Computer Models
For
Fire and Smoke

Model Name:	Fuel and Fire Tools (FFT)
Version:	1.0
Date:	2-13-2014
Model Actively Supported?:	Yes
Classification:	
Very Short Description:	Fuel and Fire Tools is an integrated application that supports the latest versions of the Fuel Characteristics Classification System (FCCS v 3.0), Consume (v. 4.2), Fire Emissions Production Simulator (FEPS 2.1) and Pile Calculator.
Modeler(s), Organization(s):	Roger D. Ottmar, U.S. Forest Service, Pacific Northwest Research Station, Fire and Environmental Research Applications Team. Susan Prichard, University of Washington, School of Environmental and Forest Sciences
User's Guide:	Under development
Technical References:	None
Validation References:	None
Availability:	Expected release in April 2014 http://www.fs.fed.us/pnw/fera
Price:	Free
Necessary Hardware:	n/a
Computer Language:	C++. Software requirements include Java 7 and .NET framework 4.0
Size:	39.2 MB
Contact Information:	Ellen Eberhardt, eeberhardt@fs.fed.us

Detailed Description: FFT is a software application that integrates the Fuel Characteristics Classification System, Consume, FEPS, Pile Calculator, and Digital Photo Series into a single user interface. All of the tools were developed by FERA as open-source and freely sharable software and are supported as separate modules.

- The Fuel Characteristic Classification System (FCCS) stores and classifies fuels data as fuelbeds and calculates fuel loadings, carbon and other summary fuel characteristics. It also predicts surface fire behavior and crown fire and available fuel potentials. The FCCS can also be run in command line as a batch calculator and is available as a separate module to be integrated into other system (e.g., IFT-DSS). Fuelbeds can be viewed and edited in the FFT's fuelbed editor.
- Consume predicts fuel consumption, pollutant emissions, and heat release based on a number of factors including fuel loadings, fuel moisture, and other environmental factors.
- The Fire Emission Production Simulator (FEPS) predicts hourly fuel consumption, pollutant emissions, and heat release characteristics of wildland fires.
- The web-based Digital Photo Series (DPS) can be launched within the fuelbed editor to for reference purposes
- The Pile Calculator is integrated within the Fuelbed Editor to allow creation and editing of pile information within fuelbeds.