



PREPARING FOR A PRIVATE GRAND CANYON RIVER TRIP

Based on the McPatt 2018 Trip

Organized by David Patterson and Mary McArthur

MCPATT CREW AT REDWALL CAVERN



THANK YOU!

- Many thanks to our very experienced friends:
 - Norm Gaume, Jim Brainard and Eric Plikerd for the Trip Notes
 - A sample copy of the trip notes is on the Adobe Whitewater Club website.
 - Our very experienced crew for their guidance on and off the river:
 - Norm Gaume, Betsy Butler, Peter Coha, Donna Koechner, Steve Ruffennach, Randy Lewis, Brent Ricks, Ben Ricks, John Wills, Andino Novat, Sylvia Dawson and Ira Bolnick
 - The rest of our crew for sharing the adventure:
 - Tom McCullough, Lynn Buck
- Trip Leaders: Dave Patterson and Mary McArthur
- Photographers: Ira Bolnick, Peter Coha, Donna Koechner, Brent Ricks, Mary McArthur, Dave Patterson and Steve Ruffennach

TO-DOS

- Lottery
- Application
- Permits for Hualapai land and off-river camping
- Crew and Boats
- Camp Behavior
 - Daily Setup and Takedown
- Itinerary
- Expenses and Paperwork
- Group Gear
 - Kitchen
 - Tables
 - Water/Fire
 - Washing
 - Propane
 - Groover
 - Rescue
 - Medical
- Food
- Personal Gear

PERMIT APPLICATION

- Non-Commercial Trip Regulations
 - https://www.nps.gov/grca/planyourvisit/upload/Noncommercial_River_Trip_Regulations.pdf
 - Check for most current regulations before your trip begins.

LOTTERY AND FEES

- Annual lottery for the following year.
- If you've applied to the lottery for the next year, you'll get notices of cancellations in that year.
- Fees
 - \$25 for lottery application, once per launch year
 - \$200 small trip deposit, \$400 standard trip deposit
 - \$20 park entrance fee per person
 - \$90 river permit per person
 - \$100 per person added after permit issued
- Use those Senior Park Passes, they are worth 4 people at \$20 ea.

OFFICIAL PAPERS

- Official Paperwork for Start of Trip

Item	Req'd qty	Have	R1	R1-P	R2	R2-P	R3	R3-P	R4	R4-P	R5	R5-P
Person			Dave	Mary	Harry	Ginny	Dumbledore	Hermione	George	Fred	Sirius	Neville
Documentation (McPatts)												
River Permit			y									
Trip Participant List			y									
List at Lee's Ferry			y									
Incident Report Form			y									
Trip Regulations (check for updates)			y									
Individuals												
Photo ID or passport	Required	16	1	1	1	1	1	1	1	1	1	1
Park Passes	4	4		1	1		1	1				
Park Pass #				xxx								
Extra truck key			y		y		y					

PEOPLE/BOAT CONSIDERATIONS

- Crew
- Types of boats and their capacity
- Pre-trip meetings
- Shared spreadsheet for managing gear, menus, kitchen contents, allergies and preferences, coffee needs, itinerary thoughts
 - Parts shown throughout this presentation
 - A sample copy of the organizational spreadsheet is on the Adobe Whitewater Club website.

PEOPLE AND BOATS: CREW

- All Crew
 - Knowledge of safety, general first aid, equipment repair and navigation
- Trip Leader (TL)
 - At least 18 years of age
- Optional for Lottery: Potential Alternate Trip Leader (PATL)
 - For if TL unable to go; without a PATL, have to cancel the trip
- Qualifying Boatman (QB)
 - Whitewater experience in the Grand Canyon or on one or more comparable rivers
- Preferred that TL or QB have been on the Grand
- Medical support
- Oarsfolk and passengers' experience
- Compatibility
- Gender balance
- Backup rowers

PEOPLE AND BOATS: BOATS

- How many and what kind of boats?
 - Rafts
 - Kayaks
 - Canoes
 - Dories
 - SUPs, etc
- Number of people per boat
- Kayaks for safety?
- Who carries kayakers' gear?



PEOPLE AND BOATS



Brent and Ben
20' Blue Hyside Oar

Dave and Mary
16' Blue Hyside Oar



PEOPLE AND BOATS

Steve and Lynn
18' Red Aire Catarcraft



Randy and Ira
14' Light Blue Avon Oar



PEOPLE AND BOATS



Sylvia and Andino
16' Beige Sotar Oar

Norm and Betsy
16' Blue Sotar Oar



PEOPLE AND BOATS



Tom and John
14' Blue Oar

Donna and Peter
18' Red Aire Cataract



GROUP GEAR LIST

McPatt Grand Canyon River Trip, Sept 1-23, 2018												
Group Gear List												
Item	Req'd qty	Have	R1	R1-P	R2	R2-P	R3	R3-P	R4	R4-P	R5	R5-P
Person			Dave	Mary	Harry	Ginny	Dumbledore	Hermione	George	Fred	Sirius	Neville
Documentation (McPatts)												
River Permit			y									
Trip Participant List			y									
List at Lee's Ferry			y									
Incident Report Form			y									
Trip Regulations (check for updates)			y									
Individuals												
Photo ID or passport	Required	16	1	1	1	1	1	1	1	1	1	1
Park Passes	4	4		1	1		1	1				
Park Pass #				xxx								
Extra truck key			y		y		y					
Raft												
Boat (Type, Manufacturer, Model, Size, Clr)			16' blue Hyside oar		18' red Aire Cat		16' oar blue Sotar		14' Air cat		14' Avon oar	
Spare Oars and blades	2 per boat		2		2		2		2		2	
Extra/ Spare PFD	2 (all rafts bring extra to Put-in - will decide from there)	2				1					1	
Throwable US Coast Guard approved, Type IV cushion for boats over 16 feet as per mfg.'s specifications	Req'd for boats => 16'	7			1				x	x	x	x
Raft air pump	1 Req'd; others optional	2	1		1							
Raft repair kit	1 per trip	2	1		1							
Truck pump		2	1		1							
River Maps	1 Req'd; others optional	4	2		1				1			
Coolers and dry boxes	Each cook group's discretion											
Drag bags	everyone								1			
Minor First Aid (per boat)	9	8	1		1		1		1		1	

- Shared spreadsheet on-line

BOATS AND GEAR

- Some required equipment in red

Raft											
Boat (Type, Manufacturer, Model, Size, Clr)			16' blue Hyside oar	18' red Aire Cat		16' oar blue Sotar		14' Air cat		14' Avon oar	
Spare Oars and blades	2 per boat		2	2		2		2		2	
Extra/ Spare PFD	2 (all rafts bring extra to Put-in - will decide from there)	2			1					1	
Throwable US Coast Guard approved, Type IV cushion for boats over 16 feet as per mfg.'s specifications	Req'd for boats => 16'	7		1				x	x	x	x
Raft air pump	1 Req'd; others optional	2	1	1							
Raft repair kit	1 per trip	2	1	1							
Truck pump		2	1	1							
River Maps	1 Req'd; others optional	4	2	1				1			
Coolers and dry boxes	Each cook group's discretion										
Drag bags	everyone							1			
Minor First Aid (per boat)	9	8	1	1		1		1		1	

KITCHEN AND FOOD: COOK GROUPS OR INDIVIDUAL

- Divide into cookgroups or everyone do their own cooking?
- Does cook group also dishwash or a second group works each night?
- Menu considerations
 - Maximal
 - Minimal
 - Outfitted
- Schedule

KITCHEN AND FOOD: MENU AND EQUIPMENT

- Menus, schedules
- Food storage
- Kitchen box
- Lunch box
- Tables
- Stoves
- Propane
- Coffee
- Dutch ovens
- Firepan
- Trash and cans
- Spice box?

KITCHEN AND FOOD: MENU AND SCHEDULE

Date	River Day	Cook Grp		Dinner	Subsequent Breakfast	Subsequent Lunch	Condiments
Food group responsibilities begin with dinner continue with breakfast and lunch the next day							Ronald will solid freeze a cooler, has some extra space. Will open Day 9
3-Sep	1		Hermione		Coffee and cold breakfast at the boat ramp shelter	Lunch at the put-in boat ramp	mayo and mustard will be opened at lunch; paper bowls & plastic cutlery. Will open first paper towels
3-Sep	1	1	Ronald, Ginny, George, Fred	Appertisers, Salmon burgers, Coleslaw, Potatoes, Cookies	Scrambled eggs with veggies, bacon (Ginny)	deli sandwiches, chips, cookies (Ginny)	
4-Sep	2	2	Mary, Dave, Hermione, Harry	Appetizers, Chicken Fajitas, salad, brownies, Margaritas	Oatmeal/fruit mix, some dry cereal, yogurt	Deli sandwiches and wraps, chips, cookies	
5-Sep	3	3	Neville, Remus, Mrs. Weasley, Mr. Weasley			Hermione	Ronald
6-Sep	4	4	Dumbledore, Sirius, Hagrid, Luna	STEAKS, BAKED POTATOES, CORN ON COB, COOKIES?	OATMEAL, COLD CEREAL, SOY MILK, JUICE, BLUEBERRIES, YOGURT	SALAMI, PASTRAMI, PEPPERONI, BREAD, MIRACLE WHIP, PROVOLONE CHEESE, SLICED APPLES, COOKIES	
7-Sep	5	1	Ronald, Ginny, George, Fred	Pappadams, Curry (Carnivore and vegetarian) and Rice, Lyches	Muesli, Brown Cow Yogurt, English Muffins, Eggs and Baked Beans	Deli Sandwiches, Chips	
8-Sep	6	2	Mary, Dave, Hermione, Harry	Appetizers, Pulled pork, cole slaw, beans of some sort	Dave: pancakes w/ walnuts, bacon	Hermione: Imitation crab salad, lettuce wraps & crackers, hummus, pita chips, crudites & dip, apples, cookies	
9-Sep	7	3	Neville, Remus, Mrs. Weasley, Mr. Weasley				
10-Sep	8	4	Dumbledore, Sirius, Hagrid, Luna	SHRIMP JAMBALAYA, RED BEANS AND RICE, RICE	EGGS, SAUSAGE, ENGLISH MUFFINS, JELLY, KNOX POTATOES, MELON	HAM, TURKEY, ROAST BEEF, PROVOLONE, SWISS, CHEDDAR CHEESES, PRINGLES	

KITCHEN AND FOOD: MENUS AND DIETS

- Menus
 - Amount of food
 - Balance between having plenty of food and not having to store leftovers
 - Use open containers of food and leftovers
 - Snacks left up to the individual
- Allergies and preferences
 - Sensitivities to nuts, sugar, gluten
 - Vegetarian

Don't go crazy with amounts of food!

Allergies

Sirius - Pistachios food allergy

Hermione - yogurt - can only eat Brown Cow brand

Mr. Weasley, Harry, Mary - penicillin

Ronald, Mrs. Weasley - wasps

Neville - gluten sensitive

Preferences

Mrs. Weasley - Vegetarian - I do enjoy dairy, don't eat a lot of eggs but can do, will eat some fish but just not a fan of canned fish or fish mixed with other foods such as tuna salad etc.

Remus - vegetarian except occasional fish

Hagrid is an insulin dependent Type 1 Diabetic

KITCHEN AND FOOD: FOOD STORAGE

- Cooler strategies
 - Early and later coolers
 - Freeze 3" water in second-half-of-trip cooler at local grocery store or use dry ice. Don't open till needed.
- Block ice
 - Basha's in Tuba City
 - Canyon REO has high density ice (for sale?)
- Dry boxes for cans and durable foods



KITCHEN AND FOOD: COOLERS



- Cover the coolers with pads or other gear
- Double as seat?
- Where does each cook group's food go?

Kitchen Box Inventory

Plates and bowls for 16 plus spares for serving appetizers, etc
No drinking cups
Silverwear for 16 plus extras
Cooking utensils--multiple spatulas, large spoons, ladle, can opener, pot grabber, small wisk,
Measuring cup and several cups for cooking
Knives, assorted
Cutting boards--3 large flexible and 2 rigid plastic
Large, medium, and smaller-but-still-good-sized SS mixing bowls/use large for salad bowl
Screen bowl to be used as a collander or to steam vegetables
Two large stock pots (thin bottom, use only for heating water)
Large copper bottom cooking pot
Smaller pot set
10 and 12 inch round aluminum dutch ovens (12" is 6 qt)
large rectangular aluminum dutch oven (8 qt)
Griddle
Roll paper towels
back-up pint of chlorox and small dish soap
salt and pepper
Hot pads
Dish towels (a few)
Chorox clean-up
dish drainer net
oil cloth table clothes
Small roll of aluminium foil
Small bottle of cooking oil (for griddles, etc.)
Small bottle of Pam for dutch ovens
tall kitchen table
4 burner partner stove with stand
stove lighters
Lunch kit (small box of utensils -- easy to take out to prepare lunches)
Sandwich papers
hand sanitizer

Notes:

Dutch ovens are primary cooking vessels for use on the stove top and well as with coals for baking
The rectangular dutch oven fits over two burners on a 4 burner partner stove (holds a lot of food)
The larger stockpot is typically used for heating river water for washing dishes
The smaller stockpot is used for heating water for pasta but burns super easy if used for cooking

A 14" dutch oven ?

Bring any spices, cooking oils, and fancy knives/utensils that your cooking needs

KITCHEN AND FOOD: KITCHEN BOX



KITCHEN AND FOOD: POTS, PLATES, UTENSILS



KITCHEN AND FOOD: LUNCH

- Table and tablecloth
- Umbrella
- Paper wraps
- Hand sanitizer
- Paper towels
- Knives
- Get utensils at breakfast
- Accessibility to food
- Cleanup before the next cook group's shift



KITCHEN AND FOOD: LUNCH

KITCHEN AND FOOD: TABLES AND FLOOR



- 3 Counter-height tables
 - Raft seats
 - Separate tables
- 1 or 2 Roll-a-tables
- Floor to catch food
- Lights at night: Luci lights, propane or electric lanterns?

KITCHEN AND FOOD: STOVES

- Who has stoves?

Item	Req'd qty	Have	R1	R1-P	R2	R2-P	R3	R3-P
Person			Dave	Mary	Harry	Ginny	Dumbledore	Hermione
Stoves and Light								
4 burner partner stove (with stand)	2	1						1
Partner stove repair kit	1	2					1	1
Everest 2 burner 50k BTU stove	1	1			1			
Propane Y for 2nd stove fittings	1	1			1			
Lights for kitchen		0			5 Lucis			

KITCHEN AND FOOD: STOVES



- 2 Stoves
- 2-Burner for large quantities of water for coffee and wash water
- 4-Burner for meal preparation
- Y splitter, extra hoses, fittings?

KITCHEN AND FOOD: PROPANE

- McPatt Sept trip used under 40 gallons?

Item	Req'd qty	Have	R1	R1-P	R2	R2-P	R6	R6-P	R7
Person			Dave	Mary	Harry	Ginny	Remus	Hagrid	Ron
Propane									
Propane (20 lb/ 5 gal bots)	4	3	1				2		
Small Propane bots (11 lb/2.5 gal)	2	4			2				2
Small Propane bots (~4 lbs/1 gal)	0	0							
Small Propane bots (1 lb)	0	0							

KITCHEN AND FOOD: PROPANE

- How much needed?
- What time of year?
- Compatible fixtures



KITCHEN AND FOOD: DUTCH OVENS

- Dutch Ovens
 - In the kitchen box
 - For use on stove
 - Additional brought by cook group
 - For use on fire

KITCHEN AND FOOD: COFFEE

- Coffee calculation
- Brew system
- Part of cook group responsibilities or one individual in charge?

Person	Quan	Pref	Oz equiv est
Harry	2 large	black	36
Dave	yes	black	18
Hermione	yes	black	18
George	cup	condensed milk	18
Fred	2-3 med cups	black	24
Dumbledore	16-20 oz	black	20
Hagrid	18 oz	some milk	18
Sirius	18 oz	Milk, cream,	18
Neville	18 oz	Black	18
Ronald	2-3 cups	1/2 & 1/2	32
Mrs. Weasley	1-2 cups	1/2 & 1/2	16
Mr. Weasley			
Remus			
Luna			18
Ginny	no		
Mary	no coffee		
Total Oz			254
Gallon total			1.98

PERSONAL GEAR

- Dishwashing gloves
- Chair
- Drinking cup
- Sodas, beer, liquor
- Snacks
- Personal medications;
salve
- See on-line lists of personal
gear on various outfitters'
sites



CAMP CONSIDERATIONS

- Crew meetings before and during trip
- Camp tasks and behaviors
- Kitchen setup
- Water
- Handwashing
- Dishwashing
- Trash and cans
- Fire
- Living room
- Groovin'

CAMP: CREW MEETINGS

- Before trip
 - Decide group expenses, responsibilities
 - Gear
 - Schedule
- How is decision making decided?
 - Team Leader or group consensus
- General etiquette
 - Launch times each morning
 - Behaviors on and off the water
- On the river
 - Morning meetings
 - Daily itinerary and agenda
 - “Plusses and deltas”
 - Conflict resolution
 - Guidance and strategies for rapids

CAMP: CAMP BEHAVIORS

- Tasks
 - Kitchen setup and takedown
 - Water
 - Handwashing stations
 - Groover setup and takedown
 - Fire pan for cooking?
 - Trash and cans
 - Dishwashing
- Division of Labor
 - Rotate chores
 - Assigned chores

CAMP: KITCHEN SETUP AND TAKEDOWN

- Setup upon landing for the day
 - Cook groups get 1st campsite choices
 - Everyone not cooking help set up
 - Kitchen, groover
 - Settle buckets of water
 - Washing stations, trash
 - Dishwashing after dinner
- Takedown after breakfast
 - Cook group cooks while everyone else packs up
 - Breakfast
 - Cook group packs up personal gear while everyone else takes down the kitchen

CAMP: KITCHEN SETUP



CAMP: KITCHEN IN SMALLER SPACES



CAMP: KITCHEN SPREAD OUT



CAMP: HANDWASHING

- Handwashing stations
 - At kitchen
 - At groover
- Emphasize cleanliness for health of the whole crew



CAMP: WATER

- How much water to haul?

Item	Req'd qty	Have	R1	R1-P	R2	R2-P	R3	R3-P	R4	R4-P	R5	R5-P	R6	R6-P	R7
Person			Dave	Mary	Harry	Ginny	Dumbledore	Hermione	George	Fred	Sirius	Neville	Remus	Hagrid	Ron
Water															
Water Filters	1	0			Gravity						1 killer				Gravity
Alum for trip requirements	1	0			y										
Water jugs - 12' gal per raft, spare spigots?		0	2		2		2		2		2		6,7,2.5		2

CAMP: WATER

- McPatt trip: 12 gallons per raft
- More than one pump
- Pumps
 - Manual Katadyne versus electric pump versus gravity pumps
 - Who is responsible for the workings of the electric pump?
 - AWC members can rent AWC pump
- Where to get water? When/where to filter?

CAMP: DISHWASHING

- Buckets and soap

Item	Req'd qty	Have	R1	R1-P	R2	R2-P	R3	R3-P	R4
Person			Dave	Mary	Harry	Ginny	Dumbledore	Hermione	George
Washing									
Buckets: rigid; water settling	8	4			4				
Buckets: soft for dishwashing							4		
Buckets: rigid for hand wash	8	4					4		
Hand wash systems	2	2					2		
Hand wash soap	8	8							8
hand wash sanitizers	8	8							8
Dishwashing gloves	ind. resp	0							

- Use settled/alum-ed river water for washing
- Heat water after dinner



CAMP: DISHWASHING

- Four tub washing system
 - Grunge - warm
 - Wash - warm
 - Rinse - cold
 - Bleach - cold
- Dishgloves
- Call out the “sharps”

CAMP: DISHWASHING

Disposing of wash water

- Strain and clean the grunge tub
- Clean the wash tub
 - Pour into grunge tub
 - Swish around
 - Strain the grunge tub
- Clean the rinse tub
 - Pour into the wash tub
 - Swish around
 - Pour into grunge tub
 - Swish around
 - Strain the grunge
- Clean the bleach tub
 - Pour into the rinse tub
 - Swish around
 - Pour into the wash tub
 - Swish around
 - Pour into the grunge tub
 - Swish around
 - Strain the grunge
- Dump strainer into the trash

CAMP: OTHER CAMP LIVING

- Trash and cans
- Fires
- Groover
- Living room

CAMP: TRASH AND CANS

- Storage of trash and cans

Item	Req'd qty	Have	R1	R1-P	R2	R2-P	R5	R5-P	R6
Person			Dave	Mary	Harry	Ginny	Sirius	Neville	Remus
Trash and Cans									
Can smashing station (mallet, rocket box for smashed cans)	1	2	mallet						1
gunnie sack/boxes for cans							2		2
Rocket boxes for trash	4								
Trash bags (13 gal)	every cook		y						

CAMP: TRASH AND CANS

- Each cook group brings trash bags (compactor bags) and rocket boxes to store trash
- Mallet to crush cans
- Who hauls the cans?
 - Rocket box and/or burlap bag
- Who teaches the can crushing technique and acts as crushing police?

CAMP: FIRES

- Firepan, blanket and tools
- Carry firewood?

Item	Req'd qty	Have	R1	R1-P	R2	R2-P	R3	R3-P	R4	R4-P	R5
Person			Dave	Mary	Harry	Ginny	Dumbledore	Hermione	George	Fred	Sirius
Fire											
Fire pan, blanket, grille, tools, tongs, gloves, Dutch Oven holder, steel brush, shovel, channel locks.	1	0	blanket				elvatd pan				
Charcoal, starter	each group		y								
Saw?		X									
Ash box	1	0									1
Firewood *(large bag, boxes, fill empty groovers where possible)	As much as each raft can carry	X	group voted on no firewood								

CAMP: FIRES

- Bring own firewood March 1 through October 31
- Can collect driftwood from beaches November 1 through end of February
- Need fire pan – 300 sq inches, 3" lip, elevated with legs.
 - Required Nov 1 through end of February, if having wood or charcoal fires
- Briquettes may be in firepan 12"x12"x3"
- Fire blanket required, at least 60" x 72"
- Burn combustibles from kitchen
- Where to store ashes

CAMP: FIREPAN



CAMP: LIVING ROOM

- Rain or shine?

Item	Req'd qty	Have	R1	R1-P	R2	R2-P	R3	R3-P
Person			Dave	Mary	Harry	Ginny	Dumbledore	Hermione
Living Room								
Rain tarp (20x20 Big Duck II)	1	0			Big Duck			
mid size parawing	1	0	Noah (12'x12')					
Chairs	ind resp.		1	1	1	1	1	1
wind screen?	0	0						

- Tarp for rain
 - If needed
- Tarp for sun
 - When needed

CAMP: LIVING ROOM



CAMP: LIVING ROOM



CAMP: GROOVIN'

- Groover and supplies

Item	Req'd qty	Have	R1	R1-P	R2	R2-P	R3	R3-P	R4	R4-P	R5	R5-P	R6
Person			Dave	Mary	Harry	Ginny	Dumbledore	Hermione	George	Fred	Sirius	Neville	Remus
Groover													
Supply box includes toilet seat & supplies (TP, sanitizer, soap, wipes, wipe disposal bag or box)	1	0			1				Mgr				
Groover boxes	7	10			2		1			3	2		2
Rolls of TP (total of 40 rolls)	22	22			22								
Pee bucket 5 gal	recommend ind.	1							1				
Wag Bags for day use	32	33			32				1				

- Smaller groover setup?
Wag Bags?

CAMP: GROOVIN'

- Groover boxes (rocket boxes)
 - # people x 1 use per day x # of days / 60 uses per rocket box
 - $16 * 1 * 20 / 60 = 5.33 \rightarrow 6$ boxes
- Big pee bucket (5 gal)
- Signal and markers
- Supplies (rocket box); stores:
 - Toilet seat
 - Several rolls of toilet paper; divide the rest among different rafts
 - Wipes and separate disposal container
 - Hand cleaners
- Daytime groover or Wagbags
- Individual nighttime pee buckets

CAMP: GROOVER SETUP

- Take supplies and groover box to location
 - Without pee bucket, locate next to the river
 - With pee bucket, can locate anywhere
- Arrange supplies and rocket boxes
- Need sidewalls for privacy?
- Mark trail to the groover
- Place “occupied” signal and handwashing station at start of the trail
- Tell everyone where it is

P: GROOVER LOCATIONS



SAFETY CONSIDERATIONS

- On the river
- Medical
- Rescue equipment
- Evacuations

SAFETY: ON THE RIVER

- Communicate intentions
- Review signals: stop, go left, go right, eddy out, come on down
- See the boat in front of you
 - If can't see, move faster
- See the boat behind you
 - If can't see, stop

SAFETY: MEDICAL

- Individual 1st aid kits
 - See Regulations for injury stabilization, relief of discomfort.
- What's in the Major Medical Kit?
- Medical, insurance and contact information for participants
- Injuries
 - Assessment by a designated medical officer of concerns
 - JW: person with renal stone was evaluated at Phantom Ranch, felt better, then had recurrences at Randy's Rock and Upper Owls Eye
- When to evacuate

RESCUE: EQUIPMENT

- Who will have rescue kits? In which boats?

Item	Req'd qty	Have	R1	R1-P	R2	R2-P	R3	R3-P	R4	R4-P	R5
Person			Dave	Mary	Harry	Ginny	Dumbledore	Hermione	George	Fred	Sirius
Mandatory Rescue											
Rescue kit: What's in it? Static rope, prusics, carabiners, pulleys? Need 1 or 2?	1	0					1		pulley		1
Orange Panels	1 set	1			1						
Signal mirror	1	1			1						
Satellite Phone/Ground-to-air transceiver	1	0			In reach		sat phone	In reach			

RESCUE: BOAT FLIPS

- Boat flips
 - Prepare ahead of time
 - Set up rescue boats at the bottom/middle of difficult rapids
 - Plan procedure to flip
 - Communication with the crew during the process

RESCUE: LOGISTICS OF EVACUATION

- Communication with Rim World
 - Satellite phone, ground-to-air transceiver, inReach
 - Signal mirror
- Location for evacuation
 - Where on the river?
 - 15'x15' space
- Orange markers
- Wet the sand
- Rotor downwash – stay 100 ft away

RESCUE: EVACUATION COST

- Take a phone calling card or credit card
- Inner canyon helicopter covered by the “tax payer”
- Ground transport and supporting commercial aeromedical transportation is the financial responsibility of patient
- If the passenger is unable to pay, the Trip Leader/ permittee will be responsible for the cost
- Check your insurance policy

OTHER GEAR

- Other gear? Games?

Item	Req'd qty	Have	R1	R1-P	R2	R2-P	R3	R3-P	R4	R4-P	R5
Person			Dave	Mary	Harry	Ginny	Dumbledore	Hermione	George	Fred	Sirius
Other											
Solar charger	1	1			1						
Extra dry bags	1	0									y

- Bring extra items, e.g., dry bags and extra outerwear, to the put-in

ITINERARY: LENGTH OF TRIP

Maximum Noncommercial Trip Length in Days

Launch Date	Lees Ferry to Diamond Creek Include 1 st and Last Days in Count		Diamond Creek to Lake Mead (Max Nights for each section)		
	Noncommercial Motor	Noncommercial Oar	Diamond Creek to Separation (Zone 1)	Separation Canyon to RM 260 (Zone 2)	RM 260 to Lake Mead (Zone 3)
Jan-Feb	0 – not allowed	25	1	2	2
Mar	0 – not allowed	21	1	2	2
Apr	12	21	1	2	2
May-Aug	12	16	1	1	1
Sep 1-15	12	18	1	1	1
Sep 16-30	0 – not allowed	21	1	1	1
Oct	0 – not allowed	21	1	2	2
Nov-Dec	0 – not allowed	25	1	2	2

ITINERARY: OPTIONS

- Layover days
- Crew exchanges at Phantom Ranch
 - Additional logistics
 - March 1-October 31, all camps below Hance Rapid to below Pipe Creek Rapid are designated Phantom Exchange Camps. Layovers prohibited
 - Coordinate camping with other exchanging groups
 - If no exchanges, no camping there

ITINERARY: STOPS AND CAMPS

River Mile	Type	Name	Notes	River Mile	Type	Name	Notes
0	Camp	River Camp	Night before launch	137	Camp or Stop	Deer Creek Falls	Waterfall. Amazing hike thru slot canyon to the Patio to the Throne Room and on through Surprise Valley to Thunder River
	Vw frm bt	Rt 89A Bridge	Condors	138	Camps	Football field	Nice camp after Deer Creek Falls, big beach, several camps
11	Camp	Soap Creek	Damn! We're in camp on the river in the Grand Canyon. Small camp	148	Camp/stop	Matkatamiba	Great slot canyon wet hike to amphitheater, small but fun camp below, can access the slot canyon from camp; hard eddy catch
21	Camp	North Canyon	Nice camp, nice hike	152	Camp	Ledges 2	Classic camp on limestone ledges, sets up for Havasu
Roaring 20s--watch out for the monster laterals				157	Stop	Havasu	Otherwise known as Havazoo; fun!; hard eddy-catch
32	Camp/layover	South Canyon	Drop dead gorgeous with nice hikes, short and long (cave)	165	Camp	Tuckup	Great camp with major canyon hike
32	Stop/fill water	Vasey's Paradise	Poison ivy	175	Camp	Lower Cove	Nice camp, sets up to run Lava early
33	Stop	Redwall Cavern	Frisbee and music		Vw frm bt	Vulcan's Anvil	Monolith in middle of river
35	Stop	Nautiloid	Short hike/climb to fossils	180	Stop	Lava Falls	Only 20 seconds long, but get your entry right! Scout right
40	Stop	Marble Canyon Dam site	Hike in a tunnel, a long way nice luch stop after camp at South Canyon	180	Stop	Tequila Beach	Recovery, celebration
43	Vw frm bt	Anasazi Bridge	Amazing!	188	Camp	Whitmore wash	Nice camp with hike
44.5	Camp	Eminence	Hike through big fault to the rim	193	Camp	192.8 mile	Nice camp
47	Camp	Saddle Canyon	Amazing hike up side canyon, though was washed out several years ago	199	Camp	Parashant	Nice camp with hike, Book of Worms
50	Camp	Dinosaur	Long distance hike available, nice big camp	202	Camp	Two Hundred and Two Mile	Nice camp
53	Camp	Nankoweap	Classic hike to granery, multiple camps, "main" is best; ruins	205	Stop	Spring Canyon	Refill water
62	Stop	Little Colorado River	Lots of rules	209	Camp/layover	Granite Park	Nice camp, amazing view and hikes
65	Camp	Carbon	One end of amazing hike up, across, and down Lava Canyon		Rapid	Mile 209	
66	Camp	Lava Canyon	The other end			Three Spring Creek	Water
69	Stop	Tanner	Petroglyphs	213	Stop	Pumpkin Springs	
72	Camp	Upper Unkar	Nice camp with hike to Unkar Delta lots of ruins		Stop	Diving Board	
Inner Gorge					Stop	Heart Rock??	
82	Camp	Grapevine Rapid	Unique camp in the black inner gorge	220	Camp	Gorilla	Nice camp
	Vw frm bt	Storage door	Cable and storage door	222	Camp	Two Hundred and Twenty-Two Mile	
88	Stop	Phantom Ranch	Early departure needed to snag camp at Granite Rapid or proceed to camp above Crystal Rapid; water	226	Pass Diamond Creek, do not stop, collect 3 more days of river time		
94	Camp	Granite Rapid	Big nice camp, sets up for Bass Camp	226.2	Camp	Two Hundred and Twenty-Six.2 Mile	Hard eddy catch; hot breeze where we camped
	Rapid	Crystal Rapid		235	Camp	Bridge Canyon	Hualapai land
The Jewels						Killer Fang Falls	Monster lateral; busy rapids in narrow gorge, half day
109	Camp/layover	Bass Camp	Wonderful camp with great hike into Shinumo Creek; hot breeze where we camped	240	Stop, small camp	Separation Canyon	Hike to Cenotaph for the Powell dudes that split off and were killed
		Shinumo Creek	Granary and Bass camp up Shimumo Creek; waterfall	246	Camp	Spencer Canyon	Hualapai land
110	Camp	110 mile	Nice camp if Bass is full	248	Camp	Surprise Canyon	Small camp on river right, hike
117	Stop	Elves Chasm	Waterfall		Camp	Surprise Canyon	Nice camp river left
121	Stop or camp	Blacktail	Marvel at the exposed great unconformity in Blacktail Canyon	The big row down the lake day through the lake bed sediment canyon, the silt flats			
Lots of camps below, then none for a long way					Vw frm bt	Hualapai Skywalk	Helicopters, cables on side of river
131	Stop	Bedrock Canyon	Rapid, lunch, nice hike to balanced rock	273.7	Camp	Small camp	Very small for 16, past the Hualapai by 0.1 miles
	Camp		Waterfall, big beach	279	Camp	Mile 279	Hard to find in brush
133	Camp	Stone Creek	Nice beach below Duebbendorf Rapid		Stop	Columbine Falls	Waterfall
134	Stop	Tapeat's creek	Filter water, hike to Thunder River; hike upstream	280	Camp	Mile 280	Non-existent in 2018
135	Camp	Owl eyes	Nice beach camp below Tapeats, above Deer Creek	280	Take-out	Pearce Ferry Ramp	
				281	After take-out	Pearce Ferry Rapid	Class 10 in 2018, worth the hike

ITINERARY: TAKE-OUT

- Diamond Creek
 - River mile 226
 - Diamond Creek Road hard on vehicles; potential flash flooding during monsoons; winter conditions.
 - Shuttle fee: \$65.00 per person, per driver, and per vehicle – check for current rate.
- Pearce Ferry
 - River mile 280
 - Two extra days.
 - Shuttle: 60 miles further; better condition; 5 miles of dirt road.
 - Shuttle returns later
 - Where to camp
- Lake Mead
 - Not an option at this time due to Pearce Ferry Rapid

AFTER TRIP

- Groover cleanout
 - Scat machine in Meadview, AZ; see Regulations
- Gastrointestinal Illness Report Form
- Incident Report Form
- Group Expenses

EXPENSES

- What are group expenses?
 - Usually shuttle, food, group supplies (kitchen and groover), major med kit, group gear repair
 - McPatt trip: Individual raft gear (i.e., oars) were included, though no damage occurred; some repair to filter and kitchen pot
- A sample copy of the group expense and reconciliation spreadsheet is on the Adobe Whitewater Club website.

EXPENSES: VEHICLES

- Coordinating transport of rafts to and from the canyon
- Shuttle
 - How many vehicles?
 - Comfort with others driving your vehicle
 - Shuttle fee, tips and gas money
- Shuttle companies
 - River Runners Shuttle Service (rrshuttleservice.com)
 - GrandCanyonShuttles.com
 - CanyonREO.com
 - CEIBA.com

EXPENSES: PER PERSON

Notes	Please check the data entry (green cells) and my formulas. Get back to us by tomorrow, Tuesday, December 11 with corrections or questions. Mary will finalize figures and re-send if there are changes.																
	Legend																
	Green Data entry																
	Red/orange Special circumstances																
	Maroon Formula																
	Blue Value comes from somewhere else; look there																
	Lavender Notes																
PARTICIPANT TRIP EXPENSES																	
	R1	R1-P	R2	R2-P	R3	R3-P	R4	R4-P	R5	R5-P	R6	R6-P	R7	R7-P	R8	R8-P	Totals
	Dave	Mary	Harry	Ginny	Dumbledore	Hermione	George	Fred	Sirius	Neville	Remus	Hagrid	Ron	Luna	Mr. Weasley	Mrs. Weasley	and Checks
Permit fees	180.00	0.00	90.00	90.00	90.00	90.00	90.00	0.00	90.00	90.00	180.00	0.00	180.00	0.00	180.00	0.00	1,530.00
Extra permit fee	180.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Food	265.83	0.00	602.70	551.03	247.29	654.78	382.91	0.00	272.21	272.21	272.21	272.21	377.35	170.79	0.00	509.61	4,851.13
Shuttle	427.46	0.00	455.00	0.00	438.00	0.00	0.00	0.00	107.75	107.75	107.75	107.75	0.00	0.00	0.00	0.00	1,751.46
Kitchen repairs	0.00	0.00	0.00	0.00	58.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	58.33
Filter repair	0.00	0.00	82.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	82.00
Medical kit	0.00	0.00	0.00	0.00	0.00	0.00	61.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	61.76
Paid so far	1,053.29	0.00	1,229.70	641.03	833.62	744.78	534.67	0.00	469.96	469.96	559.96	379.96	557.35	170.79	180.00	509.61	8,334.68
Total Trip	8,334.68	(Total trip per person: 520.92)															
FY: Food Group Totals	1,419.56				1,284.98				1,088.84				1,057.75				4,851.13
Reconciliation	D&M										B&B						
Trip share	1,041.83		520.92	520.92	520.92	520.92	520.92	520.92	520.92	520.92	1,041.83		520.92	520.92	520.92	520.92	8,334.68
Already Paid	1,053.29		1,229.70	641.03	833.62	744.78	534.67	0.00	469.96	469.96	939.92		557.35	170.79	180.00	509.61	8,334.68
To Pay								520.92	50.96	50.96	101.91			350.13	340.92	11.31	1,427.10
Due Back	(11.45)		(708.78)	(120.11)	(312.70)	(223.86)	(13.75)						(36.43)				(1,427.10)

- 2018 McPatt trip cost: \$521 per person.
- Compared to a private 2012 trip, outfitted: \$1358 per person.

EXPENSES: PRIVATE PREP OR OUTFITTED

- Rental options include:
 - Everything (boats, food, rescue gear, groover, etc.)
 - Kitchen only
 - Rescue gear only
 - Groover
 - Boats only
- Outfitters: PRO, Canyon REO, Cieba, Moenkopi

EXPENSES: OUTFITTER EXAMPLES

<i>Company</i>	<i>Package</i>	<i>Low</i>	<i>High</i>	<i>Desc</i>
Ceiba	Whole Shabang		\$14,843.00	1-8 boats, equipment, food and shuttle kitchen box, stove, blaster, Dutch ovens griddle, utensils, drying net hand wash system, kitchen tarps., etc.
	Kitchen only	\$455.00		
	Boats only	\$647.50	\$875.00	per boat
	Food only	\$304.00	\$416.00	per person
Canyon REO	Full Package		\$14,800.00	
	Kitchen only	\$550.00	\$1,100.00	
	Ala Carte	\$250.00		
	Raft	\$560.00	\$832.00	raft only v. raft package
Professional River Outfitters	Raft	\$656.00	\$880.00	16' and 18' oar rigs
	Food	\$560.00	\$720.00	Price per person
Moenkopi				
Most prices here are for a 16-day trip.				

EXPENSES: COMMERCIAL TRIPS

- Hatch River Expeditions
 - \$3297 per person, 7 days
- Western River Expeditions
 - \$2950+, 7 days
- Grand Canyon Expeditions
 - \$3209, 9-day
 - \$4715, 16-day dory



2018/09/07



THANK YOU!

Questions?