

Pulick Michael A
 Form 4
 December 15, 2010

FORM 4

**UNITED STATES SECURITIES AND EXCHANGE COMMISSION
 Washington, D.C. 20549**

OMB APPROVAL

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Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

(Print or Type Responses)

1. Name and Address of Reporting Person *
 Pulick Michael A

(Last) (First) (Middle)
 100 GRAINGER PARKWAY
 (Street)

LAKE FOREST, IL 60045-5201

(City) (State) (Zip)

2. Issuer Name and Ticker or Trading Symbol
 GRAINGER W W INC [GWW]

3. Date of Earliest Transaction
 (Month/Day/Year)
 12/14/2010

4. If Amendment, Date Original Filed(Month/Day/Year)

5. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

____ Director _____ 10% Owner
 Officer (give title below) _____ Other (specify below)
 Senior Vice President

6. Individual or Joint/Group Filing(Check Applicable Line)
 Form filed by One Reporting Person
 ___ Form filed by More than One Reporting Person

Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

| 1. Title of Security (Instr. 3) | 2. Transaction Date (Month/Day/Year) | 2A. Deemed Execution Date, if any (Month/Day/Year) | 3. Transaction Code (Instr. 8) | 4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5) | 5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4) | 6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 7. Nature of Ownership (Instr. 4) |
|---------------------------------|--------------------------------------|--|--------------------------------|---|---|--|-----------------------------------|
| | | | Code | V | Amount | (A) or (D) | Price |
| Common Stock | 12/14/2010 | | M ⁽¹⁾ | | 4,800 | A | \$ 76.61 |
| Common Stock | 12/14/2010 | | S ⁽¹⁾ | | 4,475 | D | \$ 135 |
| | | | | | | | 27,209 |

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

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SEC 1474
 (9-02)

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Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned
(e.g., puts, calls, warrants, options, convertible securities)

| 1. Title of Derivative Security (Instr. 3) | 2. Conversion or Exercise Price of Derivative Security | 3. Transaction Date (Month/Day/Year) | 3A. Deemed Execution Date, if any (Month/Day/Year) | 4. Transaction Code (Instr. 8) | 5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5) | 6. Date Exercisable and Expiration Date (Month/Day/Year) | 7. Title and Amount of Underlying Securities (Instr. 3 and 4) | 8. Amount or Number of Shares |
|--|--|--------------------------------------|--|--------------------------------|---|--|---|-------------------------------|
| Option | \$ 76.61 | 12/14/2010 | | M ⁽¹⁾ | 4,800 | 04/26/2009 04/25/2016 | Common Stock | 4,800 |
| Option | \$ 83.08 | | | | | 04/25/2010 04/24/2017 | Common Stock | 12,000 |
| Option | \$ 85.82 | | | | | 04/30/2011 04/29/2018 | Common Stock | 10,500 |
| Option | \$ 81.49 | | | | | 04/29/2012 04/28/2019 | Common Stock | 30,000 |
| Option | \$ 108.15 | | | | | 04/28/2013 04/27/2020 | Common Stock | 29,000 |

Reporting Owners

| Reporting Owner Name / Address | Relationships | | | |
|--|---------------|-----------|-----------------------|-------|
| | Director | 10% Owner | Officer | Other |
| Pulick Michael A 100 GRAINGER PARKWAY LAKE FOREST, IL 60045-5201 | | | Senior Vice President | |

Signatures

C. L. Kogl, as
attorney-in-fact
12/15/2010

**Signature of Reporting Person

Date

Explanation of Responses:

* If the form is filed by more than one reporting person, see Instruction 4(b)(v).

** Intentional misstatements or omissions of facts constitute Federal Criminal Violations. See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

(1) Transaction pursuant to a previously adopted Rule 10b5-1 trading program.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

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