M0TE Environmental Adventures

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Introduction

I felt that the D20 Modern source book left a giant hole where outdoor adventuring was concerned. The authors seemed to presume that pc's would "fly there in a jet or, if it's rough terrain, a helicopter".-*Reginald V Blue*. This seemed to ignore any genre where overland travel by foot or beast was still a standard, such as our beloved Post-Apocalyptic setting. In addition, the core rules overland material seemed lacking and also not genre specific enough to be used as-is. Some of the material presented within this document is not strictly 'outdoor' specific, but are related enough to material that is, that I decided to include it. I have made several rules changes and additions to the standards set in the existing core rules and notable source books. Some of these rule changes or additions require additional bookkeeping. As a GM you will have to make the decision whether or not the additional bookkeeping weighed against game play is worth its value added as a game supplement. In other words…is it worth it just to make your campaign more realistic?

The New Hazard: Fatigue

You may notice a theme throughout this system supplement. Fatigue plays a far more prominent role in actual game play. No longer is it a backwater condition for special occasions. Fatigue should play a bigger role in everyday campaign processes if you desire a slightly more realistic approach to wandering the wild and dangerous wastelands.
Players can gain fatigue for moving through certain terrains, or weather conditions, and for not consuming the required amounts of liquids and food as well. Fatigue, if not a big enough motivator for prudent game play will eventually turn to exhaustion, and that should get some players attention real quick. Fatigue effects are scattered throughout the text of this document, and then repeated in many cases in the Fatigue System section for clarities sake.

Movement

Rules Changes or Additions:
I have made some changes to the overland travel rules in the core rules that need some explanation, as it affects potential travel and rest rates.
While traveling overland, things like encounters and traveling without searching or stopping are handled in 'periods'. Each period is eight(8) hours long. For each period a GM determines if there is an 'encounter' or 'event' and how far the pc's have traveled over a given terrain type for that period.
Traveling two consecutive periods automatically incurs the 'fatigue' penalty as in the core rules. Unlike the core rules it is possible to travel more than a single period in a day, given the day is twenty-four(24) hours long and thus comprises 3 periods. As long as pc's maintain at least one(1) rest period between traveling periods they may travel twice(2X) in any given day.
Travel in this manner is still not without its penalties. PC's accumulate d6 'fatigue points' for each period they travel beyond the first during any given day. Once these fatigue points exceed any pc's Constitution score, that pc suffers the full effects of the fatigue status. Over time traveling in this way would be tiring.

No pc may loose fatigue points in a period where he or she is gaining fatigue points.

Traveling over certain terrain types or being subject to some weather events may also incur a fatigue point accumulation. Each pc must make a Survival skill (or Fortitude if not using that skill) check vs the terrains or weather events DC value each travel period or incur the travel penalty and the fatigue point accumulation. If <u>ALL</u> pc's make their save vs the DC of the terrain, they do not incur ANY travel distance penalties during that travel period. i.e. all distances covered are X1 no matter what the typical travel penalties are on the chart. The movement penalties associated with weather events cannot be saved against in this manner. Any given group can only travel as fast as their slowest member, unless they wish to leave a slower member behind. See Terrain Chart for particulars.

Standards:

Walk: move rate	Run: 3X move rate
Jog(hustle): double move rate	Sprint: 4X move rate

1 round = 6 seconds	1 mile PHB = 6000ft (used for movement figures)
1 period = 8 hours	1 mile English Standard = 5280ft

Base Move Rate

	10	15	20	25	30	35	40
One Minute:							
Walk	100'	150'	200'	250'	300'	350'	400'
Jog	200'	300'	400'	500'	600'	700'	800'
Run	300'	450'	600'	750'	900'	1050'	1200'
Sprint	400'	600'	800'	1000'	1200'	1400'	1600'
One Hour:							
Walk	1m	1.5m	2m	2.5m	3m	3.5m	4m
Jog	2m	3m	4m	5m	6m	7m	8m
Run	-	-	-	-	-	-	-
One Period:							
Walk	8m	12m	16m	20m	24m	28m	32m
One Day:							
Walk	8m	12m	16m	20m	24m	28m	32m
(2nd period)	16m	24m	32m	40m	48m	56m	64m
Jog	-	-	-	-	-	-	-
Run	-	-	-	-	-	-	-

Factors Effecting Base Movement:

Terrain

Base Terrain - DC	Plains -8	Hills-10	Coastal-10	Forest-12	Desert –12	Swamp-16	Mountains -16	Ruins-16
Hampering Terrain	**Movement Modifier**							
Highway	X1	X1	X1	X1	-	X1	X.75	X1
Road/Trail	X1	X1	X.75	X1	-	X.75	X.5	X.75
Grassland	X1	X.75	X.75	X.5	X.5	X.5	X.5	X.5
Wooded/Scrub	X.75	X.5	X.5	X.5	X.5	X.25	X.25	X.25
Sandy*	X.75	X.25	X.25	X.25	X.5	-	X.25	X.25
Mud/Snow*	X.5	X.25	X.25	X.25	-	X.25	X.25	X.25
Flooded/Marsh	X.5	X.5	X.25	X.25	-	X.5	X.25	X.25
Rocky/Rough/ Volcanic	X.75	X.5	X.25	X.25	X.25	-	X.25	X.25
Arid/Barren/ Deathland	X1	X.75	X.75	X.5	X.75	-	X.5	X.5
Jungle*	X.5	X.25	X.25	X.5	-	X.25	X.25	X.25
Ice/Slick	X.75	X.25	X.5	X.25	X.25	X.25	X.25	X.25

* In addition gain d6 fatigue points per travel period where condition exists for 1/2 or more of the time traveled

- All terrain movement penalties are combined (+) with Weather Hazard movement penalties or subtracted from total movement.

Consult the Weather Events Charts for further factors effecting movement.

Overland Events

As stated, each 8-hour period the GM needs to determine what, if anything happened. The GM rolls a d20 against the terrain type the pc's are traveling through or camping in. A result equal to or less than the indicated DC value results in a potential 'Event', the GM then rolls a d10 and consults one of the following tables depending on the characters status.

Traveling or Search Movement Events
D10   Event

1-2   Obstacle/Hazard *(table 1)*
3-5   Encounter *(table 2)*
6   Omen *(table 3)*
7-9   Nothing *(you ALMOST had an event)*
10   Trail/Road *(table 4)*
Consult the associated sub-table for specifics.

Camping Events
D10   Event
1-8   Nothing (you ALMOST had an event)
9-10   Encounter (*table 2*)
Consult the associated sub-table for specifics.

Table 1
Obstacles and Hazards Chart:
*This event may require some GM interpretation and imagination. If you do not possess these qualities simply ignore the Obstacles and Hazards results on the Events Chart or substitute as desired.

Roll   **Event**
D100
1-2   Toxin Hazard (see Toxin Hazard Chart)
3   Exposure to Disease (see the Physicians Handbook chapter)
4-5   Radiation Hazard (see Radiation Hazard Chart-Usually around an ancient site, but could be a stray)
6   Automated Defenses (see Automated Defenses Chart table 1b)-usually around an ancient site)
7-8   Trap (refer to Traps Chart (table 1c)-Traps would indicate an intelligence set them)
9   Triggered Explosion (see Explosions Chart (table 1d)-May be new or ancient)
10-12 Poisonous Plant (Poison Plant Charts (table 1e)-Probably not on a frequented trail)
13-22 Weather Event (see Weather Hazards Chart)
23-25 Travel in Wrong Direction
26-28 Tech Item Dramatic Failure
29-31 Caught in Giant Abandoned Webs
32-35 Lost
36-38 Found an Uninhabited/Abandoned Dwelling
39-41 Found an Artifact
42-45 Found and Ancient Site
46-48 Pit or Hole on Trail
49-51 Wall
52-54 Cliff, Up
55-58 Ancient Vehicle Wreck
59-62 Tangle of Plant Life
63-65 A Giant Dead Creature
66-72 Tree in Path
73-75 Water Fall
76-78 Stream
79-81 Landslide
82-84 River
85-87 Cliff, Down
88-90 Flooded
91-93 Mudslide
94-96 Crater
97-100 Pool/Pond/Lake

Table 1b
Automated Defenses Chart:
Does not include sentient or non sentient mobile units, which can be found in the encounter tables

Roll D100	Structure	AC	HP	Damage	Notes	Hardness	Range	DC
1-30	MachineGun Pillbox	18	50	6d6	50degarc	5	60	12
31-38	Autocannon Pillbox	18	50	12d6	50degarc	5	100	12
39-55	MachineGun Turret	17	60	6d6	360deg	5	60	14
56-60	Autocannon Turret	17	60	12d6	360deg	5	100	14
61-65	Laser Turret	17	60	3d6	360deg	5	120	14
66-78	StunBox	14	40	Stun	360deg	5	10'	16
79-95	Stun Turret	16	60	Stun	360deg	5	40	20
96-100	Gatling Turret	17	60	6d6	360deg	5	50	14

Table 1c
Traps Chart:

D30	Trap	DC	Damage	Special Effects	Range/Area
1	Gas-Knockout	d12+4	-	Unconscious	10-20'
2	Pit	d12+4	1d6/10'	-	-
3	Spiked Pit	d12+4	1d6/10'+1d6	-	-
4	Fire Pit	d12+4	1d6/10'+1d6rnd	-	pit
5	Quick Sand	d12+4	-	Suffocate	5'
6	Snare	d12+4	-	Entangled	5'
7	Net Snare	d12+4	-	Entangled	10'
8	Dead Fall	d10+4	1d6	Dazed/Pinned	5'
9	Acid-Splash	d12+6	1d6/1d4rnds	-	5'+5'
10	Blade Slash	d12+4	1d6	-	5'
11	Mini-Missiles	d12+6	2d6/missle	-	120'/5'
12	Oil Fire	d10+2	1d6/round	-	10'
13	Contact Poison	d12+d8	1d6/1d4rnds	-	-
14	Crushing Room	d12+8	1d6/round	Pinned	room
15	Poison Needle	d12+d8	-	Unconscious	-
16	Flooding Room	d12+8	-	Drown	room
17	Explosive	as Explosives Chart		-	-
18	Neural Snare	d12+4	-	Mental Paralysis	10'
19	Sonic Snare	d12+4	1d6	Stunned	20'
20	Energy Beam	d12+6	2d6	-	30'
21	Audible Alarm	d12+4	-	Encounter	120'
22	Inaudible Alarm	d12+4	-	Encounter	special
23	Animal Pit	d12+4	as animal	Encounter	-
24	Pheromone Snare	d12+4	-	GM select condition	20'
25	Stun Ray	d12+6	-	Unconscious	30'
26	Electrical	d12+6	2d6	Stunned	5'
27	Catapult	d12+4	1d6/10'	Fall/launch d6x10'	5'
28	Slide	d12+4	-	Relocate	10-40'
29	Paralysis Gas	d12+8	-	Paralyzed	10-20'
30	Boiling Water	d12+4	1d4/2 rounds	-	10'

Table 1d
Explosion Chart:
Explosives suffer some changes as well from the standard D20 Modern rules.

D10	Type	DC	Damage	Special Effect	Range/Area
1	Photon	d12+4	-	Blinded	Sight
2	Plasma	d20+8	6d6	-	10'
3	Sonic	d12+4	1d6	Stunned	30'
4	Shrapnel	d12+4	4d6	-	20'
5	Concussion	d14+4	1d6	Stunned	10'
6	Napalm	d14+6	3d6+1d6/rnd	dur = d4 rounds	10'
7	Gas -Knockout	d12+4	-	Unconscious	10-20'
8	Gas -Damaging	d12+4	1d6+1d6/rnd	dur = d4 rounds	10-20'
9	Restraining	d14+6	-	Entangled/Pinned	10'
10	EMP	d20+8	1d6	Stunned-d4rounds	20'
	Roll on Table 1d_1 for triggering device				

Table 1d_1

Explosives and Traps Triggers:

D10	Trigger
1	Fuse Chord
2	Trip Wire
3	Motion Sensor
4	Chemical Sensor
5	Mechanical
6	Pressure
7	PhotoElectric
8	Heat
9	Vibration
10	Audio

*Optionally the Traps supplement can be used. Refer to that document.

Table 1e

Poison Plants:

D6	Type	Area
1	Vines/Creepers	d100sqryrds
2	Bush	10'sqr
3	Tree	20'sqr
4	Flowers	d30sqryrds
5	Algae	d10sqryrds
6	Fungue	d20sqryrds

* Refer to poison section for plant specifics

Table 2

Encounter Tables:

*These tables reflect some campaign specific preferences and may have to be adjusted to fit your campaign. For those who would like to see and/or use my encounter system you can download the tables at – (uncompleted component)

D100	Table	Source
1-25	Animal Encounters	
	1-75	Mammal
	76-85	Insect
	51-75	Avian
	86-100	Reptile/Amphibian
26-75	Monster Encounters	
	1-50	MonsterManual II
	26-50	MonsterManual
	51-75	GammaWorld Tables
	76-100	Fiend Folio Tables
76-100	Intelligent Encounters	

Table 3
Omens Chart:
*This event requires some GM interpretation and imagination. If you do not possess these qualities simply ignore the Omens results on the Events Chart or substitute as desired.

Roll D20	Event
1	Blood Red Moon
2	Eclipsed Sun
3-4	Cloud in the shape of something
5	Flaming Bush
6-7	A Painted Sign Warning
8-9	Blood Stains
10-11	Eerie Cries
12	Charred Remains
13	Wreckage
14	Dead Body
15	Battle Site
16	Wagon Wreckage
17	A Glint of Metal
18	A Monument
19	A Recent Cryptic Note or Letter
20	Glimpse of unnatural movement

Table 4
Trail or Road Chart:
If your campaign has no room for a random settlement or kept roads and trails, ignore or change the results of this roll to suit your needs.

Roll D20	Event
1-12	Game Trail 50% leads to potable water Will almost always lead away from civilized communities or dangerous areas.
13-17	Community Trail 75% leads to a community 25% will lead potable water
18-19	Wagon Path(Road) 50% leads to a distant community 50% leads to a local community
20	Ancient Road 75% will lead to an ancient city location

Weather

Prevailing Wind Direction (D8)

(8)NW   (1)N   (5)NE

(3)W   (4)E

(7)SW   (2)S   (6)SE
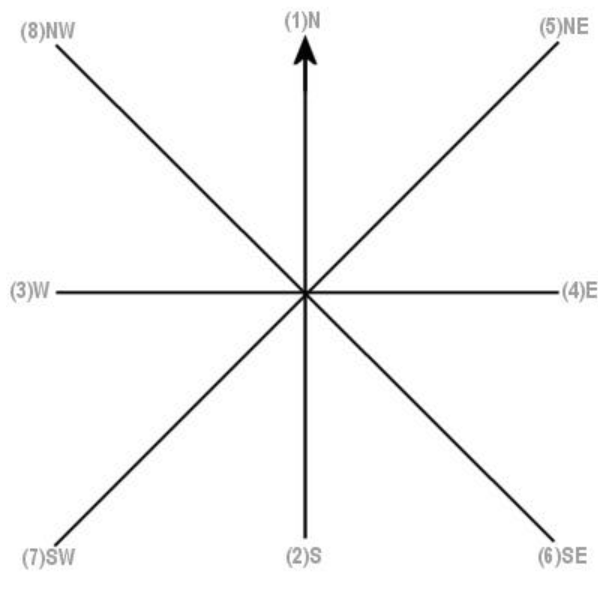
Daily Weather Chart : Temperate North (median 45deg North)

Season	Spring	%	Summer	%	Fall	%	Winter	%
Temperature	**45°**	1-50	**65°**	1-40	**45°**	1-35	**28°**	1-50
	+D12	51-76	+D20	41-78	+D20	36-80	+D8	51-70
	-D8	77-100	-D8	79-100	-D6	81-100	-D10	71-100
Wind	**10mph**	1-50	**10mph**	1-40	**8mph**	1-40	**8mph**	1-35
	+D10	51-74	+D8	41-50	+D8	41-55	+D10	36-65
	-D10	75-100	-D10	51-100	-D8	56-100	-D8	66-100
Cloud	**Partial**	1-50	**Partial**	1-55	**Cloudy**	1-50	**Cloudy**	1-55
	Clear	51-75	Clear	56-78	Partial	51-80	Partial	56-80
	Cloudy	76-100	Cloudy	79-100	Clear	81-100	Clear	81-100
~Rain/Fog		20/+10		8/+2		15/+10		70/+15
	Cloudy	+20	Cloudy	+10	Cloudy	+20	Cloudy	+25
	Pcloudy	+10	PCloudy	+5	PCloudy	+10	PCloudy	+15
	Light	1-45	Light	1-60	Light	1-40	Light	1-30
	Medium	46-80	Medium	61-90	Medium	41-80	Medium	31-70
	Heavy	81-100	Heavy	91-100	Heavy	81-100	Heavy	71-100
~Snow	**Rain to Snow**	30	**Rain to Snow**	0	**Rain to Snow**	40	**Rain to Snow**	85
*Special Weather Event	**See Weather Hazards**	5	**See Weather Hazards**	5	**See Weather Hazards**	8	**See Weather Hazards**	10

~ If a roll indicates rain or snow, temperature automatically drops, so simply roll the negative temperature modifier indicated.
*Roll for this event first or ignore and use Events Charts or combine for more fun

Daily Weather Chart : Equatorial Wet (median 0deg)

Season	Spring	%	Summer	%	Fall	%	Winter	%
Temperature	**70°**	1-50	**80°**	1-40	**70°**	1-40	**60°**	1-40
	+D12	51-76	+D12	41-84	+D12	41-75	+D10	41-80
	-D6	77-100	-D4	85-100	-D6	76-100	-D6	81-100
Wind	**4mph**	1-50	**4mph**	1-40	**2mph**	1-40	**6mph**	1-40
	+D10	51-74	+D8	41-50	+D8	41-55	+D10	41-75
	-D4	75-100	-D4	51-100	-D2	56-100	-D6	76-100
Cloud	**Partial**	1-35	**Partial**	1-30	**Cloudy**	1-50	**Cloudy**	1-55
	Clear	36-75	**Clear**	31-65	**Partial**	51-80	**Partial**	56-70
	Cloudy	76-100	**Cloudy**	66-100	**Clear**	81-100	**Clear**	71-100
~Rain/Fog		15/+10		25/+5		15/+10		10/+15
	Cloudy	+10	**Cloudy**	+20	**Cloudy**	+10	**Cloudy**	+5
	Pcloudy	+5	**PCloudy**	+10	**PCloudy**	+5	**PCloudy**	+0
	Light	1-60	**Light**	1-30	**Light**	1-50	**Light**	1-70
	Medium	61-85	**Medium**	31-80	**Medium**	51-80	**Medium**	71-90
	Heavy	86-100	**Heavy**	81-100	**Heavy**	81-100	**Heavy**	91-100
~Snow	**Rain to Snow**	0	**Rain to Snow**	0	**Rain to Snow**	0	**Rain to Snow**	1
*Special Weather Event	**See Weather Hazards**	5	**See Weather Hazards**	5	**See Weather Hazards**	8	**See Weather Hazards**	10

~ If a roll indicates rain or snow, temperature automatically drops, so simply roll the negative temperature modifier indicated.
* Roll for this event first or ignore and use Events Charts or combine for more fun

Daily Weather Chart : Equatorial Dry (median 0deg)

Season	Spring	%	Summer	%	Fall	%	Winter	%
Temperature	**70°**	1-50	**85°**	1-40	**70°**	1-40	**60°**	1-40
	+D20	51-76	+D20	41-84	+D20	41-75	+D10	41-80
	-D6	77-100	-D4	85-100	-D4	76-100	-D10	81-100
Wind	**6mph**	1-50	**2mph**	1-40	**4mph**	1-40	**6mph**	1-40
	+D10	51-74	+D10	41-50	+D8	41-55	+D10	41-75
	-D6	75-100	-D2	51-100	-D4	56-100	-D6	76-100
Cloud	**Partial**	1-35	**Partial**	1-30	**Cloudy**	1-50	**Cloudy**	1-55
	Clear	36-75	**Clear**	31-65	**Partial**	51-80	**Partial**	56-70
	Cloudy	76-100	**Cloudy**	66-100	**Clear**	81-100	**Clear**	71-100
~Rain/Fog		15/+5		5/+0		15/+5		10/+5
	Cloudy	+5	**Cloudy**	+0	**Cloudy**	+10	**Cloudy**	+5
	Pcloudy	+0	**PCloudy**	+0	**PCloudy**	+5	**PCloudy**	+0
	Light	1-70	**Light**	1-80	**Light**	1-50	**Light**	1-70
	Medium	71-95	**Medium**	81-99	**Medium**	51-80	**Medium**	71-90
	Heavy	96-100	**Heavy**	100	**Heavy**	81-100	**Heavy**	91-100
~Snow	**Rain to Snow**	0	**Rain to Snow**	0	**Rain to Snow**	0	**Rain to Snow**	5
*Special Weather Event	**See Weather Hazards**	5	**See Weather Hazards**	5	**See Weather Hazards**	8	**See Weather Hazards**	10

~ If a roll indicates rain or snow, temperature automatically drops, so simply roll the negative temperature modifier indicated.
* Roll for this event first or ignore and use Events Charts or combine for more fun

Daily Weather Chart : Temperate South (median 45deg South)

Season	Spring	%	Summer	%	Fall	%	Winter	%
Temperature	**60°**	1-50	**80°**	1-40	**60°**	1-40	**43°**	1-40
	+D12	51-76	+D20	41-84	+D20	41-75	+D10	41-80
	-D10	77-100	-D6	85-100	-D10	76-100	-D10	81-100
Wind	**4mph**	1-50	**4mph**	1-40	**2mph**	1-40	**6mph**	1-40
	+D10	51-74	+D8	41-50	+D8	41-55	+D10	41-75
	-D4	75-100	-D4	51-100	-D2	56-100	-D6	76-100
Cloud	**Partial**	1-40	**Partial**	1-35	**Cloudy**	1-50	**Cloudy**	1-55
	Clear	41-75	**Clear**	36-78	**Partial**	51-80	**Partial**	56-70
	Cloudy	76-100	**Cloudy**	79-100	**Clear**	81-100	**Clear**	71-100
~Rain/Fog		10/+10		5/+2		15/+10		30/+15
	Cloudy	+20	**Cloudy**	+10	**Cloudy**	+20	**Cloudy**	+25
	Pcloudy	+10	**PCloudy**	+5	**PCloudy**	+10	**PCloudy**	+15
	Light	1-45	**Light**	1-60	**Light**	1-40	**Light**	1-30
	Medium	46-80	**Medium**	61-90	**Medium**	41-80	**Medium**	31-70
	Heavy	81-100	**Heavy**	91-100	**Heavy**	81-100	**Heavy**	71-100
~Snow	**Rain to Snow**	15	**Rain to Snow**	0	**Rain to Snow**	5	**Rain to Snow**	35
*Special Weather Event	**See Weather Hazards**	5	**See Weather Hazards**	5	**See Weather Hazards**	8	**See Weather Hazards**	10

~ If a roll indicates rain or snow, temperature automatically drops, so simply roll the negative temperature modifier indicated.
* Roll for this event first or ignore and use Events Charts or combine for more fun

Weather Consistency - Obviously if something doesn't make sense, i.e. the rolls come up with no cloud cover on a rainy day, then either decide that it is a clear day and not rainy or make it cloudy AND rainy.

Travel - Some weather phenomenon may have travel repercussions. Consult the Basic Weather Effects table.

Daily Weather Charts Procedure:

STEP 1 – Roll % for a Special Weather Event and consult the Daily Weather Chart and the column that best expresses the season in which the pc's are traveling. If a roll of the % die equals or is less than the indicated value consult the Weather Hazards Chart and cross your fingers and toes.

STEP 2 – Roll % and consult the appropriate season column on the Daily Weather Chart. The results will indicate either a base temperature (in **bold**) or a modifier roll that is to be added or subtracted from the base temperature as indicated.

STEP 3 – Roll % for Cloud cover on the Daily Weather Chart under the column that best expresses the season in which the pc's are traveling. The options are either, Clear, Partial or Cloudy. This may affect other weather indicators.

STEP 4 – Roll % for Wind Speed in the appropriate seasons column (You can roll for wind direction on the Prevailing Wind Direction chart above). The results will indicate that the wind speed is the base speed (in **bold**) or whether or not you need to roll a wind speed adjustment die. Merely subtract or add the die roll to the base wind speed as indicated.

STEP 5 – This section of the chart is to determine if it is going to rain or if it is foggy for the day. At the top row you will notice two values separated by a backslash (20/+10) this means that there is a flat 20% chance that it will be raining, to determine if it is foggy instead of raining consult your original rain die roll, if it exceeds the 20% rain roll but equals or is less than the sum of the two numbers presented (ex: 20/+10 = 30%) then it is foggy instead. Anything over the 30% indicates that it is neither raining nor foggy.

You must then determine whether or not the rain or fog is light, medium or heavy, simply roll % again in the most appropriate season column.

STEP 6 – This section is to determine weather or not the rain is actually snow. When Step 5 determines that the days weather will be rainy, there is a chance based on the season that the rain may actually be snow. Simply roll % on the column most appropriate for the season. If the roll equals or is less than the indicated value for that column, then it is snowing instead.

Weather Modifiers
1. For every +1000' in elevation
    a. subtract 2deg of temperature
    b. add 1% snow chance
    c. add 1mph in wind speed

Northern Hemisphere
2. For every 10deg latitude south from median add 3deg in temperature
3. For every 10deg latitude north from median subtract 3 deg in temperature

Southern Hemisphere
4. For every 10deg latitude south from median subtract 3deg in temperature
5. Foe every 10deg latitude north from median add 3deg in temperature

Basic Weather Effects:

Condition	DC	Duration	Effect	Damage	Movement
Rain Storm	D10	D6cycles	Concealment	-	X.75
Fog	n/a	D20hours	Concealment	-	X.25
Snow Storm	D10+2	D6cycles	Damage/Hypothermia	d4/hour	see Terrain Chart

- Some clothing options may negate damage effect of a snow storm

Weather Hazards:
Saves vs the effects of Hazards use the most appropriate statistic and every duration cycle of the event.

D20	Event	DC	Duration	Special Effects	Damage	Move Mod
1	Radiation Zone	D4level	permanent	Rad-Damage/Mutation	as chart	-
2	Glowing Fog	D4level	D4hours	Rad-Dam/Mutation/Concealment	as chart	as weather effect
3	Poison Gas Fog	D4level	d2cycles	Tox-Damage/Concealment/Mutat	as chart	as weather effect
4	Black Snow	D4level	D4hours	Tox-Damage/Mutation	as chart	as weather effect
5	Black Rain	D4level	D6hours	Tox-Damage/Mutation	as chart	as weather effect
6	Frost/Ice	D10	permanent	Hypothermia	d6/period	as weather effect
7	Windburst	D10+2	D4rounds	Damage	d4/round	-
8	Heatwave	D10+2	D4days	Thirst-Heatstroke	d4/hour	X.75*
9	Firebrands	D12+2	D10rounds	Damage	d4/round	-
10	Windstorm	D12+2	D4cycles	Damage	d6/hour	x.5*
11	Hail/Rock Fall	D12+2	D10rounds	Damage+Subdual	d4/round	-
12	Blizzard/Monsoo	D20+2	D6cycles	Damage/Concealment	d4/hour	x.5*
13	Mudslide/Quicks	D20+2	D4rounds	Suffocation	d8/round	as terrain
14	Flash Flood	D20+2	D4rounds	Drown	d6/round	-
15	Hurricane/Typh	D20+2	D2cycles	Damage/Concealment	d6+2/hour	x.25*
16	Earthquake	D20+2	D4rounds	Damage	d6/round	-
17	Fire Storm	D20+10	D10rounds	Damage	d10+4/round	-
18	Lightning Storm	D20+10	D2hours	Damage/Critical Damage	d10+4/strike	-
19	Tornado	D30+10	D4rounds	Damage/Critical Damage	d10/round	-
20	Eruption Zone	D30+10	D4days	Gas+Lava+Fire Brands+Damage	d12+4/round	x.75*

Radiation Zone This is simply a geographical location or one with an object that contains radioactive material of a nature that requires a pc to save vs the Radiation Hazard at the rolled level of exposure. See the radiation entry in Misc. Environmental Hazards section.

Glowing Fog This is an unnatural fog or steam that has the same effect as a Radiation Zone but with no fixed duration. See Weather Effects charts for movement penalties. All fogs provide concealment as the PHB.

Poison Gas Fog This is a toxic fog with the effect of a Toxin Hazard and is saved at the rolled level of exposure. See the Toxin entry in the Misc. Environmental Hazards section. See Weather Effects chart for movement penalties.

Black Snow This is a toxic snowfall that contains toxic material of a nature that requires a pc to save vs the Toxin Hazard at the rolled level of exposure. See the Toxin entry in the Misc. Environmental Hazards section.

Black Rain Same as Black Snow, though in liquid form.

Frost/Ice The conditions that lend to the formation of Ice and Frost also may cause pc's who are not specifically Protected against cold, to take damage over time. See Terrain Charts for movement penalties.

Windburst A powerful, unpredictable gust of wind that causes damage for its duration with a chance that the pc is 'blown away'. It is so powerful and localized that any action other than hanging on is impossible for the duration. Each size class above medium gains +1 on the check.

Heat Wave This is a weather phenomenon that can happen just about anywhere in the blasted earth and is unpredictable in nature and can last days. Any pc attempting anything other than resting in a cool place will take the listed damage if he fails the save and must also vs 'heatstroke' or suffer from the effects of fatigue. By the way, it is harder to move under the fierce heat beating down on your head. The move penalty is in addition to any others.

Firebrands Somewhere, something is on fire. The coals and firebrands from this fire have chosen your particular location to rain down on.

Windstorm Same general effect as a windburst but more sustained and with a longer duration. Normal movement and combat are possible during this effect, combatants suffer a –2 unfavorable condition penalty on actions. In addition, pc's who desire to brave traveling in this mess will suffer the listed damage if their save is not made. Fatigue points are accumulated during its duration and movement is affected during the duration.

Hail/Rock Fall You are being pummeled by stones from above, whether they are from a volcano thousands of miles away or a cliff above you. You take an equal amount of regular damage and subdual damage if you fail your save.

Blizzard/Monsoo This is a much more sever version of a Rain or Snow Storm. It is more difficult to move and the movement penalty is in addition to any terrain mods and you acquire additional fatigue points. Provides Concealment.

Mudslide/Quicks In addition to the normal damage per duration, if you do not make your dex save you become buried and must make a save vs suffocation as the PHB.

Flashflood as above except save or drown.

Hurricane/Typh This is a much more severe version of the Blizzard or Monsoon. It does more damage, effects travel more, and causes any pc who attempts travel to gain fatigue points. Provides concealment.

Earthquake Earthquakes are common nowadays and can be quite sever. Shelter does not mitigate this damage.

Firestorm If your in a location that contains flammable materials your in a world of hurt. This event does a lot of damage very quickly if shelter cannot be found.

Lightning A direct strike to a pc requires a save vs catastrophic/critical damage.

Tornado PC's caught out in a tornado they can't avoid must save vs catastrophic/critical damage.

Eruption Zone This is the great grandfather of catastrophic events. Anyone caught out in the open with an active eruption is going to see fireworks up close and personal. Firebrands, rock falls, poison gas and ash are typical of the type of damage that pc's are likely to face. This effects movement as well but offers some concealment.

*Any weather hazard assumes the pc's are exposed to the event. If shelter is available and partaken of the GM should moderate effects.

Finding Shelter

Players use their characters Survival skills to both, detect imminent weather hazards and to find or build emergency shelter from these hazards.
The process is very easy for both. To detect that there is a weather event about to happen in the near future, each effected character makes a Survival skill check vs the events DC rating to 'forecast' the weather. Successful checks insures enough time for the characters to attempt to find or build shelter. The second check is also made using the Survival skill against the events DC rating. If successful the characters manage to find suitable shelter from the hazard, which may or may not mitigate some of the effects of that hazard or event at GM discretion.

Misc. Environmental Hazards

Unlike real life, the MOTE setting defies the laws of physics in several cases. Suspension of belief is a requirement. Or….you can simply ignore or substitute whichever offending parts of the hazards section you like.

Radiation, can still cause sickness, but it can also cause spontaneous, beneficial mutations of a dramatic nature. Not only may you grow that third eye you've always wanted, but you just might get that sixth sense too. Mind powers, and physical powers unimagined will make your character a wonder of the wastes. Fellow mutants will call you brother, and the unchanged may scorn you for the freak you are.

Toxins…they can still kill you to, but if they don't kill you, they just might make you stronger…literally! MOTE also uses a more cinematic, comic book approach to toxins. Super powers, more often called mutations in MOTE can be one of the results of exposure.

Biological hazards can play as much a role in your game as you desire. It is used just as any other hazard in the MOTE setting and that's why you'll find it here in this section. Just as in traveling and weather events, a character makes a Survival skill check vs the DC of the event to avoid the results of a hazard exposure. If your not using the Survival skill, then substitute with Fortitude.

Radiation:

There are four levels of Radiation, each doing a successively greater amount of damage and increasing the possibility of gaining either random mutations or defects.

Pure Strain Humans are immune to the mutagenic effects of the first three levels of radiation. Damage to humans is handled normally.

Androids are immune to the mutagenic effects of all levels of radiation and damage effects of the first 2 levels of radiation. In fact the radiation damage effects are effectively reduced two steps so that an R3 level would do R1 damage to an Android and an R4 level will do R2 damage to an android.

All other races are fully affected by the radiation hazard.

Rad Level	Exposure Period	DC Rating	Damage	Mutation Chance	Permanent Chance	Duration
R1	/day	DC20	D4	5%	5%	D4 days
R2	/hour	DC25	D4+1	10%	10%	D6 days
R3	/hour	DC30	D8+1	20%	20%	D8 days
R4	/min	DC35	D12+5	40%	40%	D10 days

Rad Level – The relative level of radiation in a given area. R1 is the weakest form of radiation and R4 the strongest, for game purposes.

Exposure Period – How long you have to be in a radiation zone before being subjected to the special effects or attacks of the radiation hazard.

DC Rating – The difficulty class you must save against using your Survival skill check or suffer the damaging and mutagenic effects of the intensity level of the radiation for which you are exposed. If you fail your save then you potentially suffer the damaging and mutagenic affects of radiation. You must save each period.

Damage – How much damage you suffer for exceeding each Exposure Period of a radiation zone. You suffer the damage for each period in which you are within the rad zone.

Mutation Chance – This is the chance that you will receive either a mutation or a defect in addition to the damage for staying in a radiation zone for the specified period. A standard Fortitude save must be conducted. If the die roll equals or exceeds your Fort save then you receive a random mutation either within your primary mutation group or outside, as the mutation rules, otherwise you receive a random defect.

Permanent Chance – This is the roll which you determine if the mutagenic changes suffered by the radiation are permanent or not, if not roll for duration.

Duration – How long the mutagenic effects of the radiation lasts if it is not permanent.

The damage any PC suffers from the rad level is added to an individuals permanent 'Rad Count' at the same duration as the rad level duration, so that if you are exposed to an R1 level rad level for 3 days your total rad count would 3xd4 = 12 points max. If the Rad Count of any individual character exceeds their Constitution score then any rad count points above the Constitution is taken as damage. (i.e. after 4 days of R1 level radiation exposure you have a rad count of 13 and your Con is 11, you would suffer an ADDITIONAL 2 points of damage above and beyond the normal duration damage you would suffer each day). If the damage were R2 level and hourly you would apply the excess damage hourly. This excess damage is applied at the same rate or period that your exposure level indicates until you remove yourself from the hazardous environment. Once you have left the environment, excess Rad Count damage is applied DAILY at whatever point the GM decides, usually the beginning or the end of a day.

Your Rad Count does not decrease naturally once you've left the radiated environment, so you could end up taking periodic damage for the rest of your character's life on a daily basis, which may not be long at all if your Rad Count is much higher than your Con score.

Treatment: There are drugs that help the body to process radiation. (refer to Medical Treatments Tables) These drugs allow saves vs the damaging and mutagenic effects of rad poison. The drugs will automatically clear the body of all rads at or below it's DC rating and those rated below the radiation's DC level reduce the effects of the rad poisoning 1 step for every dose. (i.e. a R3 rad poisoning is treated with a DC25 antirad drug, the radiation effects now are treated as a R2 rad poisoning). In addition the DC of the serum subtracts from the total of your individual Rad Count.

Toxic Waste:

There are four levels of Toxicity, each doing a greater amount of damage and increasing possibility of gaining mutations or defects.

Pure Strain Humans are immune to the mutagenic effects of the first two levels of toxicity. Androids are immune to the mutagenic effects of all levels of toxicity and damage from the first two toxic levels. All other beings suffer the full effects of the toxicity level for which they are exposed.

In most respects, toxic waste acts as a poison of the ingested or contact variety, but because of its mutagenic properties within the game it has been parsed here for clarification.

Toxic Level	DC Rating	Damage	Exposure Period	Damage Duration	Mutation Chance	Permanent Chance	Mutation Duration
T1	DC20	D4	/min	D4 rounds	5%	5%	D4 days
T2	DC25	D4+1	/min	D4+1 rounds	10%	10%	D6 days
T3	DC30	D8+1	/min	D4+2 rounds	15%	15%	D8 days
T4	DC35	D12+5	/min	D6+2 rounds	25%	25%	D8 days

Toxic Level – The relative level of toxicity of a given ingested or touched substance. T1 is the weakest form of toxic substance and T4 the strongest and most likely to cause you grief.

DC Rating – The difficulty class you must save against using your Survival skill check or suffer the damaging and mutagenic effects of the intensity level of the toxin for which you are exposed to. If you fail your save then you potentially suffer the damaging and mutagenic effects of the toxin. You must roll each period to save.

Damage – How much damage you receive from coming into contact with a toxic substance each indicated round.

Exposure Period – If your stuck in a toxic environment, you suffer damage every period equal to the toxicity level ratings listed damage.

Damage Duration – How long the damaging effects last after ending your current exposure by leaving a toxic area, or dropping the toxic substance. You will receive damage each period you remain exposed to the toxic substance otherwise as per the Damage and Exposure columns.

Mutation Chance – This is the chance that you will receive either a mutation or a defect in addition to the damage for having toxic poisoning. A standard Fortitude save must be conducted. If the die roll equals or exceeds your Fort save then you receive a random mutation either within your primary mutation group or outside, as the mutation rules, otherwise you receive a random defect.

Permanent Chance – This is the roll which you determine if the mutagenic changes suffered by the toxin are permanent or not, if not roll for duration.

Duration – How long the mutagenic effects of the toxin lasts if it is not permanent.

The damage any PC suffers from the toxin level is added to an individuals permanent 'Toxin Count' at the same duration as the toxin level duration, so that if you are exposed to a T1 level toxin for 3 minutes your total toxin count would 3xd4 = 12 points max. If the Toxin Count of any individual character exceeds their Constitution score then any toxin count points above the Constitution is taken as damage every duration. (i.e. after 4 minutes of T1 level radiation exposure you have a toxin count of 13 and your con is 11, you would suffer an ADDITIONAL 2 points of damage above and beyond the normal duration damage you would suffer every minute). You loose 1 toxin count point/hour +/- Con Mod naturally after leaving a toxic environment. You also continue to take any toxin points above Con score as damage every Period.

Treatment: There are drugs that help the body to process toxins. (refer to Medical Treatments Tables) These drugs allow saves vs the damaging and mutagenic effects of the toxin. The drugs will automatically clear the body of all toxins at or below it's DC rating and those rated below the toxins DC level reduce the effects of the toxin 1 step for every dose. (i.e. a T3 toxin is treated with a DC20 antitoxin drug, the toxin effects now are treated as a T2 toxin). In addition the DC rating of the Anti-toxin is subtracted from the PC's total toxin count.

Biological Hazards:
The biological agent responsible for the mutations now prevalent throughout the world is still present. Although, most creatures have adapted to the virus, there are occasional outbreaks and the virus is still known to exist in nature. Just as a cold, when someone's immune system is weakened, they stand a chance of contracting The Morphagenic Plague, which will induce illness and, potentially, further mutations.

There are no special procedures for contracting the illness. It stands a random chance of being contracted as any other disease in the campaign. (refer to Disease Tables). The effects are repeated below.

DC25 d4 damage/day(no healing)   D8 days   100%-Con Mutation Chance
                                                                         Beneficial Mutation – 40% Defect – 60%

Treatment: There is no known cure (duh, or there wouldn't be much of a game!), however, an antiviral injection of at least DC25 allows a daily Fort save vs the damaging effects of the Morphagenic virus. Each successive day requires an additional dosage. A successful save means no damage is taken for that day.

All mutations or defects contracted from the Morphagenic Plague are permanent.
Androids are immune to the effects of the Morphagenic Plague as well as any other biological viral or bacterial agent. Though they can be susceptible to electronic viruses if you include them in your campaign.

The section on diseases and its treatments is too large to include within this document. You can find them within the Physicians Handbook chapter.

Starvation and Dehydration

This section *is* meant to replace the sparse section within the existing core rules. It uses the Fatigue Point system described in other parts of this document. Fractional accounting may be used at the discretion of the GM, otherwise round all fractions up.

This system is *not* meant to duplicate exact real life requirements. Both the food and water requirements have been altered to suit the needs of this rules system. It is, however close enough.

The Standards:
Basic medium size humanoid requires - 2 pints potable liquid per 8 hour period
                                          Or 1 pint with the appropriate amount of food
                                          3 ounces of food per 8 hour period

- Daily requirements: 6 pints of liquid or 3 pints with food and 9 ounces of solid food.
- Any amounts less than the full stated amount is NOT enough. You still suffer from the full fatigue accumulation.

Larger than man sized creatures – (2X) Double the requirements
Smaller than man sized creatures – (½X) One-half the requirements
Other Modifiers:
- Extreme environments double food and/or liquid requirements.
- Certain mutations, abilities, skills or hardy genotypes may decrease the requirements by as much as (½X) half.
      [EX: A small lizard humanoid would only require ¼ the food and liquid requirements of a normal medium sized humanoid]

The Effects:
The effects are cumulative with themselves and other fatigue point causing sources.
- For each period without adequate water = gain 1 fatigue point
- For each period without adequate food = gain 1 fatigue point

Finding The Basics

The bodies of wasteland foes should never be callously left to rot ever again. Not only should road kill always be on the menu but, players need to be reminded, that what doesn't kill them, just might keep them alive. Encourage the cannibalization of foes if it doesn't occur to them on their own. The blood of the enemy really can make them stronger, or at least keep them from the terrors of thirst.

Many GM's will note, after glancing at the charts, that it really isn't that hard to find food or water in most cases. This is deliberate. Although I wanted to account for the realism of hunger and thirst, I did not want this basic function to become the focus of game play.

Water Finding:
Consult the following table. Possession of the Survival, Rural or Urban skill grants a substantial bonus to the find water skill. Survival, Urban is only good for urban areas, and Survival, Rural is only good for rural locations.

Water Find Table: D10					
Terrain Type	Free Water	Skill	No Water	Contaminated %	Amount
Urban (intact)	1-3	4-9	10	20%	D10+2
Urban (ruins)	1-3	4-8	9-10	45%	D8+2
Open/Grassland Rural	1-5	6-10	-	5%	D10+10
Forested/Jungle Rural	1-6	7-10	-	10%	D20+10
Swamp/Wetland Rural	1-10	-	-	60%	Infinite
Arid/Desert Rural	1	2-6	7-10	10%	D6

Water Find Table
Step1: GM decides the most appropriate terrain type based on the selections under the Terrain Type.
Step2: Roll a D10 and consult the row with the selected terrain type. The Free Water column is the basic chance that anyone, skilled or not is able to find water. Those with skill find water on rolls up to the 'Skill' column. So, a character with the Survival, Urban skill searching in an Urban (intact) location would find water on a die roll of 1-9. A result of 10 means that no water was found, despite the odds. If that same character had the Survival, Rural skill and was searching the same Urban environment then he/she/it would not have gained the benefits and would only find water on a die roll of 1-3.
Step3: If water was found, consult the row of the pre-determined terrain type, under the 'Contaminated' column to determine if the water is contaminated. A roll of the listed % or lower indicates that the water is indeed contaminated. Consult the Contamination of Food and Water section for details.
Step4: Determine the amount of water you find. Each rolled amount equals 1 pint worth.

Food Finding:
Consult the following table. Possession of the Survival, Rural or Urban skill grants a substantial bonus to the find water skill. Survival, Urban is only good for urban areas, and Survival, Rural is only good for rural locations.

Food Find Table: D10					
Terrain Type	**Easy Food**	**Skill**	**No Food**	**Contaminated %**	**Meals**
Urban (intact)	1-5	6-9	10	15%	D8
Urban (ruins)	1-3	4-7	8-10	50%	D6
Open/Grassland Rural	1-3	4-7	8-10	5%	D6
Forested/Jungle Rural	1-4	5-8	9-10	5%	D8
Swamp/Wetland Rural	1-4	5-8	9-10	50%	D8
Arid/Desert Rural	1	2-4	5-10	5%	D4

Food Find Table
Step1: GM decides the most appropriate terrain type based on the selections under the Terrain Type.
Step2: Roll a D10 and consult the row with the selected terrain type. The Easy Food column is the basic chance that anyone, skilled or not is able to find food. Those with skill find food on rolls up to the 'Skill' column. So, a character with the Survival, Urban skill searching in an Urban (intact) location would find Food on a die roll of 1-9. A result of 10 means that no food was found, despite the odds. If that same character had the Survival, Rural skill and was searching the same Urban environment then he/she/it would not have gained the benefits and would only find food on a die roll of 1-3.
Step3: If food was found, consult the row of the pre-determined terrain type, under the 'Contaminated' column to determine if the food is contaminated. A roll of the listed % or lower indicates that the food is indeed contaminated. Consult the Contamination of Food and Water section for details.
Step4: Determine the amount of food you find. Each rolled amount equals 1 meals worth or 3 ounces of food.

Contamination of Food and Water

The wilds and ruins of the wastelands are not necessarily conducive to safe eating. There are many debilitating elements that hide in the flesh of creatures and the seemingly clean clear waters of rain pools. The following tables amount to a roulette wheel…..good luck.

Water and Food Contamination

Die	Contamination Type	Results
1-3	Viral/Bacterial Infected	See Physicians Handbook chapter
4-5	Toxin Contaminated	See Toxin Section of This Document
6	Radiation Contaminated	See Radiation Section of This Document
7-8	Poison	See Poison Section of This Document

The Fatigue System

Basic Rules
- Fatigue points cannot be shed or recovered from while you are still gaining them for any reason. You must protect yourself or treat the condition that is causing you to gain fatigue points in the first place. This may be rest, or shelter or food or others as described in the appropriate sections.
- Once the character has rested enough or eaten and drank enough to bring the Fatigue Point threshold below the characters Constitution score that character no longer suffers from the affects of fatigue.
- Accumulated fatigue points are recovered from at the rate of one(1) point per 8 hour period of uninterrupted rest. If your still hungry or thirsty, and therefore still accumulating fatigue points, again - you cannot recover any fatigue points.
- You do not recover from the conditions fatigue and exhaustion as the core rules describe.
- Any character suffering from fatigue also accumulates subdual damage at the rate of d4+2 per 8 hour period.
- Fatigue points are cumulative from all other fatigue point causing affects.

[Example]
So, a character who has traveled 16 hours the previous day (with a break of one(1) period in-between) has accumulated d6=2 fatigue points. If that same character hadn't eaten or drank anything in those last two periods an additional 4 fatigue points would have been accumulated and the running total to be recovered from would have been 6 points, which would have taken six 8 hour periods of complete rest with the proper amounts of food and liquid to fully recover from.

Beyond Fatigue:

A character can be Fatigued for a number of 8 hour periods equal to ½ his Con score (round to nearest). Once this threshold is crossed the Character then suffers from the condition Exhaustion and also starts accumulating subdual damage at the rate of d10+2 per 8 hour period.

Treat any damage caused from subdual damage as the core rules, including any additional condition effects.

Poisons

Poisons are handled as per the core rules in most cases. This section largely replaces those in other core rules. If your using the Omega World rules in Polyhedron#153 do not apply the +5 DC that source recommends.

Poison Types:

A Fortitude save is used when a pc saves against the effects of a poison. Situational modifiers may affect the DC of the poison at GM's discretion.
The GM may set whatever DC value he desires for a specific delivery system (i.e. creature or plant, etc). Otherwise, consult the Poison DC table.

Type:

D6	Poison	Initial Damage	Secondary Damage	Duration
1	Sicken/Weakness	1d4 Con and Str	1d4 Con and Str	d4days – Con Mod
2	Progressive Damage	1d6 dam / d4 rounds	-	-
3	Paralysis	Paralyzed/Helpless	-	d10min - Con Mod
4	Knockout	Unconscious	-	d4hrs – Con Mod
5	Delusion	1d4 Wis	1d4 Wis	d4hrs – Con Mod
6	Death	Death	-	until reincarnated

Poison DC:

#	Poison Intensity	DC
1	Low Intensity	D10+10
2	Medium Intensity	D20+20
3	High Intensity	D30+30

Poison Delivery Method:

GM should choose most appropriate method.
Inhaled
Contact
Ingested
Injury