

**From:** [Endries, Mark](#)  
**To:** [Marshall, Michael E](#); [Reid, Rebekah N](#)  
**Subject:** HENA Current Populations Sleuth Estimates  
**Date:** Friday, April 13, 2018 9:24:32 AM  
**Attachments:** [Sleuth 2040 area estimates by HENA population updated.xlsx](#)  
**Importance:** High

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Hi All,

Here is the table showing Sleuth effects on current HENA populations.

Thanks!

Mark

**Mark Endries**

USFWS

160 Zillicoa St

Asheville, NC 28801

Office: 828.258.3939 ext. 231

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[illegible]

Population Number	Total Area	Already classed Urban	2.5% chance	5% chance	10% chance	20% chance	30% chance	40% chance	50% chance	60% chance	70% chance	80% chance	90% chance	95% chance	97.5% chance	100% chance
1	7.588992	0.03	0.00	0.01	0.15	0.00	0.00	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	8.979754	1.02	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
3	6.053572	1.50	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
29	61.77582	0.00	0.08	0.00	0.06	0.00	0.56	0.44	0.00	0.00	0.02	0.00	0.03	0.00	0.00	0.00
31	10.60813	10.61	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
32	7.714748	4.69	0.00	0.09	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00
44	3.726772	2.28	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.49	0.00	0.01	0.00	0.00	0.00	0.17
59	2.019339	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.61	0.03	0.01	0.26	0.00	0.00	0.00	0.00
77	1.493605	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.45	0.00	0.00	0.02	0.09	0.00	0.00	0.00
93	10.81183	0.02	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	0.85
96	23.70901	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	104.6788	9.43	0.00	0.84	0.00	0.31	1.07	0.39	0.95	0.42	0.81	1.38	1.15	0.75	0.14	0.00
125	5.12552	0.00	0.26	0.03	0.00	0.63	0.05	0.00	1.08	1.23	1.12	0.05	0.29	0.00	0.34	0.00
130	0.288677	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
154	8.382998	0.00	0.00	0.00	0.00	0.02	0.07	0.00	0.41	0.36	0.00	0.00	0.03	0.00	0.00	0.00
176	9.831662	0.09	0.00	0.00	0.00	0.41	0.00	0.37	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.00
177	6.660586	1.69	0.00	1.14	0.15	0.01	0.54	0.00	0.29	0.02	0.45	0.81	0.06	0.01	0.35	0.01
178	93.1043	26.62	0.00	0.00	0.00	0.22	0.81	0.82	1.51	0.00	0.13	2.60	2.23	0.63	0.55	2.46
179	3.742444	3.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.04	0.00	0.19	0.00	0.02
195	1.928798	1.93	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
206	4.286365	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	4.00
208	13.67991	2.37	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	11.31
214	3.717265	0.00	0.00	0.47	0.19	0.24	0.15	0.00	0.00	0.00	0.05	0.00	0.05	0.41	0.00	2.07
216	16.41368	0.00	0.00	2.51	1.15	1.27	2.94	0.36	1.33	1.26	0.10	0.15	0.00	0.00	0.00	0.00
247	12.33006	0.72	0.15	0.00	0.53	0.51	0.00	0.80	0.39	0.38	0.31	0.00	0.79	0.00	0.00	2.88
248	6.297741	1.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	3.34
252	9.784329	6.21	0.00	0.00	0.78	0.11	0.02	0.00	0.09	0.00	0.00	0.00	0.37	0.00	0.00	0.00
261	5.348384	0.00	0.00	0.00	0.03	0.03	0.15	0.00	0.00	0.41	0.07	0.00	0.71	0.18	0.00	0.00
276	30.56404	0.19	0.00	0.60	0.95	1.68	0.46	0.11	0.00	0.20	0.00	0.11	0.57	0.00	0.00	0.00
279	0.482264	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	0.39
287	1.952563	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.28
291	2.882909	1.02	0.00	0.00	0.00	0.00	0.00	0.15	0.26	0.02	0.61	0.35	0.39	0.07	0.00	0.01
292	3.857592	0.00	0.00	0.97	0.43	0.00	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71
295	5.803496	1.06	0.00	0.00	0.00	0.14	0.00	0.00	0.74	1.43	0.00	0.00	0.20	0.70	0.01	0.00
302	29.73705	0.43	0.00	0.00	0.02	0.00	0.00	0.11	0.11	0.00	0.00	0.76	0.76	0.23	0.69	1.18
306	1.928565	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.29	0.96	0.15	0.00	0.43
312	1.614895	0.00	0.00	0.00	0.00	0.15	0.00	0.58	0.00	0.10	0.37	0.41	0.00	0.00	0.00	0.00
316	10.66942	2.14	0.00	0.00	0.00	0.00	0.00	0.82	0.13	0.81	1.85	0.00	1.78	0.76	0.00	2.21
317	0.144491	0.14	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
318	1.333588	1.33	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
320	0.031016	0.03	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

Population Number	Total Area	Already classed Urban	2.5% chance	5% chance	10% chance	20% chance	30% chance	40% chance	50% chance	60% chance	70% chance	80% chance	90% chance	95% chance	97.5% chance	100% chance
1	30711.68	0.41%	0.00%	0.17%	1.94%	0.00%	0.00%	0.40%	0.59%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2	36339.92	11.32%	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%
3	24498.03	24.77%	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%
29	249998.9	0.00%	0.12%	0.00%	0.09%	0.00%	0.91%	0.71%	0.00%	0.00%	0.03%	0.00%	0.05%	0.00%	0.00%	0.00%
31	42929.76	100.01%	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%
32	31220.6	60.74%	0.00%	1.14%	0.00%	0.31%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	20.39%	0.00%	0.00%	0.00%
44	15081.77	61.17%	0.00%	0.00%	0.00%	0.00%	1.93%	0.00%	0.00%	13.10%	0.00%	0.27%	0.00%	0.00%	0.00%	4.68%
59	8172.008	0.00%	7.24%	0.00%	0.00%	0.00%	0.24%	0.00%	30.26%	1.62%	0.33%	13.09%	0.00%	0.00%	0.00%	0.00%
77	6044.428	0.00%	0.00%	0.00%	6.70%	0.00%	0.00%	0.02%	30.38%	0.00%	0.00%	1.51%	6.14%	0.00%	0.00%	0.00%
93	43754.12	0.19%	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%	7.82%
96	95947.32	0.00%	0.00%	0.07%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
100	423621.7	9.01%	0.00%	0.80%	0.00%	0.29%	1.02%	0.37%	0.91%	0.40%	0.78%	1.32%	1.10%	0.72%	0.14%	0.00%
125	20742.32	0.00%	5.16%	0.53%	0.00%	12.34%	1.04%	0.00%	21.01%	24.05%	21.78%	1.02%	5.65%	0.00%	6.67%	0.00%
130	1168.24	0.00%	0.00%	13.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
154	33924.92	0.00%	0.00%	0.00%	0.00%	0.23%	0.81%	0.00%	4.86%	4.25%	0.00%	0.00%	0.37%	0.00%	0.00%	0.00%
176	39787.48	0.89%	0.03%	0.00%	0.00%	4.18%	0.00%	3.76%	0.00%	2.16%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
177	26954.54	25.34%	0.00%	17.11%	2.25%	0.14%	8.10%	0.00%	4.34%	0.36%	6.79%	12.19%	0.92%	0.10%	5.31%	0.13%
178	376781.2	28.59%	0.00%	0.00%	0.00%	0.23%	0.87%	0.88%	1.62%	0.00%	0.14%	2.79%	2.40%	0.68%	0.59%	2.64%
179	15145.19	85.06%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.27%	1.14%	0.00%	5.12%	0.00%	0.49%
195	7805.6	99.94%	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%
206	17346.37	0.40%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.24%	93.41%
208	55360.87	17.31%	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%	82.69%
214	15043.3	0.00%	0.00%	12.54%	5.03%	6.53%	4.13%	0.00%	0.00%	0.00%	1.43%	0.00%	1.44%	10.97%	0.00%	55.72%
216	66424.06	0.00%	0.00%	15.27%	6.99%	7.74%	17.92%	2.21%	8.13%	7.65%	0.61%	0.91%	0.00%	0.00%	0.00%	0.00%
247	49898.17	5.87%	1.22%	0.02%	4.29%	4.14%	0.00%	6.46%	3.17%	3.07%	2.50%	0.00%	6.37%	0.00%	0.00%	23.35%
248	25486.16	28.80%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.22%	0.02%	0.02%	53.03%
252	39595.93	63.47%	0.00%	0.00%	8.02%	1.11%	0.21%	0.00%	0.93%	0.00%	0.00%	0.00%	3.80%	0.00%	0.00%	0.00%
261	21644.23	0.00%	0.00%	0.00%	0.55%	0.60%	2.89%	0.01%	0.00%	7.58%	1.37%	0.00%	13.21%	3.35%	0.00%	0.00%
276	123688.8	0.61%	0.00%	1.97%	3.10%	5.49%	1.51%	0.35%	0.00%	0.65%	0.00%	0.36%	1.87%	0.01%	0.00%	0.00%
279	1951.662	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%	80.85%
287	7901.775	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	11.50%	0.00%	0.00%	14.25%
291	11666.76	35.39%	0.00%	0.00%	0.00%	0.00%	0.00%	5.14%	9.01%	0.57%	21.31%	12.28%	13.53%	2.43%	0.00%	0.23%
292	15611.18	0.00%	0.00%	25.03%	11.09%	0.00%	18.95%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	18.40%
295	23486.01	18.20%	0.00%	0.00%	0.00%	2.46%	0.00%	0.00%	12.77%	24.60%	0.00%	0.00%	3.41%	11.99%	0.25%	0.00%
302	120342.1	1.46%	0.00%	0.00%	0.07%	0.00%	0.00%	0.35%	0.39%	0.00%	0.00%	2.55%	2.55%	0.77%	2.33%	3.98%
306	7804.656	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.05%	4.64%	15.11%	49.91%	7.83%	0.00%	22.40%
312	6535.273	0.00%	0.00%	0.00%	0.09%	9.23%	0.00%	35.73%	0.00%	6.40%	23.20%	25.28%	0.00%	0.00%	0.00%	0.00%
316	43177.8	20.06%	0.00%	0.00%	0.00%	0.00%	0.00%	7.69%	1.21%	7.61%	17.32%	0.00%	16.68%	7.08%	0.00%	20.67%
317	584.7346	99.70%	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%
318	5396.859	99.74%	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%
320	125.5182	98.79%	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%

**From:** [Marshall, Michael E](#)  
**To:** [Endries, Mark](#)  
**Cc:** [Reid, Rebekah N](#)  
**Subject:** Re: HENA Current Populations Sleuth Estimates  
**Date:** Friday, April 13, 2018 9:29:27 AM  
**Importance:** High

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Hi Mark,

There shouldn't be any change in the SLEUTH analysis on current populations, right? The Current populations are unchanged, it is the EOs used to create the model that changed (i.e. now going back to 2005). I was under the impression that the only changes would be to the model.....so, needing to see how much predicted habitat is urbanized by the SLEUTH model.

I may be way off....does this make sense?

Thanks,

Mike

On Fri, Apr 13, 2018 at 9:24 AM, Endries, Mark <[mark\\_endries@fws.gov](mailto:mark_endries@fws.gov)> wrote:

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Here is the table showing Sleuth effects on current HENA populations.

Thanks!

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**Work Schedule 1st Week**

Monday-Thursday --> In Office 7:30-4:30 CST

**Work Schedule 2nd Week**

Monday-Thursday --> In Office 7:30-4:30 CST

*This email correspondence and any attachments to and from this sender is subject to the Freedom of Information Act and may be disclosed to third parties.*

**From:** [Endries, Mark](#)  
**To:** [Marshall, Michael E](#)  
**Cc:** [Reid, Rebekah N](#)  
**Subject:** Re: HENA Current Populations Sleuth Estimates  
**Date:** Friday, April 13, 2018 9:31:51 AM  
**Importance:** High

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We changed the definitions of what a current population is to include things back to 2005, so that would be the change.

Mark

**Mark Endries**

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Asheville, NC 28801  
Office: 828.258.3939 ext. 231  
Mobile: 828.215.1740

On Fri, Apr 13, 2018 at 9:29 AM, Marshall, Michael <[michael\\_marshall@fws.gov](mailto:michael_marshall@fws.gov)> wrote:  
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**To:** [Endries, Mark](#)  
**Cc:** [Reid, Rebekah N](#)  
**Subject:** Re: HENA Current Populations Sleuth Estimates  
**Date:** Friday, April 13, 2018 9:38:38 AM  
**Importance:** High

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Gotcha....I was thinking we were only using back to 2005 for the model....and that for the purposes of a Current population and it's resilience score, we were still only going 10 years back (i.e. 2007). The justification for the model being that the GIS is from 2011, but only going 10 years back (to 2007) was for assessing resilience based on an abundance estimate. No big deal, but will need to come to a consensus.....Rebekah...what do you think?

Mike

On Fri, Apr 13, 2018 at 9:31 AM, Endries, Mark <[mark\\_endries@fws.gov](mailto:mark_endries@fws.gov)> wrote:

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Thanks,

Mike

On Fri, Apr 13, 2018 at 9:24 AM, Endries, Mark <[mark\\_endries@fws.gov](mailto:mark_endries@fws.gov)> wrote:

Hi All,

Here is the table showing Sleuth effects on current HENA populations.

Thanks!

Mark

**Mark Endries**



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[160 Zillicoa St](#)  
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**Work Schedule 1st Week**

Monday-Thursday --> In Office 7:30-4:30 CST

**Work Schedule 2nd Week**

Monday-Thursday --> In Office 7:30-4:30 CST

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[illegible]

Population Number	Total Area	Already classed Urban	2.5% chance	5% chance	10% chance	20% chance	30% chance	40% chance	50% chance	60% chance	70% chance	80% chance	90% chance	95% chance	97.5% chance	100% chance
1	7.588992	0.03	0.00	0.01	0.15	0.00	0.00	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	8.979754	1.02	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
3	6.053572	1.50	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
29	61.77582	0.00	0.08	0.00	0.06	0.00	0.56	0.44	0.00	0.00	0.02	0.00	0.03	0.00	0.00	0.00
31	10.60813	10.61	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
32	7.714748	4.69	0.00	0.09	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00
44	3.726772	2.28	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.49	0.00	0.01	0.00	0.00	0.00	0.17
59	2.019339	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.61	0.03	0.01	0.26	0.00	0.00	0.00	0.00
77	1.493605	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.45	0.00	0.00	0.02	0.09	0.00	0.00	0.00
93	10.81183	0.02	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	0.85
96	23.70901	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	104.6788	9.43	0.00	0.84	0.00	0.31	1.07	0.39	0.95	0.42	0.81	1.38	1.15	0.75	0.14	0.00
125	5.12552	0.00	0.26	0.03	0.00	0.63	0.05	0.00	1.08	1.23	1.12	0.05	0.29	0.00	0.34	0.00
130	0.288677	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
154	8.382998	0.00	0.00	0.00	0.00	0.02	0.07	0.00	0.41	0.36	0.00	0.00	0.03	0.00	0.00	0.00
176	9.831662	0.09	0.00	0.00	0.00	0.41	0.00	0.37	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.00
177	6.660586	1.69	0.00	1.14	0.15	0.01	0.54	0.00	0.29	0.02	0.45	0.81	0.06	0.01	0.35	0.01
178	93.1043	26.62	0.00	0.00	0.00	0.22	0.81	0.82	1.51	0.00	0.13	2.60	2.23	0.63	0.55	2.46
179	3.742444	3.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.04	0.00	0.19	0.00	0.02
195	1.928798	1.93	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
206	4.286365	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	4.00
208	13.67991	2.37	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	11.31
214	3.717265	0.00	0.00	0.47	0.19	0.24	0.15	0.00	0.00	0.00	0.05	0.00	0.05	0.41	0.00	2.07
216	16.41368	0.00	0.00	2.51	1.15	1.27	2.94	0.36	1.33	1.26	0.10	0.15	0.00	0.00	0.00	0.00
247	12.33006	0.72	0.15	0.00	0.53	0.51	0.00	0.80	0.39	0.38	0.31	0.00	0.79	0.00	0.00	2.88
248	6.297741	1.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	3.34
252	9.784329	6.21	0.00	0.00	0.78	0.11	0.02	0.00	0.09	0.00	0.00	0.00	0.37	0.00	0.00	0.00
261	5.348384	0.00	0.00	0.00	0.03	0.03	0.15	0.00	0.00	0.41	0.07	0.00	0.71	0.18	0.00	0.00
276	30.56404	0.19	0.00	0.60	0.95	1.68	0.46	0.11	0.00	0.20	0.00	0.11	0.57	0.00	0.00	0.00
279	0.482264	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	0.39
287	1.952563	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.28
291	2.882909	1.02	0.00	0.00	0.00	0.00	0.00	0.15	0.26	0.02	0.61	0.35	0.39	0.07	0.00	0.01
292	3.857592	0.00	0.00	0.97	0.43	0.00	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71
295	5.803496	1.06	0.00	0.00	0.00	0.14	0.00	0.00	0.74	1.43	0.00	0.00	0.20	0.70	0.01	0.00
302	29.73705	0.43	0.00	0.00	0.02	0.00	0.00	0.11	0.11	0.00	0.00	0.76	0.76	0.23	0.69	1.18
306	1.928565	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.29	0.96	0.15	0.00	0.43
312	1.614895	0.00	0.00	0.00	0.00	0.15	0.00	0.58	0.00	0.10	0.37	0.41	0.00	0.00	0.00	0.00
316	10.66942	2.14	0.00	0.00	0.00	0.00	0.00	0.82	0.13	0.81	1.85	0.00	1.78	0.76	0.00	2.21
317	0.144491	0.14	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
318	1.333588	1.33	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
320	0.031016	0.03	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

Population Number	Total Area	Already classed Urban	2.5% chance	5% chance	10% chance	20% chance	30% chance	40% chance	50% chance	60% chance	70% chance	80% chance	90% chance	95% chance	97.5% chance	100% chance
1	30711.68	0.41%	0.00%	0.17%	1.94%	0.00%	0.00%	0.40%	0.59%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2	36339.92	11.32%	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%
3	24498.03	24.77%	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%
29	249998.9	0.00%	0.12%	0.00%	0.09%	0.00%	0.91%	0.71%	0.00%	0.00%	0.03%	0.00%	0.05%	0.00%	0.00%	0.00%
31	42929.76	100.01%	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%
32	31220.6	60.74%	0.00%	1.14%	0.00%	0.31%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	20.39%	0.00%	0.00%	0.00%
44	15081.77	61.17%	0.00%	0.00%	0.00%	0.00%	1.93%	0.00%	0.00%	13.10%	0.00%	0.27%	0.00%	0.00%	0.00%	4.68%
59	8172.008	0.00%	7.24%	0.00%	0.00%	0.00%	0.24%	0.00%	30.26%	1.62%	0.33%	13.09%	0.00%	0.00%	0.00%	0.00%
77	6044.428	0.00%	0.00%	0.00%	6.70%	0.00%	0.00%	0.02%	30.38%	0.00%	0.00%	1.51%	6.14%	0.00%	0.00%	0.00%
93	43754.12	0.19%	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%	7.82%
96	95947.32	0.00%	0.00%	0.07%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
100	423621.7	9.01%	0.00%	0.80%	0.00%	0.29%	1.02%	0.37%	0.91%	0.40%	0.78%	1.32%	1.10%	0.72%	0.14%	0.00%
125	20742.32	0.00%	5.16%	0.53%	0.00%	12.34%	1.04%	0.00%	21.01%	24.05%	21.78%	1.02%	5.65%	0.00%	6.67%	0.00%
130	1168.24	0.00%	0.00%	13.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
154	33924.92	0.00%	0.00%	0.00%	0.00%	0.23%	0.81%	0.00%	4.86%	4.25%	0.00%	0.00%	0.37%	0.00%	0.00%	0.00%
176	39787.48	0.89%	0.03%	0.00%	0.00%	4.18%	0.00%	3.76%	0.00%	2.16%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
177	26954.54	25.34%	0.00%	17.11%	2.25%	0.14%	8.10%	0.00%	4.34%	0.36%	6.79%	12.19%	0.92%	0.10%	5.31%	0.13%
178	376781.2	28.59%	0.00%	0.00%	0.00%	0.23%	0.87%	0.88%	1.62%	0.00%	0.14%	2.79%	2.40%	0.68%	0.59%	2.64%
179	15145.19	85.06%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.27%	1.14%	0.00%	5.12%	0.00%	0.49%
195	7805.6	99.94%	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%
206	17346.37	0.40%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.24%	93.41%
208	55360.87	17.31%	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%	82.69%
214	15043.3	0.00%	0.00%	12.54%	5.03%	6.53%	4.13%	0.00%	0.00%	0.00%	1.43%	0.00%	1.44%	10.97%	0.00%	55.72%
216	66424.06	0.00%	0.00%	15.27%	6.99%	7.74%	17.92%	2.21%	8.13%	7.65%	0.61%	0.91%	0.00%	0.00%	0.00%	0.00%
247	49898.17	5.87%	1.22%	0.02%	4.29%	4.14%	0.00%	6.46%	3.17%	3.07%	2.50%	0.00%	6.37%	0.00%	0.00%	23.35%
248	25486.16	28.80%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.22%	0.02%	0.02%	53.03%
252	39595.93	63.47%	0.00%	0.00%	8.02%	1.11%	0.21%	0.00%	0.93%	0.00%	0.00%	0.00%	3.80%	0.00%	0.00%	0.00%
261	21644.23	0.00%	0.00%	0.00%	0.55%	0.60%	2.89%	0.01%	0.00%	7.58%	1.37%	0.00%	13.21%	3.35%	0.00%	0.00%
276	123688.8	0.61%	0.00%	1.97%	3.10%	5.49%	1.51%	0.35%	0.00%	0.65%	0.00%	0.36%	1.87%	0.01%	0.00%	0.00%
279	1951.662	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%	80.85%
287	7901.775	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	11.50%	0.00%	0.00%	14.25%
291	11666.76	35.39%	0.00%	0.00%	0.00%	0.00%	0.00%	5.14%	9.01%	0.57%	21.31%	12.28%	13.53%	2.43%	0.00%	0.23%
292	15611.18	0.00%	0.00%	25.03%	11.09%	0.00%	18.95%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	18.40%
295	23486.01	18.20%	0.00%	0.00%	0.00%	2.46%	0.00%	0.00%	12.77%	24.60%	0.00%	0.00%	3.41%	11.99%	0.25%	0.00%
302	120342.1	1.46%	0.00%	0.00%	0.07%	0.00%	0.00%	0.35%	0.39%	0.00%	0.00%	2.55%	2.55%	0.77%	2.33%	3.98%
306	7804.656	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.05%	4.64%	15.11%	49.91%	7.83%	0.00%	22.40%
312	6535.273	0.00%	0.00%	0.00%	0.09%	9.23%	0.00%	35.73%	0.00%	6.40%	23.20%	25.28%	0.00%	0.00%	0.00%	0.00%
316	43177.8	20.06%	0.00%	0.00%	0.00%	0.00%	0.00%	7.69%	1.21%	7.61%	17.32%	0.00%	16.68%	7.08%	0.00%	20.67%
317	584.7346	99.70%	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%
318	5396.859	99.74%	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%
320	125.5182	98.79%	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%