

i-Tree Suite Change Log (2/8/2012)

i-Tree Suite Version	Application Version	Improvements
V4.1.7	Eco 4.1.6	Fixed bug in tables of missing "City Total" row in five tables. This error is introduced when SAS processed data is being loaded.
	Hydro 4.0.5	Removed reference to ManagementCatchmentArea as it was not always reset properly and unnecessary
V4.1.6	Eco 4.1.5	Data editing error message (removed -1 from the valid entry such as tree height, dbh etc)
	Hydro 4.0.4	Reverse chart legend order so rain is at the top
		EMC units corrected to g/hr and 10 ⁻³ *lb/hr in chart and table
		Allow sorting on all columns in output table, automatically clear total rows on sorting.
		Updated Hydrology.exe which will now properly handle NODATA values and other bug fixes
	STREETS 4.0.4	Correct benefit values for SoCalSMA region
	Vue 4.0.1	<p>Miscellaneous</p> <ul style="list-style-type: none"> • App file path changes • Add LEAD Tools Copyright text to About screen • Fix Google code - Right click not working on LC pixels • Fix Google code - Distance and Bearing not working over top of pixels • On clip window, map windows for TC/IC/LC are out of alignment • Negative value for Dev Hi Intensity Avail Space after adjustment of TC/IC. • New NLCD zones (Kuelhler msg) implement Al's suggestion of note at bottom of Adjustment form • ArcGIS v10 clipping protocol • Re-Clip Washington in ArcGIS v10 for colors/eliminate gray palette • Updated updater code • Help Button not visible on adjustment form • Printer dialogs added to choose printer • Fix truncation of: O3 (C/P) "per poun" in reports • Add i-Tree Canopy suggestion for TC/IC adjustment %s on adjustment screen help • Report: for LC classes with 0 acres – no longer included in reports

		<p>Google Enhancements</p> <ul style="list-style-type: none"> • Clip: NLCD footprint rectangle on Google • Find/Vue/Clip: Current Vue view extent rectangle on Google window on zoom <ul style="list-style-type: none"> ◦ (Need to make this rectangle move with pan – v5 release) • Toggle legend button from Google Vue window • GoogleVue: buttons to toggle pixels visible/invisible • GoogleVue - re-write LC, TC, IC, AnalysisOutput to Google API v3 to support pan and zoom • GoogleVue: pan Google window to Lat/Lng coordinates of NLCD image centers • GoogleVue: zoom to extents of NLCD images (given differing Google Maps window size) • GoogleFind - re-write to Google API v3 for pan/zoom • GoogleFind: Pan/NLCD • GoogleFind: Zoom/NLCD • Clip: check if FIRST user point is inside NLCD image area as well as subsequent points • Clip window - re-write to Google API v3 to support pan and zoom • Clip: zoom to NLCD image extent on NLCD image extents button • Clip: auto zoom to NLCD image extent when first loaded/clip window first opened • Clip: simplified draw polygon process -added delete vertices functions (no more separate delete last vertex button) • Clip: simplified draw polygon -added drag vertices functions –on-the-fly adjustment of polygon • Clip: simplified draw polygon - no more close/finish polygon button – coordinates update with each polygon change/edit • Clip: on hitting Draw AOI on NLCD button, make Google AOI drawing visible, but no longer editable (lower right Reset button becomes only option to start COMPLETELY over) • Clip: streamlined the onscreen help text, reduced steps & numbered steps now match with numbered buttons on screen
V4.1.5	Eco 4.1.4	Fixed the “no current record” bug in written report while generating two dominant ground cover percentages if there are less than two actual ground covers.
		Species Name Format: have choice in View menu for Scientific Name and Common Name
		In written report: a message to close Microsoft Office Software will pop up if clipboard accessing error encountered
		Sending and Receiving for SAS online processing: ftp error is fixed in Window 7 operation system
		Fixed the bug when tree id or plot id is more than 5 digits
	Eco PDA utility	Properly handle null values when the Pocket PC's XML file is updated with IPED

	v4.1.2	fields.
V4.1.3		Corrected version of WeatherStations.mdb included in installer
V 4.1.2	STREETS 4.0.3	Force upgrade to i-Tree Streets PDA v4.0.1
	STREETS PDA 4.0.1	Write Project Data File in UTF8 format to fix issue with international characters
	Hydro 4.0.3	Change the weather data query to the range of gauge station data range
		Fixed the bug of location database reader in hydro pollution data processing
	Eco 4.1.2	Added New South Wales of Australia on SAS online processing
		Fixed cvs export standard error data missing in one table
		“Beta” word added to the application title for Australia projects
		Written report and tables/charts now reflect the local currency symbols
		SAS online now have trees and shrubs processed for pollution separately
		Fixed a leaf area density discrepancy bug between tables “Per-Area Estimates for Trees” and “Leaf Area and Biomass for Trees and Shrubs” when a project is configured to use variant plot size and shrubs are not collected.
		Hourly pollution charts are now enhanced by offering additional selections by trees, shrubs or combined.
V 4.1.1	Eco 4.1.1	In project creation form, if an existing location is selected, the controls in Location frame are disabled, so as Series frame and Year frame Fixed the bug when submitting for model process of international projects “Primary Partition Name (or State name) can not be Null” PEST module is developed. Full Inventory Importing is developed. In menu View/Dataset, 20 items limitation is removed. Victoria of Australia is treated as in USA now for SAS online model processing Manual is updated. FieldLanduse “N” (Industrial) from version 3 is changed to “C” (Commercial/Industrial) in FieldLanduses and Trees tables in exporting to model process Fixed bug “subscript out of range” when species is less than 10 in written report
	Eco PDA Utility	PEST Module is developed

	4.1.0	
	Eco PDA 4.1.0	PEST Module is added for data transferring
	STREETS 4.0.2	<p>Changed Company Name to "iTree"</p> <p>Moved location of IPED data to i-Tree\Streets folder within the use's application data folder</p> <p>Updated climate zone map</p> <p>Fixed crash upon failing to load IPED Matrix</p> <p>Check for PDA version 4.0.0</p> <p>Improved support for GPS devices in PDA</p> <p>Fixed potential crash upon save due to .NET bug in PDA</p> <p>Improved backup support</p>
	Hydro 4.0.2	<p>Set currently selected parameters in configuration form</p> <p>Ignore current time zone for StartDate and EndDate in Raw Data Import Form</p> <p>Set download progress dialog box to be modal in Raw Data Import Form</p> <p>Allow 0% tree cover/evergreen values in Raw Data Input form</p> <p>Bug fix when using data spans two or more years</p>
V 4.0.1	Eco 4.0.1	Model Processing is automated.
		In the input database, a field PercentMeasured (long type) is added in SubPlots table
		MDE is now allowing to enter percent measured for plot
		The form Plot generator is rewritten for manual plot adding
		In the input database, fields WeatherStationID and YearOfWeatherData are added
		In Menu "Edit", a sub item called "Manage Map Landuse" is added
		Google map component is added for selecting weather station. In project setup, user is required to select a weather station id for UFORE-D process
		In MDE, "Delete Plot" is added
		In MDE tree data entry form, "Delete" tree and "Undo" edit buttons are added.
		A new chart "Hourly pollutant removal by trees and shrubs" is added for UFORED result report
		The chart "Monthly pollutant removal by trees and shrubs" and the table "Pollutant Removal" are rewritten

		A report "Model Processing Notes" is added in the Reports menu
		Label NR is changed to STAT in MDE tree data entry form
		Paper collection form for sampled project has corrected some typos
		A sample project for full inventory is added. A sample project for plot based (or sampled) project is rebuilt. Menu under File for opening sample projects is change.
		Updated user manual
	Eco PDA Utility 4.0.0	Updated the PDA utility's plot import form to use VSFlexGrid instead of DBGrid which was not displaying values (only empty cells.)
		Changed dialog boxes to be modal instead of hiding the main form. This avoids the program left running in the background when the user clicks the "X" in the upper right to close dialog. Forms are explicitly loaded and unloaded now.
		Added X for surveyor form
		Handled -1 as default SubPlotSize (should never happen, but it did in a test project I had.)
		Insert value for Percent Measured into input database
		Updated user manual
	PDA Application 4.0.0	Allow single digit direction in Compass Control's manual entry
		Backup: Use API to find storage card
		Add I, P, and U as status
		Shrub details sum of percent in entering data must be 100%.
	Streets 4.0.0	Add new dynamic IPED reports
		Add "Create New" and "Select Existing" project database options
		Update About Screen and User's Manual
	Vue 4.0.0	added "google find" to identify the point location on Google maps
		added "Google vue" to mosaic 11x11 pixels of NLCD data onto Google maps
		added the ability to tie into ECO project
		added a simple clip function
		created map tool buttons

		added TC and IC correction factors
		interface update
	Hydro 4.0.0	New application in Version 4
	Species 4.0.0	Added user interface for International users
	Storm 4.0.0	Updated display.
V3.0.19	Streets v3.0.15	Fix potential crash in City Information dialog if invalid location information is encountered.
		Fix misplaced project version check during import inventory.
		Fix type of PestId in the IPED XML schema definition file so that it is imported properly.
		Add globalization support for reading default benefit values.
		Add globalization support for reading pest matrix.
V3.0.18	Eco v3.0.15	In project configuration setup, single quote and double quote now is prevented from entering in Location, Series fields
		Handled comma, dot, and blank in SAS output numeric values when loading data from Forest Service
		Added a function to check the duplicated species in SAS output files when loading data from Forest Service for reporting
		Delete button added In MDE
	Eco PDA Utility v3.0.12	Changed the distance to plot center to decimal
		Filtered out industrial landuse to match to MDW
	Streets v3.0.14	Fixed crash while trying to delete a large number of trees.
		Fixed incorrect calculation of # of Segments Sampled. Also fixed Zone editing/modification, and possible errors in Annual Benefits reports.
		Added Export Inventory options (CSV, & XML)
		Added online IPED updates.
		Added Footnote to Carbon Stored report.
		Renamed NetCarbonStorage sheet to CarbonStorage during export.
		Fixed opening of Stratum 3.4 based projects.

		Updated project format to include project versions and IPED dates.
		Fixed crash during reporting when a Null species code is encountered.
	Streets PDA v3.0.13	Used API to auto-detect storage device in backup form replacing previous hard coded storage device.
		Prevent Pocket PC from entering low power mode while GPS is running by reset system idle timer when GPS receives data
V3.0.17	Eco v3.0.14	Added Print Plot button in Sample Plot MDE
		Added Comments for trees in Sample Plot MDE
		Moved comments editing from plot notes to Tree notes internally
		Changed DS from integer to decimal
		Data loss for multiple page tree editing in MDE
	Eco PDA Utility v3.0.11	Fixed unknown species bug (unknown species detection)
		Refresh ground covers on PDA when retrieving data
		Solved DS decimal rounding issue when sending/retrieving data
	Eco PDA v3.0.11	Fixed inventory tree search
		Fixed Inventory/sample re-measurement status field
V3.0.16	Eco v3.0.13	Removed undesired post stratification
		Fixed location database (added missing table Temperature)
	Eco PDA v3.0.10	Changed "No Trees on Plot" to only modify actions menu, instead of disabling the "% Tree Cover" combobox and setting it to 0. Actions combobox menu will be modified when "% Tree Cover" > 0 and "No Trees on Plot" is not checked
	Eco PDA Utility v3.0.10	Changed PDA version check to 3.0.10
	Species v3.0.5	Fixed location database (added missing table Temperature)
		Resize suite version label to fit all version numbers
	Streets v3.0.13	Fix crash in Species Distribution report when there aren't at least 5 different species types in each zone
		Fix crash in Relative Performance Index report when there are no trees to report on
		The Manual is updated

V3.0.15	Eco v3.0.12	Input database changed Crownbase to limit 450, TreeHeightLiveTop limit to 450, TreeTotalHeight to limit 450, CrowWidth (EW,NS) limit to 300. MDE also changed accordingly.
		Ground Cover data input in MDE is changed to Grid.
		A new report table "Most Important Species" is added
	Streets v3.0.12	Added Central Florida climate region
	Species v3.0.4	Main form screen resized to have height compatible to 600 pixel screen
		Location database is now using a shadow database to avoid exclusive access violation
	Eco PDA v3.0.9	Constrain tree values to match input database rules
		Fix crash on nonalphabetic character in search box
	Eco PDA Utility v3.0.9	Unknown Species code checking is only applied to completed plots. The data for all uncompleted plots will remain the same in PDA application allowing users to edit for the second chance.
		Brought back the groundcovers editing form (which modifies input database now). The editing form will not allow edit the standardized ground covers. It allows to add/edit/delete customized ground cover with ground cover ID starting from 51.
		Switched ground cover editing grid to VSFlexGrid, which eliminated the occasional grid data invisibility to users
		PDA application version check is now conducted through a .NET method which directly retrieves the version from PDA application itself, eliminated the version inconsistency (previously it reads from version.txt file in PDA causing possible inconsistency). The .NET version checking method is contained in new MDBDAndS.dll.
V3.0.14	Eco PDA v3.0.7	Updated all version information to be consistent with Eco PDA Utility
	Eco PDA Utility v3.0.8	Removed "Import information from Location Database," "Add/Edit/Delete Additional Ground Cover Types," and "Populate Field Input Database with Cover Types" dialogs from the Project Setup tab. Necessary code runs automatically.
		Changed version check for PDA Application
V3.0.13	Eco v3.0.10	Fixed error "item not found in collection" in Sending data to Forest Service

		Added EAB susceptibility report
		In MDE, 13 pages limit of trees editing per plot is no longer exist.
		In MDE data editing, species editing now allows the toggle between species code, botanic name and common name
	Streets v3.0.11	Refresh current report after modifying annual costs.
		Fix crash that can occur upon running reports.
V3.0.12	Eco v3.0.9	
		Fixed data editing bug when species name starting with letter x
		Allow user to enter species for dead tree hardwood and dead tree softwood
		Fixed the bug in written report for international users when energy option is not available
		Includes updated Eco user's manual v3.1
	Eco PDA Utility v3.0.6	Use API to launch external applications, fixes Windows 7 Compatibility
		Fix Send Tree Data form to only show trees from current Eco project
		Add MACCLASS/PICLASS (Dead unknown hardwood/dead unknown softwood) to species database on PDA; always send Species Database to PDA when sending configuration
		Alter Middle Database to accept species code of 8 characters
	Streets v3.0.10	Fix crash in Define Species dialog due to duplicate species codes with differing cases.
		Correct spelling of "short holes" to "shot holes" in Insect Signs options.
	Streets PDA v3.0.10	Add GPS API option to support buggy GPS devices.
		Allow GPS Direct entry after Start GPS fails.
	Storm v3.0.4	Fix incorrect PDA application version issue.
V3.0.11	Streets PDA v3.0.9	Fix crash upon save due to a bug in .Net CF
		Correct display of the Comment panel on square displays.
		Clear all held location fields upon clicking the Clear Location button.

		Store the averaged GPS coordinate values rather than the last received values.
V3.0.10	Eco v3.0.8	Fixed the issue with species code "none" when loading reporting data from forest service
	Streets v3.0.8	Refresh current report after importing records from the PDA.
	Streets PDA v3.0.8	Fix potential crash upon exit.
		Fix high-resolution display issue with Comment box.
V3.0.9	Eco v3.0.7	fixed read only issue for species and location databases
		fixed naming issue for chart "Carbon Sequestration Density by Land USE"
		fixed plot size issue in page 21 of report writer
		fixed ordering issue in input data editing
	Streets v3.0.7	Display unmatched species codes in uppercase on reports.
		Add validation for GPS coordinates.
		Prompt for unmatched species codes after importing data.
		Only allow a record to be duplicated at most 9999 times.
		Update RPI report to use Condition factors.
		Correct the Population Summary report.
		Add pest common name to Inventory Details form.
		Remove duplicated summary lines from pest summary reports.
		Correctly import SurveyorID as a String and not an Integer.
		Updated sample project.
		Implement new IPED protocol.
	Streets PDA v 3.0.7	Return to the Edit Tree form after editing a tree.
		Ensure changes are made only when the user has made them.
		Add Pest common name selection field.
		Update pest tabs for new IPED protocol.
		Correct display issues as a result of modifications added for square displays.
		Correctly handle canceling an edit of Pest data.
		Fix bug in GPS control resulting in data loss.

		Update GPS control to accept GPS coordinates in either +-Decimal Degrees or Decimal Degrees + Direction.
		Display invalid GPS coordinates to the user in the status pane.
		Display previously recorded GPS coordinates to the user when the GPS is ready to capture.
	Storm v3.0.3	Export Rural indicator as Y/N rather than yes/no.
		Correct Standard Error estimates provided by the template.
		Ensure rural trees are counted separately from all other trees.
		Correct tree removal estimates on the Post Analysis sheets.
		Extrapolate tree estimates on the Post Analysis sheets where possible.
		Correct the Brush Adjust lookup table to match the descriptions.
		Add Standard Error estimates for debris estimates.
V3.0.8	Eco v3.0.6	Community Map is brought back available
		Adding plots loop is changed to more intuitive way
	Streets v3.0.6	Corrected extrapolation for sample inventories for Pest, Maintenance, and Conflict reports.
		Moved report generation to its own thread. Removes race condition in user interface thread.
		Replaced Site Type reports.
		Replaced Other reports.
		Replaced Land Use reports.
		Replaced Pest Summary reports.
		Clarified report headers of all new reports.
		Updated export of Site Type, Other, and Land Use reports for Excel.
	Eco PDA 3.0.5	Added backup functionality
V3.0.7	Eco v3.0.5	Added 'Pack Project' sub menu in 'File' menu for data sharing
		If the input database and estimate database are not found in opening a project, it pops up file dialog box for browsing.
		Fixed a bug in table of Leaf Area and Biomass For Trees by DBH and Landuse
V3.0.6	Streets v3.0.5	Replaced Conflict reports.

		Replaced Maintenance reports.
		Fix crash while trying to delete existing Zones
		Mark all zones with errors on User Define Fields dialog
		Fix compatibility issues with Microsoft Excel 2007.
		Display the correct zone for the Pest Summary report.
		Fix crash in Species dialog for LoMidWXXX region.
		Fix crash upon opening the User Define Fields dialog as a result of a .Net bug.
	Streets PDA v3.0.6	Add support for square displays.
	Eco v3.0.4	Fix the "." Issue in the SAS output file
V3.0.4	Streets v3.0.3	Skip recording of DBH for non-trees.
		Abort export of reports if Excel is not installed.
		Replace charts in reports with place holder if Excel is not installed.
		Refresh current report after modifying benefit prices, city info, or annual costs.
		Refresh current report after switching between English to Metric or Common to Scientific modes.
		Add Pest Symptom Details reports.
		Fix crash while trying to modify the Average Home Resale's Value
		Fix crash in exporting Maintenance Summary reports.
		Use correct units during export of Canopy Cover report.
		Correct chart displayed on exported Canopy Cover report.
		Display correct charts for Site Type reports.
		Fix graph displayed on Canopy Cover report.
		Correct tree types displayed on Population Summary report.
	Streets PDA v3.0.4	Skip recording of DBH and default Primary Pest field to None for non-trees.
	Eco v3.0.3	Save Plot Size to series table's DefaultSubPlotSize field (this was not being saved anywhere.) Because this is by series and not year, if they modify the previous series DefaultSubPlotSize in PlotGenerator, they are prompted and informed that the size is by series and asked if they are sure that they want to change this.

	Eco PDA v3.0.4	Crash bug fixed when saving an edit without Hydro Option enabled
		Stem Edit button corrected, was referencing Tree ID in the query instead of Stem ID.
	Eco PDA Utility v3.0.4	(Grabbing Plot Size) First check if subplot exists, if it does get size from subplot. If no subplot, check DefaultSubPlotSize. If DefaultSubPlotSize is not -1 (default value,) then use default plot size of .1 or .04 (metric or English units).
V3.0.3	Eco V3.0.2	MDE: added dead tree status (R, H, C, L) data validation. Set Total Height (-1), Live Top (-1), Crown base height (-1), Crown width (N/S & E/W) (-1), Crown missing (100), Crown Dieback (100), Crown Light Exposure (-1), % Impervious Below Crown (-1), % Shrubs Below Crown (-1) to the default values
		Added suite version and app version in the About screen
		Added the rule: when a tree is added, tree status can only be "O". When a tree is edited, "O" can be changed to other status.
		Fixed a species record (SubGenus=x Cupressocyparis) in SubGenus table in species database
		Fixed the crash if DR and DS are empty
		Enable "Collected Data Permanent" in Inventory to let users set remeasurement on trees
		Allow PDA dead tree values in sample mode
		Use user's temp folder for 64 bit computers
	Eco PDA Utility v3.0.3	Updater set to check suite version
		Check for Wow64 and install appropriate device center on Vista
		Properly Remove completed plots from Pocket PC
		Add suite and app version info to splash/about form
	Eco PDA App v3.0.3	Fixed some bugs for GPS
		Added a "Direct Entry" button for manual entering of GPS coordinates
	Streets v3.0.2	Removed requirement of CityManaged field for existing Stratum projects
		Strip spaces from column names in Stratum_Inventory format
		Fix floating New button on Define Species dialog

		Add i-Tree Suite version to About form
		Fix reporting after creating a new project and then immediately importing data
		Prevent importing of Stratum_Inventory format if no SpCode column is present
		Ignore records whose species code is NULL or an empty string during import
		Correct species code comparison bug in Stocking Level report
		Ensure data sent to the PDA still exists in the project if it was modified and re-add it if necessary
		Refine entire reporting interface and prevent the application from crashing while running a report
		Fix an index out of bounds issue in Maintenance Top 5 report
		Correct issues in the Species Distribution report and the Canopy Cover reports when there is no data to report on
		Auto refresh the current report whenever the user modifies data and remove the refresh button
		Updated default list of species codes for various regions. Reconciled species code inconsistencies for Streets
		Fixed reporting issues when projects were initiated with one tree.
	Streets PDA App v3.0.3	Fixed some bugs for GPS
		Added a "Direct Entry" button for manual entering of GPS coordinates
	Storm v3.0.2	Save template as "Excel Workbook"
		Set file attributes to normal after copying the template
		Add suite version to about screen
		Updater set to check suite version
	Species v3.0.3	Add suite version
		Updater to check suite version
	Vue v3.0.2	Adjusted About screen and added suite version
		Added "Loss!": indicator appearing at wrong times on Developed, Classes Tree % change form

		Fixed run-time error via a Data Type mismatch on Developed, Classes Tree % change form
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