

Technical Note: Tax Calculation Methodology

Application: Foothills R&R Wealth Planner (v36)

Module: Dynamic Tax Engine & Withdrawal Sequencer

Overview

The v36 engine utilizes a sophisticated "**Gross-Up**" **Iteration Algorithm** to estimate future tax liability. Unlike standard calculators, this engine dynamically adjusts effective tax rates annually based on specific income sources, specific state exemptions, and the chosen withdrawal sequence.

Federal Tax Logic

- **Social Security Taxation:** The engine assumes **85%** of Social Security benefits are taxable for modeled profiles.
- **Bracket Inflation:** To prevent artificial "bracket creep," the engine applies a compound **Tax Adjustment Factor** (user-defined, default 3.0%) to widen tax brackets and increase the Standard Deduction for future years (2027–2030+).
- **Filing Status Transition:** The engine explicitly models the "Widow Tax Shock." Upon the death of a spouse, the filing status shifts from **Married Jointly** to **Single**, halving the Standard Deduction and compressing tax brackets.

State Tax Logic & Exemptions

- **Standard Logic:** Applied as $\$(\text{Taxable Income} - \text{Standard Deduction}) \times \text{State Rate}\$$.
- **North Carolina (NC) Exemption:** The engine identifies NC as a Social Security-exempt state. The taxable portion of Social Security is deducted from the state tax base before the **4.75%** rate is applied.

Withdrawal Strategy Impact

The v36 update introduces **Strategy-Based Taxation**. The total tax paid is now a function of the **Withdrawal Strategy** selected:

1. **Tax-Efficient:** Prioritizes Cash, then Taxable, then Tax-Deferred, and finally Roth.
2. **Preserve Taxable:** Prioritizes Cash, then Tax-Deferred, then Roth, and finally Taxable.

3. **Roth First:** Prioritizes Cash, then Roth, then Taxable, and finally Tax-Deferred.

Disclaimer

This methodology provides a high-fidelity estimation for planning purposes. It assumes Standard Deductions. It does not account for complex itemized deductions, RMD specifics, or capital gains tax brackets (which may be lower). Users should consult a CPA for precise tax filing advice.

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