Wells Timberland REIT, Inc. Form 424B3 November 23, 2011

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WELLS TIMBERLAND REIT, INC. SUPPLEMENT NO. 17 DATED NOVEMBER 23, 2011 TO THE PROSPECTUS DATED AUGUST 6, 2009

This document supplements, and should be read in conjunction with, our prospectus dated August 6, 2009, relating to our offering of up to \$2,200,000,000 of shares of our common stock, as supplemented by Supplement No. 12 dated April 18, 2011, Supplement No. 13 dated May 17, 2011, Supplement No. 14 dated June 17, 2011, Supplement No. 15 dated August 12, 2011, and Supplement No. 16 dated November 10, 2011. Defined terms used in this supplement have the same meanings as set forth in the prospectus. The purpose of this supplement is to disclose: the status of our public offerings; and

an update regarding our dealer-manager.

Status of Our Public Offerings

On August 11, 2006, we commenced our initial public offering of up to 85.0 million shares of common stock, of which 10.0 million shares were reserved for issuance through our distribution reinvestment plan. Our initial public offering ended on August 11, 2009. We raised gross offering proceeds of approximately \$174.9 million from the sale of approximately 17.6 million shares in our initial public offering.

On August 12, 2009, we commenced a follow-on public offering of 220.9 million shares of common stock, of which 20.9 million shares of common stock are being offered under our distribution reinvestment plan. As of November 21, 2011, we had raised gross offering proceeds of approximately \$109.3 million from the sale of approximately 11.0 million shares of common stock under our follow-on offering. As of November 21, 2011, approximately 189.0 million shares remained available for sale to the public in our follow-on offering, exclusive of shares available under our distribution reinvestment plan. Unless extended, our follow-on offering is expected to terminate on December 31, 2011.

As of November 21, 2011, we had received aggregate gross offering proceeds of approximately \$284.2 million from the sale of approximately 28.6 million shares in our public offerings. After incurring approximately \$25.1 million in selling commissions and dealer-manager fees, approximately \$3.4 million in other organization and offering expenses, and funding common stock redemptions of approximately \$2.1 million pursuant to the share redemption program, as of November 21, 2011, we had raised aggregate net offering proceeds available for investment in properties of approximately \$253.6 million, substantially all of which had been invested in timberland properties.

An Update Regarding Our Dealer-Manager

On November 21, 2011, Wells Investment Securities, Inc., or WIS, the dealer manager for our public offerings, entered into a Letter of Acceptance, Waiver and Consent, or AWC, with the Financial Industry Regulatory Authority, Inc., or FINRA, relating to previously disclosed alleged rule violations in connection with our public offerings. The AWC sets forth FINRA's findings that WIS had (1) reviewed, approved, and distributed as a wholesaler various sales materials related to our public offerings that failed to comply with the content standards of FINRA's advertising rules,

(2) failed to implement its supervisory system in an effective manner in order to ensure compliance with FINRA's advertising rules, and (3) failed to establish and maintain a supervisory system that was reasonably designed to safeguard confidential customer information.

Without admitting or denying the findings against it, WIS consented in the AWC to these findings by FINRA, a censure, and the imposition of a fine in the amount of \$300,000. No other disciplinary action was taken against WIS; no remedial measures were required; and no individuals were charged.

SUPPLEMENTAL INFORMATION —The prospectus of Wells Timberland REIT, Inc. consists of this sticker, the prospectus dated August 6, 2009, Supplement No. 12 dated April 18, 2011, Supplement No. 13 dated May 17, 2011, Supplement No. 14 dated June 17, 2011, Supplement No. 15 dated August 12, 2011, Supplement No. 16 dated November 10, 2011, and Supplement No. 17 dated November 23, 2011.

Supplement No. 12 includes:

the status of our public offerings;

changes to the suitability standards for investors;

a description of our current portfolio;

selected financial data;

our performance - Adjusted EBITDA;

our net tangible book value per share;

the refinancing of our indebtedness;

information regarding our indebtedness;

our election to be taxed as a REIT;

a revision of the tax considerations section of our prospectus;

our offering of up to 11,398,963 shares of common stock in a private placement to non-U.S. persons;

information concerning distributions and our declarations of stock dividends;

the renewal of and an amendment to our advisory agreement;

compensation paid to our advisor;

updates regarding our dealer-manager;

a clarification regarding our subscriptions procedures;

the amendment and restatement of our independent directors compensation plan;

information concerning our board of directors;

the amendment and restatement of our charter;

the amendment and restatement of our bylaws, and the subsequent adoption by our board of directors of an amendment to our bylaws to limit the leverage we may incur;

the issuance and sale of Series B preferred stock in a private placement;

elarifications to the disclosure in the section of the prospectus entitled "Business and Policies -Investment Objectives";

a revision to the "Management - Legal Proceedings" disclosure regarding the Piedmont Office Realty Trust, Inc. litigation";

incorporation of certain documents by reference;

a change to the "Experts" section of our prospectus;

information regarding redemptions made pursuant to our share redemption plan;

amendments to our share redemption plan, an amended and restated copy of which is attached to this supplement as Annex A;

amendments to our distribution reinvestment plan, an amended and restated copy of which is attached to this supplement as Annex B;

changes to our subscription agreement, an amended and restated copy of which is attached to this supplement as Annex C;

an update to our "Prior Performance Summary" disclosure in our prospectus; and

an update to our "Prior Performance Tables" disclosure in our prospectus.

Supplement No. 13 includes:

the status of our public offerings;

information regarding our indebtedness;

declaration of a stock dividend for the third quarter of 2011;

a reduction in the dividend rate for our Series A and Series B preferred stock; and our Quarterly Report on Form 10-Q for the quarter ended March 31, 2011, as filed with the Securities and Exchange Commission on May 9, 2011.

Supplement No. 14 includes:

the status of our public offerings;

information regarding our indebtedness;

the amendment of the Mahrt loan agreement to provide for a revolving loan facility;

the redemption of shares of our Series A and Series B preferred stock; and

an update to our estimated use of proceeds.

Supplement No. 15 includes:

the status of our public offerings;

information regarding our indebtedness;

declaration of a stock dividend for the fourth quarter of 2011;

the amendment of our charter; and

our Quarterly Report on Form 10-Q for the quarter ended June 30, 2011, as filed with the Securities and Exchange Commission on August 9, 2011.

Supplement No. 16 includes:

the status of our public offerings;

information regarding our indebtedness; and

our Quarterly Report on Form 10-Q for the quarter ended September 30, 2011, as filed with the Securities and Exchange Commission on November 8, 2011.

Supplement No. 17 includes:

the status of our public offerings; and

an update regarding our dealer-manager.