

University of Michigan Dioxin Exposure Study
Section G: Current Diet
March 29, 2007

The question was raised at the dioxin HHRA meeting on 3/21/07 whether UMDES data could provide the actual counts of participants who had eaten meals of various types of game from the Tittabawassee River flood plain during the past 5 years. A request was made to provide the frequencies of meals eaten for questions G6, G7, G8, G9, and G10. The answers are tabulated below, by the frequencies that were reported for each game type. It should be noted a few numbers in the tables below differ slightly from the numbers posted to the UMDES website because the UM investigators re-imputed the data during winter 2007, which resulted in small changes in the estimated frequencies.

A specific request was made regarding the number of subjects who ate turtle. These responses are tabulated in table G10. We have tabulated the responses for each of the specific game meats reported in this question. These are the actual counts of responses, not imputed estimates. It should also be noted that these responses do not specify where the game was taken, so they are not specific to the Tittabawassee River flood plain.

	Region	N	0<X<=1	1<X<=2	2<X<=5	5<X<=10	10<X<=60	60<X<=120	X>120
G6d	Overall	103	12	9	2	15	38	22	6
WD/VE	M/S FP	42	6	3	5	3	20	1	3
Raised/	M/S Near FP	27	1	3	3	6	9	2	4
Taken in	M/S Out FP	28	4	1	0	5	10	7	2
TR Flood-	M/S Plume								
plain	Jackson/Calhoun								

Note: X is the total number of meals eaten during the last 5 years among participants who had ever eaten Whitetail Deer or Venison that was raised or taken in the Tittabawassee River floodplain.

	Region	N	0<X<=1	1<X<=2	2<X<=5	5<X<=10	10<X<=60	60<X<=120	X>120
G6e	Overall	54	4	2	4	2	33	4	5
WD/VE	M/S FP	15	1	0	5	0	8	1	0
Raised/	M/S Near FP	18	3	1	3	3	7	0	1
Taken in	M/S Out FP	18	0	0	1	1	12	2	2
Saginaw	M/S Plume								
River/Bay	Jackson/Calhoun								

Note: X is the total number of meals eaten during the last 5 years among participants who had ever eaten Whitetail Deer or Venison that was raised or taken in the Saginaw River or Saginaw Bay floodplain.

	Region	N	0<X<=1	1<X<=2	2<X<=5	5<X<=10	10<X<=60	60<X<=120	X>120
G6f	Overall	644	39	25	69	99	228	55	130
WD/VE	M/S FP	138	7	7	22	25	48	15	15
Raised/	M/S Near FP	138	12	5	24	24	42	10	22
Taken in	M/S Out FP	159	11	6	18	25	56	21	22
Other	M/S Plume	26	1	4	5	2	7	1	7
Areas	Jackson/Calhoun	183	10	6	17	28	66	8	47

Note: X is the total number of meals eaten during the last 5 years among participants who had ever eaten Whitetail Deer or Venison that was raised in or taken from another area or from an unknown area.

	Region	N	0<X<=1	1<X<=2	2<X<=5	5<X<=10	10<X<=60	60<X<=120	X>120
G7b	Overall	44	1	19	1	9	14	0	0
	WT/P/G	23	5	5	5	4	4	0	0
/Q/W	M/S Near FP	12	1	4	3	3	1	0	0
Taken in	M/S Out FP	8	0	4	0	2	2	0	0
TR Flood-	M/S Plume								
plain	Jackson/Calhoun								

Note: X is the total number of meals eaten during the last 5 years among participants who had ever eaten Wild Turkey, Pheasant, Grouse, Quail, or Woodcock that was raised or taken in the Tittabawassee River floodplain.

	Region	N	0<X<=1	1<X<=2	2<X<=5	5<X<=10	10<X<=60	60<X<=120	X>120
G7c	Overall	20	1	9	1	0	9	0	0
	WT/P/G	9	3	0	3	1	1	0	0
/Q/W in	M/S Near FP								
Saginaw	M/S Out FP	7	0	3	0	0	3	0	0
River/Bay	M/S Plume								
	Jackson/Calhoun								

Note: X is the total number of meals eaten during the last 5 years among participants who had ever eaten Wild Turkey, Pheasant, Grouse, Quail, or Woodcock that was raised or taken in the Saginaw River or Saginaw Bay floodplain.

	Region	N	0<X<=1	1<X<=2	2<X<=5	5<X<=10	10<X<=60	60<X<=120	X>120
G7d	Overall	184	35	16	40	35	53	2	3
	WT/P/G	40	4	5	8	7	16	0	1
/Q/W in	M/S Near FP	43	8	4	15	11	4	0	1
Other	M/S Out FP	48	8	6	6	7	19	1	1
Areas	M/S Plume	6	1	0	0	0	5	0	0
	Jackson/Calhoun	47	10	3	14	11	8	0	1

Note: X is the total number of meals eaten during the last 5 years among participants who had ever eaten Wild Turkey, Pheasant, Grouse, Quail, or Woodcock that was raised in or taken from another area, or from an unknown area.

	Region	N	0<X<=1	1<X<=2	2<X<=5	5<X<=10	10<X<=60	60<X<=120	X>120
G8a	Overall	20	1	3	8	8	0	0	0
WD/G	M/S FP	11	1	0	1	7	2	0	0
Raised/	M/S Near FP	6	2	2	2	1	0	0	0
Taken in	M/S Out FP								
TR Flood-	M/S Plume								
plain	Jackson/Calhoun								

Note: X is the total number of meals eaten during the last 5 years among participants who had ever eaten Wild Duck or Goose that was raised or taken in the Tittabawassee River floodplain.

	Region	N	0<X<=1	1<X<=2	2<X<=5	5<X<=10	10<X<=60	60<X<=120	X>120
G8b	Overall	27	7	0	10	3	7	0	0
WD/G	M/S FP	6	1	1	0	2	2	0	0
Raised/	M/S Near FP	10	1	0	7	1	1	0	0
Taken in	M/S Out FP	11	3	0	4	1	3	0	0
Saginaw	M/S Plume								
River/Bay	Jackson/Calhoun								

Note: X is the total number of meals eaten during the last 5 years among participants who had ever eaten Wild Duck or Goose that was raised or taken in the Saginaw River of Saginaw Bay floodplain.

	Region	N	0<X<=1	1<X<=2	2<X<=5	5<X<=10	10<X<=60	60<X<=120	X>120
G8c	Overall	79	30	3	22	13	8	3	0
WD/G	M/S FP	18	3	1	2	4	6	2	1
Raised/	M/S Near FP	18	5	2	7	1	4	0	0
Taken in	M/S Out FP	17	8	0	5	4	0	0	0
Other	M/S Plume								
Areas	Jackson/Calhoun	23	8	1	6	3	3	1	0

Note: X is the total number of meals eaten during the last 5 years among participants who had ever eaten Wild Duck or Goose that was raised in or taken from another area, or from an unknown area.

	Region	N	0<X<=1	1<X<=2	2<X<=5	5<X<=10	10<X<=60	60<X<=120	X>120
G9a	Overall	21	1	1	8	0	12	0	0
S/WR	M/S FP	8	1	2	3	0	2	0	0
Raised/	M/S Near FP	11	3	2	5	0	2	0	0
Taken in	M/S Out FP								
TR Flood-	M/S Plume								
plain	Jackson/Calhoun								

Note: X is the total number of meals eaten during the last 5 years among participants who had ever eaten Squirrel or Wild Rabbit that was raised or taken in the Tittabawassee River floodplain.

	Region	N	0<X<=1	1<X<=2	2<X<=5	5<X<=10	10<X<=60	60<X<=120	X>120
G9b	Overall	12	0	0	1	2	8	0	0
S/WR	M/S FP								
Raised/	M/S Near FP								
Taken in	M/S Out FP	6	0	0	0	1	4	0	0
Saginaw	M/S Plume								
River/Bay	Jackson/Calhoun								

Note: X is the total number of meals eaten during the last 5 years among participants who had ever eaten Squirrel or Wild Rabbit that was raised or taken in the Saginaw River or Saginaw Bay floodplain.

	Region	N	0<X<=1	1<X<=2	2<X<=5	5<X<=10	10<X<=60	60<X<=120	X>120
G9c	Overall	103	26	3	19	24	29	3	0
S/WR	M/S FP	18	5	2	5	1	2	3	0
Raised/	M/S Near FP	14	3	0	2	5	4	0	0
Taken in	M/S Out FP	32	5	0	6	8	12	1	0
Other	M/S Plume								
Areas	Jackson/Calhoun	37	12	2	7	8	7	1	0

Note: X is the total number of meals eaten during the last 5 years among participants who had ever eaten Squirrel or Wild Rabbit that was raised in or taken from another area, or from an unknown area.

G10: (During the last 5 years) have you ever eaten any other game meat not already mentioned such as Raccoon, Opossum, Groundhog, Woodchuck, Muskrat, Wild Turtle or Frog? (Note: 59 people answered yes among the 1324 participants.)

G10a: please specify type of meat(s)

G10a	Number of people who recorded eating this type of game
NO	1265
BEAR	5
BEAR, ALLIGATOR, RATTLE SNAKE	1
BEAR, ELK	2
BEAR, ELK, MULE DEER, BUFFALO, WILD TURTLE	1
BEAR, LION	1
BEAVER	1
BEAVER, ELK	1
BUFFALO, CARIBOU, MOOSE	1
CARIBOU	3
CARIBOU, BEAR	1
ELK	2
ELK, ANTELOPE	1
ELK, BUFFALO, BEAR	1
ELK, MOOSE, DUCK, BUFFALO	1
FROG	8
FROG, ELK, MOOSE	1
GAME DINNER: VARIETY	2
MOOSE	1
MUSKRAT	3
RACCOON	5
RACCOON, MUSKRAT, TURTLE	1
RACCOON, OPOSSUM, TURTLE, SQUIRREL, RABBIT, WOODCHUCK	1
RACCOON, PORCUPINE	1
RACCOON, SQUIRREL	1
TURTLE	8
TURTLE, FROG	2
TURTLE, GOAT	1
WOODCHUCK	2

The following table shows the number of people that have ever eaten the specific type of game meat (for example, there are 12 people who have ever eaten BEAR).

G10a	Number of people who recorded eating this type of game
NO	1265
ALLIGATOR	1
ANTELOPE	1
BEAR	12
BEAVER	2
BUFFALO	4
CARIBOU	5
DUCK	1
ELK	13
FROG	11
GAME DINNER: VARIETY	2
GOAT	1
LION	1
MOOSE	4
MULE DEER	1
MUSKRAT	4
OPOSSUM	1
PORCUPINE	1
RABBIT	1
RACCOON	9
RATTLE SNAKE	1
SQUIRREL	2
TURTLE	13
WILD TURTLE	1
WOODCHUCK	3

	Region	N	0<X<=1	1<X<=2	2<X<=5	5<X<=10	10<X<=60	60<X<=120	X>120
G10b	Overall	<5							
Others	M/S FP								
Raised/ Taken in	M/S Near FP								
	M/S Out FP								
TR Flood- plain	M/S Plume								
	Jackson/Calhoun								

Note: X is the total number of meals eaten during the last 5 years among participants who had ever eaten any other game meat not already mentioned such as Raccoon, Opossum, Groundhog, Woodchuck, Muskrat, Wild Turtle or Frog that was raised or taken in the Tittabawassee River floodplain.

<5 - Estimate not shown to maintain confidentiality of study participants.

	Region	N	0<X<=1	1<X<=2	2<X<=5	5<X<=10	10<X<=60	60<X<=120	X>120
G10c	Overall	<5							
Others	M/S FP								
Raised/ Taken in	M/S Near FP								
	M/S Out FP								
Saginaw River/Bay	M/S Plume								
	Jackson/Calhoun								

Note: X is the total number of meals eaten during the last 5 years among participants who had ever eaten any other game meat not already mentioned such as Raccoon, Opossum, Groundhog, Woodchuck, Muskrat, Wild Turtle or Frog that was raised or taken in the Saginaw River or Saginaw Bay floodplain.

<5 - Estimate not shown to maintain confidentiality of study participants.

	Region	N	0<X<=1	1<X<=2	2<X<=5	5<X<=10	10<X<=60	60<X<=120	X>120
G10d	Overall	54	22	3	16	7	5	0	0
Others	M/S FP	7	2	0	1	1	2	0	0
Raised/ Taken in	M/S Near FP	13	7	2	3	0	2	0	0
	M/S Out FP	16	8	0	5	1	1	0	0
Other Areas	M/S Plume								
	Jackson/Calhoun	16	5	2	5	3	1	0	0

Note: X is the total number of meals eaten during the last 5 years among participants who had ever eaten any other game meat not already mentioned such as Raccoon, Opossum, Groundhog, Woodchuck, Muskrat, Wild Turtle or Frog that was raised in or taken from another area (not the Tittabawassee River, Saginaw River, or Saginaw Bay), or from an unknown area.