: In Ketchikan, early is on time, on time is late and being late to work is a trait that will require retraining. Our customers, your teammates and leadership all deserve 100% effort and being on time and

prepared for work is elemental. If one member of the team is late to work, it has a cascading effect on the day which is not acceptable.

Arrive on Time & Be Prepared for Tour: All clients expect their drivers, dock representatives, hiking guides and captain to be waiting for them on arrival. Failure to do so creates a feeling of anxiousness that lingers well into the tour. Requiring a client to wait is perceived as a waste of their money.

Personal & Group Awareness - Your actions have an effect on the people around you. You can choose to have a positive or negative effect by the way you interact with coworkers, customers, and members of the community. If there are points of conflict with a coworker, attempt to bring them to a positive resolution or take the issue to a supervisor for conflict resolution.

Work Ethic - Alaska is a "work hard, play hard" kind of place and Alaska Travel Adventures is a work hard, be safe, have fun kind of company. We will work extremely hard to provide the best tours, have fun while delivering tours, make the most out of living in Alaska when not on tour! Show up each day ready to work hard and you will be rewarded with an amazing season!

Success Driven - Look to be successful at your position! Our tours are rated by the cruise lines, and we collect comment cards on which guides are evaluated by our customers. Alaska Travel Adventures has a system of rewards including the "Alaska Summit" award, Employee(s) of the month and a year-end performance bonus. There are also financial incentives for positive tour/guide TripAdvisor reviews and selling merchandise. Guides who do an excellent job on tours may receive gratuities as well.

Knowledge

Clients have reason to expect their captains, deckhands, and hiking guides to know about the cities in which their tour takes place, local native people, the company operating the tour, locations and attractions of special interest, and unique elements of flora and fauna. Information provided in this manual, training materials, staff training, and personal research are all required in order to perform your job at a high level. Be intentional in increasing your knowledge by engaging in study and practicing delivery of information. Knowledge in the below areas should be self-evaluated and will be evaluated by your supervisor.

Weather Systems - An understanding of the weather that makes SE Alaska a temperate rainforest, i.e. why Ketchikan receives the highest annual precipitation of any US city.

Geology - An understanding of how the landscape in the area came to be via tectonic motion and glaciation.

Geography - Have a basic awareness of Alaska geography and specific knowledge of SE Alaska including location of Ketchikan and proximity of Revillagigedo Island to the mainland and other islands in the Alexander Archipelago.

Tides - Have a basic understanding of the cause of our semi-diurnal tidal cycle, awareness of high and low tide for the day and how to predict the height of water at a specific time.

Flora - Display the ability to correctly identify the commonly occurring trees, flowers, and berry bushes of the Southern Tongass

Fauna - An understanding of what animals, birds, and organisms are, and are not, in the Ketchikan area and how the size of an island can determine which type of wildlife it can support.

Native Cultures - A general understand of the matrilineal structure of the clans, as well as which three main cultures are in the area and some of their defining characteristics/traditions/values and mythology.

Alaska History - Prove a general understanding of the history of the State and its acquisition by the United States from Russia, its subsequent territorial status, when it became a state.

Ketchikan - Provide a general understanding of how Ketchikan started - both in terms of Native Cultures and populations that occupied the mouth of Ketchikan Creek and in terms of Western influence. Understand the historical economy of the area, as well as some of the more storied sections of town.

Employee Acknowledgment

This manual's contents reflect a general description of the procedures and rules for employment in the Ketchikan Rainforest Island Hiking program. I acknowledge receipt of this manual. I agree tofamiliarize myself with these procedures and rules and to comply with their provisions at all times. I understand that the contents of this manual are proprietary and agree not to reproduce or distribute this material in any way.

Employee Name _____

Employee Signature _____ Date _____

Appendix A – Tour Description

Rainforest Island Adventure

Description: A motorized rigid inflatable Seahawk provides a short, but exciting cruise along the coast of Clover Passage to a remote island in the Tongass National Forest. Whales, Stellar sea lions, harbor seals, porpoise, bald eagles and migrating seabirds may be spotted on this route.

Join an experienced Alaskan trail guide for a walk through natural, unspoiled beauty of this coastal rainforest. The trail takes you through a beautiful old growth forest, by way of a secluded beach. This mostly boardwalk path is about one-mile in length and well maintained.

Follow your knowledgeable guide through this ancient forest and learn about botanic species native to this region, such as the Western red and yellow cedars which Alaska native cultures have depended on for spiritual enrichment, shelter and transportation, and how the Sitka spruce was instrumental in the construction of Howard Hughes' famous "Spruce Goose" and other early vintage fighter planes.

After hiking this gently sloped historic trail, gather by the campfire to enjoy an Alaskan-style snack. Take some time to explore the natural beauty around you before re-boarding the Seahawk for the return trip to Knudson Cove. Bring your camera and binoculars!

Includes: Round-trip transportation from dock; quality rain gear; life jackets; snack and beverages.

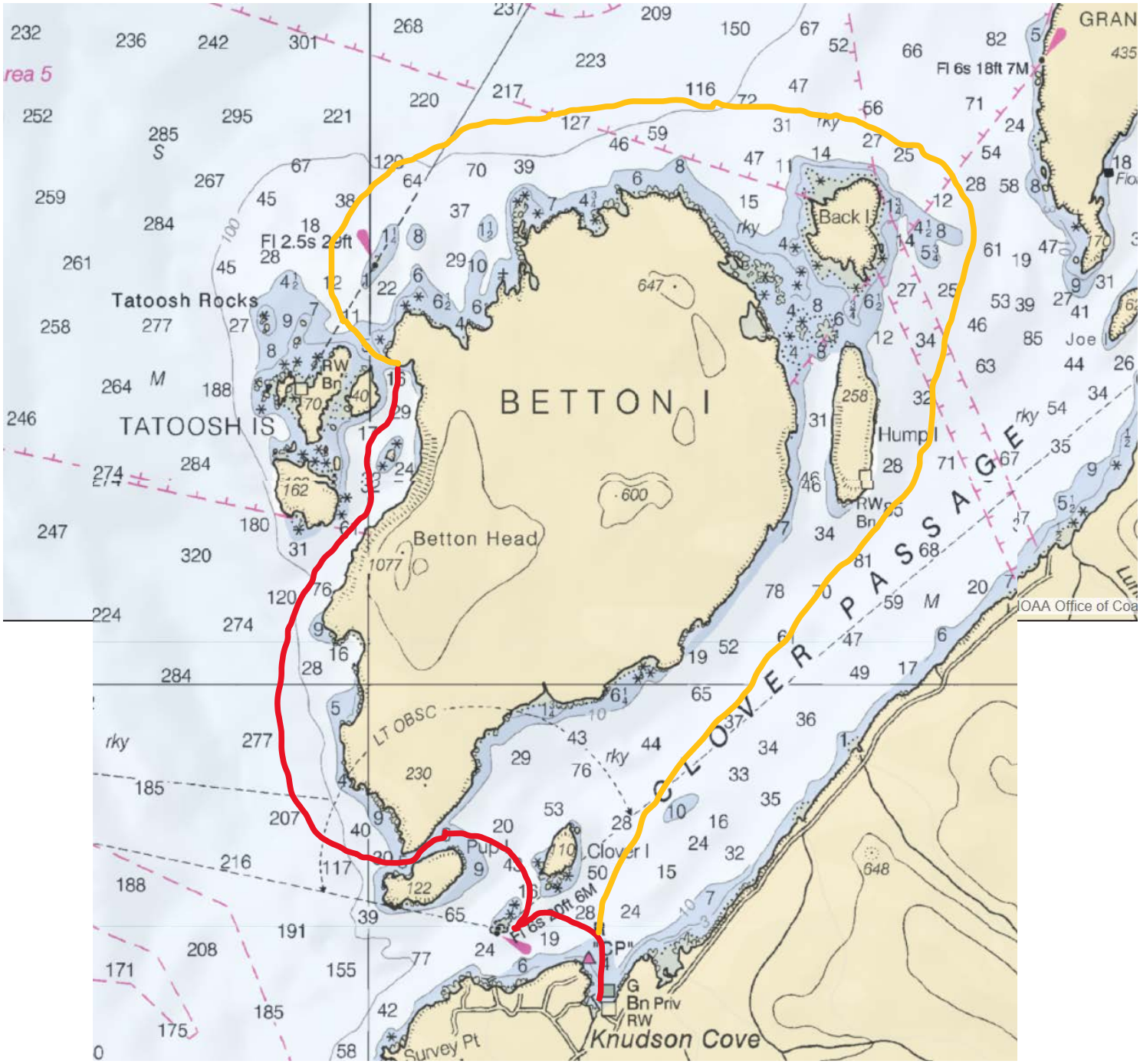
Available: Multiple departures daily May through September at times to meet cruise ship or tour schedules. Operates in all weather conditions.

Capacity: 4 - 48 persons each departure. Up to 144 persons per day. (Minimum of 4 persons.)

Duration: Approximately 4 hours

Notes: Dress comfortably in warm layers and sturdy walking shoes. Restroom facilities are limited. Moderate to good physical condition is necessary for participation in this excursion. This trail has a gradual slope and is well maintained. [KO1] Children must weigh at least 40 pounds in order to fit into required life jackets. Children 12 and under must be accompanied by an adult. Children 13-17 must have a signed parental consent form to participate in the absence of a parent or guardian. This tour operates under a Special Use Permit issued by the US Forest Service.

Appendix B – Seahawk Routes



Primary Route

Safety Route

Appendix C – Acceptable Recycling Materials List

Material	Include	Keep Out	Action
Newspaper, Magazines, Catalogs	Includes ads, inserts, phone books, and paperbacks	No Rubber Bands or Plastic Bags	Burn All Paper Waste
Scrap and Shredded Paper	Junk mail, envelopes, office papers, greeting cards, paper egg cartons, paper tubes, wrapping paper and cereal boxes. Put shredded paper in a paper bag	No bath tissue, paper towels freezer boxes, coffee cups or paper coated with food wax, foil or plastic.	Burn All Paper Waste
Cardboard	Flatten All Cardboard Waste	No wax-coated cardboard or food residue	Burn All Paper Waste
Milk Cartons, Drink Boxes	Rinse Clean	No Plastic Straws	Place in biodegradable plastic garbage bags
Plastic Bottles & Tubs	Only #1 & #2 designated recyclable plastic bottles - labels OK	No plastic lids, trays, bags, take-out boxes or motor oil, pesticides or herbicide containers	Take to Walmart to have sent to recycling facility
Aluminum Foil	Crumples into loosely packed balls	No Food Residue	Place in biodegradable plastic garbage bags and in dumpster
Metal & Aerosol Cans	Aluminum, tin, empty and non-toxic aerosol cans, steel food and beverage cans. Rinse food cans – labels OK	No plastic caps. Do not flatten or puncture cans or remove nozzles	Place in biodegradable plastic garbage bags and in dumpster
Glass	All Colors - labels OK	No Lids	Place in biodegradable plastic garbage bags and in dumpster

Appendix D – Seahawk Daily Checklist

Vessel _____ Captain _____ Date _____

AM Start-Up for Seahawk: Complete the following Start-up Procedures:

- ❑ Check engine mounting bolts.
- ❑ Check fuel levels, start engine to warm up (check log to see if boat was fueled on previous day)
- ❑ Visually inspect the inflatable for any leaks, water in bottom, loose patches, etc.
- ❑ Check inflation pressure of inflatable. Inflate to proper pressure (2 PSI), if necessary, make sure chambers have equal air.
- ❑ Turn on and check operation of VHF radio and listen to weather report. (WX1)
- ❑ Check that waterproof safety box is onboard. The Safety Kit should have first-aid kit, flashlight, charts, sounding device ((air horn)) or whistle, flares, etc.) Make sure kit is kept dry and secure. If the safety box was opened on the previous day of operations, ensure that the item marked "used" has been replaced.
- ❑ Check that the waterproof map case is onboard. The map case should have the binder, log book, rules of the road, rite-in-the-rain pen, lighter, current tide book and alcohol screening strips
- ❑ The Help out other crew members with daily duties.
- ❑ Each inflatable will carry all required U.S. Coast Guard equipment. Equipment list must be checked on a daily basis.

Equipment List for Seahawk:

On Board:

- ❑ 2 Paddles
- ❑ Life Ring
- ❑ Extendable Pole
- ❑ B II Fire Extinguisher
- ❑ Air Pump
- ❑ Bailer
- ❑ Marine Radio & FCC License
- ❑ 20" Ring Buoy with Water Light & 60' of Line
- ❑ Anchor with 100' of Line
- ❑ Compass
- ❑ In line fuel primer (hand pump)
- ❑ Overboard Lifesaving Device
- ❑ First Aid Kit
- ❑ Marine Radio & FCC License

In Waterproof Chart Case
Check to Ensure Case is On-Board

- ❑ Logbook
- ❑ Charts
- ❑ Handheld VHF Radio

In Orange Waterproof Box
Check to Ensure Box is On Board

- ❑ 3 Red/ 3 Orange Flares
- ❑ Pyrotechnic Devices (flare gun)
- ❑ Patch Kit
- ❑ Flashlight with extra Batteries
- ❑ Sound Blasting Device and Spare Cartridge
- ❑ Duct Tape
- ❑ Flat Head Screwdriver
- ❑ Phillips Head Screwdriver
- ❑ Pliers
- ❑ Bailing Wire
- ❑ Hose Clamps
- ❑ Spark Plugs & Plug Wrench
- ❑ Extra Fuel Line Clips

PM Shutdown for Seahawk: Complete the following Shut-Down Procedures

- ❑ Spray Down Vessel
- ❑ Fuel Vessel (Note: Log Fueling in Logbook)
- ❑ Freshwater Engine Flush
- ❑ Turn Off Batteries
- ❑ Report / Handle any Mechanical Issues
- ❑ Notate what items were used if Emergency Box was opened.

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