

Table 12. Rate of release of N₂O measurements made in September 2009.

[NEC, Northeast Creek Watershed; GW#, measurement site; mM, millimolar; °C, temperature, degrees Celsius; NO₃, nitrate; nmoles, nanomoles; m, meters; hr, hours; sq, square; T₀, date and time chamber sealed; N₂O, nitrous oxide; T₁, beginning of period of associated flux calculation; T₂ ending of period of flux calculation; Temp., temperature]

| Location | Sequence No. ¹ | Chamber Sealed (T ₀) | Start Time (T ₁) | End Time (T ₂) | Treatment | Number of replicate measurements ² | Soil Temp. (°C) | Net N ₂ O release ³ (nmoles/sq m/hr) |
|----------|---------------------------|----------------------------------|------------------------------|----------------------------|---------------------------------|---|-----------------|--|
| NEC GW1 | 1 | 9/21/2009 15:58 | 9/21/09 18:26 | 9/22/09 7:56 | Ambient | 2 | 14.3 | -45 |
| NEC GW2 | 1 | 9/21/2009 16:12 | 9/21/09 18:01 | 9/22/09 7:32 | Ambient | 2 | 14.3 | 13 |
| NEC GW2 | 1 | 9/21/2009 16:12 | 9/21/09 18:00 | 9/22/09 7:29 | 75 mM Glucose | 1 | 14.3 | -61 |
| NEC GW3 | 1 | 9/21/2009 15:52 | 9/21/09 18:11 | 9/22/09 7:58 | Ambient | 2 | 14.3 | -86 |
| NEC GW3 | 1 | 9/21/2009 15:52 | 9/21/09 18:10 | 9/22/09 7:57 | 75 mM Glucose | 1 | 14.3 | -73 |
| NEC GW4 | 1 | 9/21/2009 16:05 | 9/21/09 18:21 | 9/22/09 7:48 | Ambient | 2 | 14.3 | -31 |
| NEC GW4 | 1 | 9/21/2009 16:05 | 9/21/09 18:20 | 9/22/09 7:47 | 75 mM Glucose | 1 | 14.3 | -80 |
| NEC GW5 | 1 | 9/21/2009 15:00 | 9/21/09 18:16 | 9/22/09 7:30 | Ambient | 2 | 14.3 | 2,430 |
| NEC GW5 | 1 | 9/21/2009 15:00 | 9/21/09 18:17 | 9/22/09 7:31 | 75 mM Glucose | 1 | 14.3 | 4,370 |
| NEC GW6 | 1 | 9/21/2009 15:35 | 9/21/09 18:31 | 9/22/09 8:07 | Ambient | 2 | 14.3 | -220 |
| NEC GW6 | 1 | 9/21/2009 15:35 | 9/21/09 18:30 | 9/22/09 8:06 | 75 mM Glucose | 1 | 14.3 | -220 |
| NEC GW4 | 1 | 9/22/2009 11:56 | 9/22/09 18:00 | 9/23/09 8:15 | 75 mM Glucose | 1 | 12.5 | 41 |
| NEC GW4 | 2 | 9/22/2009 11:56 | 9/23/09 8:15 | 9/23/09 14:10 | 75 mM Glucose | 1 | 12.5 | 597 |
| NEC GW4 | 1 | 9/22/2009 11:56 | 9/22/09 14:46 | 9/22/09 18:01 | Ambient | 2 | 12.5 | 731 |
| NEC GW4 | 2 | 9/22/2009 11:56 | 9/22/09 18:01 | 9/23/09 8:16 | Ambient | 2 | 12.5 | 64 |
| NEC GW4 | 1 | 9/22/2009 11:56 | 9/23/09 8:16 | 9/23/09 14:11 | Ambient | 2 | 12.5 | 567 |
| NEC GW4 | 1 | 9/22/2009 11:57 | 9/22/09 14:48 | 9/22/09 18:03 | 5 mM NO ₃ + Glucose | 1 | 12.5 | 50,000 |
| NEC GW4 | 2 | 9/22/2009 11:57 | 9/22/09 18:03 | 9/23/09 8:18 | 5 mM NO ₃ + Glucose | 1 | 12.5 | 84,100 |
| NEC GW4 | 3 | 9/22/2009 11:57 | 9/23/09 8:18 | 9/23/09 14:13 | 5 mM NO ₃ + Glucose | 1 | 12.5 | 133,000 |
| NEC GW4 | 1 | 9/22/2009 11:57 | 9/22/09 14:49 | 9/22/09 18:04 | 5 mM NO ₃ | 2 | 12.5 | 15,900 |
| NEC GW4 | 2 | 9/22/2009 11:57 | 9/22/09 18:04 | 9/23/09 8:19 | 5 mM NO ₃ | 2 | 12.5 | 28,200 |
| NEC GW4 | 3 | 9/22/2009 11:57 | 9/23/09 8:19 | 9/23/09 14:14 | 5 mM NO ₃ | 2 | 12.5 | 63,100 |
| NEC GW4 | 1 | 9/22/2009 11:59 | 9/22/09 14:51 | 9/22/09 18:06 | 25 mM NO ₃ + Glucose | 1 | 12.5 | 76,700 |

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|---------|---|-----------------|---------------|---------------|----------------------------------|---|------|---------|
| NEC GW4 | 2 | 9/22/2009 11:59 | 9/22/09 18:06 | 9/23/09 8:21 | 25 mM NO ₃ + Glucose | 1 | 12.5 | 154,000 |
| NEC GW4 | 3 | 9/22/2009 11:59 | 9/23/09 8:21 | 9/23/09 14:16 | 25 mM NO ₃ + Glucose | 1 | 12.5 | 286,000 |
| NEC GW4 | 1 | 9/22/2009 12:00 | 9/22/09 14:52 | 9/22/09 18:07 | 25 mM NO ₃ | 2 | 12.5 | 17,000 |
| NEC GW4 | 2 | 9/22/2009 12:00 | 9/22/09 18:07 | 9/23/09 8:22 | 25 mM NO ₃ | 2 | 12.5 | 35,800 |
| NEC GW4 | 3 | 9/22/2009 12:00 | 9/23/09 8:22 | 9/23/09 14:17 | 25 mM NO ₃ | 2 | 12.5 | 102,000 |
| NEC GW4 | 1 | 9/22/2009 12:00 | 9/22/09 14:54 | 9/22/09 18:09 | 50 mM NO ₃ + Glucose | 1 | 12.5 | 42,700 |
| NEC GW4 | 2 | 9/22/2009 12:00 | 9/22/09 18:09 | 9/23/09 8:24 | 50 mM NO ₃ + Glucose | 1 | 12.5 | 118,000 |
| NEC GW4 | 3 | 9/22/2009 12:00 | 9/23/09 8:24 | 9/23/09 14:19 | 50 mM NO ₃ + Glucose | 1 | 12.5 | 184,000 |
| NEC GW4 | 1 | 9/22/2009 12:01 | 9/22/09 14:55 | 9/22/09 18:10 | 50 mM NO ₃ | 2 | 12.5 | 13,400 |
| NEC GW4 | 2 | 9/22/2009 12:01 | 9/22/09 18:10 | 9/23/09 8:25 | 50 mM NO ₃ | 2 | 12.5 | 36,500 |
| NEC GW4 | 3 | 9/22/2009 12:01 | 9/23/09 8:25 | 9/23/09 14:20 | 50 mM NO ₃ | 2 | 12.5 | 54,800 |
| NEC GW4 | 1 | 9/22/2009 12:02 | 9/22/09 14:57 | 9/22/09 18:12 | 100 mM NO ₃ + Glucose | 1 | 12.5 | 47,800 |
| NEC GW4 | 2 | 9/22/2009 12:02 | 9/22/09 18:12 | 9/23/09 8:27 | 100 mM NO ₃ + Glucose | 1 | 12.5 | 109,000 |
| NEC GW4 | 3 | 9/22/2009 12:02 | 9/23/09 8:27 | 9/23/09 14:22 | 100 mM NO ₃ + Glucose | 1 | 12.5 | 180,000 |
| NEC GW4 | 1 | 9/22/2009 12:03 | 9/22/09 14:58 | 9/22/09 18:13 | 100 mM NO ₃ | 2 | 12.5 | 14,600 |
| NEC GW4 | 2 | 9/22/2009 12:03 | 9/22/09 18:13 | 9/23/09 8:28 | 100 mM NO ₃ | 2 | 12.5 | 32,400 |
| NEC GW4 | 3 | 9/22/2009 12:03 | 9/23/09 8:28 | 9/23/09 14:23 | 100 mM NO ₃ | 2 | 12.5 | 54,400 |
| NEC GW4 | 1 | 9/22/2009 12:06 | 9/22/09 15:00 | 9/22/09 18:15 | 200 mM NO ₃ + Glucose | 1 | 12.5 | 40,000 |
| NEC GW4 | 2 | 9/22/2009 12:06 | 9/22/09 18:15 | 9/23/09 8:30 | 200 mM NO ₃ + Glucose | 1 | 12.5 | 81,600 |
| NEC GW4 | 3 | 9/22/2009 12:06 | 9/23/09 8:30 | 9/23/09 14:25 | 200 mM NO ₃ + Glucose | 1 | 12.5 | 179,000 |
| NEC GW4 | 1 | 9/22/2009 12:08 | 9/22/09 15:01 | 9/22/09 18:17 | 200 mM NO ₃ | 2 | 12.5 | 10,100 |
| NEC GW4 | 2 | 9/22/2009 12:08 | 9/22/09 18:17 | 9/23/09 8:31 | 200 mM NO ₃ | 2 | 12.5 | 25,700 |
| NEC GW4 | 3 | 9/22/2009 12:08 | 9/23/09 8:31 | 9/23/09 14:26 | 200 mM NO ₃ | 2 | 12.5 | 54,200 |

¹ Sequence numbers refer to the chronologically ordered N₂O release rate measurements at a given site for the same treatment following sealing of the chamber.

² Replicate measurements refers to the number of individual chambers receiving the same treatment. Values shown are for the average of measurements receiving the same treatment.

³ A negative number indicates a decrease in N₂O in the headspace during the measurements interval suggesting N₂O was consumed.