**Campground Reservations Plugin - Complete Specification**

**1. Technical Requirements**

On a Wordpress site running WooCommerce, create a wordpress plugin for campground registrations with annual customer named CCC WOR Camping. Users that are CCC members have a role, ccc\_member. The site also has a role for CCC officers (ccc\_officer) that should permit administration of the plugin. Admins should also be able to administer the plugin.

The plugin should be compatible with the Woocommerce feature "High-Performance order storage".

No need for specific CSS, the defaults should be fine. The wordpress plugin will only need to be in English.

Do not use emojis in the code or responses. Provide a flat folder structure. Provided file names should match the names in the plugin. Vanilla JS for the front end.

Actions should not require confirmation.

**2. Site Structure and Database Schema**

The campground has ~100 sites. This campground only has 1 week that we care about for reservations, the 9 days that include the 4th of July, for an event called Week of Rivers. We need to manage the reservation(s) for that week, and reservations are only for that entire time span. When members reserve a site, they pay for all 9 days. The reservation year is based on the calendar year.

Each site can be of type: Campsite, Electric Site, RV Site, or Cabin, which will be manually created products in Woocommerce. I also have an additional product: Guest, to permit additional payment for more than one person on a site. If a type is missing in WooCommerce, it should be displayed on the settings page as a warning. It should be possible to add (or remove) specific numbered sites, or change a site type from one type to another.

For the 4 types of sites, each is unique (not shared).

There are currently 4 Cabins (Sycamore, Blackberry, Dogwood, and Maple) There are RV sites numbered 1-33 except there is a 9a and 9b, and 14a and 14b There are electric campsites numbered: 28,40,43,44,45,46,47,48,49,50,51,52,53,60,61 Campsite: 25,26,27,29,30,34,35,36,37,38,39,41,42,54,55,56,57,58,59,62,63,64,65

Create unique system site identifies, like cabin\_sycamore, or campsite\_25.

When a user registers for a campsite, they also need to provide a count of the number of guests who will be staying on the site, and list of names (don't have to be members). There doesn't need to be a limit of guests on site, but need a name for each of them. Each additional attendee will be an additional purchase/product, "Guest". Guest names should be stored with the registration into a separate table.

It should be possible to import and export site data in Settings.

**3. Business Logic Rules**

**Availability Periods**

There are 3 availability periods for the year:

* Closed Period - Before the defined start date (NO reservations)
* Annual WOR Start Date - the first date annual members can reserve their site.
* Annual WOR Period – From Start Date the beginning of the General Period (annual members only)
* General WOR Period – From the end of the Annual period to the end of the event. (everyone) Editable on the Settings pages

Default Annual Start Date for Annual Members: May 1 (editable on the Settings page)   
Default General Availability Date: June 1 (editable on the Settings page)

Date Controls - Annual members can reserve sites starting on Start Date, general members on the General Availability Date.

* Annual: Starting on May 1, people with annual status should be able to sign up for their site from the prior 2 years.
* General: Starting June 1, I want any member to be able to reserve any site not already reserved.

So only members with annual status can reserve their specific site at the Start Date. After June 1st (or other configured date) any member can reserve any available site.

Users can only have 1 annual site at a time.

**Annual Management (Annual members get early access to their sites)**

* Those with the member role who have reserved a site in a previous year have annual status to get that site again.
* If they miss one year, they still have annual status to that site.
* If they miss 2 years, they lose annual status for that site, which should require review before they are removed.
* If a user's member role is removed (they lose the role "ccc\_member"), they should be removed from the annual list after a review and receive an email to that effect.
* We don't need to track "years missed", just the last time the member reserved the site by year.
* Admins and officers also need to be able to view, add, edit, and delete individually from the list of those registered with annual sites.

**Registration Rules**

* Same User Check - Prevents a user from having multiple annual entries for the same site
* Same Year Check - Prevents multiple users from having reserved the same site in the same year
* First-come first serve for reservations of the same site
* Site should be immediately reserved upon payment completion
* Members cannot cancel

**Transaction Timeout**

If a user doesn't complete their transaction in 30 minutes (a time that should be configurable on the Settings page) pending reservations should be removed. The user should be notified via email that their registration was not complete. This should have its own template.

**4. User Interface Specifications**

**Reservation Page**

* The page should display the date range for the reservation/event
* Users should see a visual color-coded site map, and select by site
* Sites can be displayed as a simple grid, sorted by type and should include the "name" of the site (either the number for campsites and RVs, or names for cabins). Sort order should be the campsites sorted in numeric order (a combination of electric and non-electric), then the RV sites, then the cabins.
* The page should include a link to the campground itself only as a reference image for questions: https://smokymtnmeadows.com/sitemap/
* The page should include a link to an image of the campground showing where the sites are:
* The reservation page should show current phase, and next deadlines:
  + During Closed: "Next: Annual member reservations open [DATE]"
  + During Annual: "Next: General reservations open [DATE]"
  + During General: "Event dates: [START\_DATE] to [END\_DATE]"
* The Reservation information should be in a short code, so it can be placed on a page
* Display a Legend so users understand what each color means: Blue (Annual), Teal (open to all), Green (available), Red (reserved)

**Status Messages**

* Closed Period: "Reservations are not yet open. Annual member reservations begin on [DATE]."
* Annual Period: "Annual member reservation period is active until [DATE]. General reservations begin on [DATE]."
* General Period: "General reservation period is active. All available sites can be reserved."

**Form Labels and Buttons**

Reservation form:

* Guest count field: "Number of additional guests"
* Guest names: "Guest names (one per line)"
* Submit button: "Reserve Site & Checkout"
* Cancel button: "Cancel Selection"

Admin interface buttons:

* "Add Site", "Edit Site", "Delete Site"
* "Import CSV", "Export Data"
* "Send Reminder Emails"
* "Review Annual Status"
* "Save Changes"

**5. WooCommerce Integration**

When a user is checking out, the checkout process will use 4 products that match the 4 campsite types: Campsite, Electric Site, RV Site, and Cabin, as well as the Guest product for additional guests on the site. Products should automatically be added to the cart and redirect to checkout.

Pricing/cost will be handled as the Woocommerce products. Products will be "Hidden" in the Woocommerce catalog.

The plugin shouldn't need to hook into membership expiration. The page with the reservations and the short code can be set to require membership to view the page.

**6. Admin Interface Requirements**

I need a Settings Dashboard. Admins (users with the ccc\_officer role, and Wordpress admins) should be able to:

* change types of campsite
* change the number of campsites
* add/delete campsites singularly or in bulk. In bulk would be in CSV format.
* add a new campsite type. Sites can then be changed to that type, or added of that type.
* View current reservations and manage priorities as a list of site, reservation status, annual status, and user name and email.
* Set the general availability date
* Set the Annual member start registration date.
* Set the start and end dates for the week of the event
* Review those who should lose annual status and remove them. This task should be manual. Users should lose their annual status if they no longer have the member role, or missed 2 years.
* add/delete annual entries
* Email all users with an available annual site who have not registered this year.
* The settings page can have subsections where reasonable.
* It should display a warning if one of the WooCommerce site types are missing.
* if an admin changes a site with an active reservation, they should receive a warning and then it should occur with no other notifications.
* it should not be possible to delete a site with an active reservation. if a site without an active reservation is deleted, the entry in the annual list should also be removed.
* edit the email templates

I do not need confirmation messages when those actions are taken.

It should be possible as ccc\_officer/admin to view all the reserved sites, and all sites regardless of status.

**Admin Interface Layout**

**Settings Page Sections**

1. **General Settings**
   * Event dates configuration
   * Availability period dates
   * Transaction timeout setting
2. **Site Management**
   * Site type management
   * Individual site CRUD
   * Bulk CSV operations
3. **Reservations**
   * Current reservations
   * Annual status management
   * CSV import for data
   * CSV Export of reservation data
4. **Communications**
   * Email template editor
   * Send reminder emails
5. **Logs**
   * Transaction logs
6. **System Status**
   * WooCommerce product validation
   * Plugin compatibility checks

**Data Table Columns**

**Current Reservations:** Site ID | Site Type | User Name | User Email | Reservation Status | Annual Status | Actions

**Annual Status List:** Site ID | User Name | User Email | Last Reserved Year | Status | Actions

**Transaction Log:** Date/Time | Action | User | Site ID | Details | Admin User

**Navigation and Breadcrumbs**

**Admin Menu Structure**

* **Campground Reservations**
  + Dashboard
  + Site Management
  + Reservations
  + Annual Members
  + Email Templates
  + Settings
  + Transaction Log

**Page Titles**

* "Week of Rivers Reservations"
* "Campground Administration"
* "Site Management"
* "Annual Member Management"
* "Email Template Editor"

**7. CSV Import/Export Functionality**

**CSV Import (Import historical reservations for annual establishment)**

* I have a list of users who have previously reserved those ~100 sites (1:1).
* This should establish the baseline historical records. We only need to track back 2 years (because after that they've lost their annual status).
* I need to be able to import historical data for past priorities, in the format of: member\_email,<site number>, year.
* If an entry doesn't match a Wordpress user with a member role, the entry should provide an error and not import/add.
* Should display on the Settings page

**8. Email Templates & Communications**

When someone reserves a site (and pays for it), they will receive a confirmation email. There need to be customizable email templates for registration and if their status is removed on the Settings page. I need separate templates for each of the 4 site types. If a new site type is added later, a new product and template will need to be automatically created.

Templates should include the user name, the site number, the guest list, and the event dates.

**Available Template Variables**

* {user\_name} - Customer's display name
* {user\_email} - Customer's email
* {site\_id} - Site identifier (e.g., "campsite\_25")
* {site\_display\_name} - Human-readable site name (e.g., "Campsite 25")
* {site\_type} - Site type (Campsite, RV Site, etc.)
* {event\_start\_date} - Event start date
* {event\_end\_date} - Event end date
* {guest\_count} - Number of additional guests
* {guest\_list} - List of guest names
* {reservation\_date} - Date reservation was made
* {year} - Reservation year

**Default Email Templates**

**Confirmation Email (Campsite):** Subject: Week of Rivers Reservation Confirmed - {site\_display\_name}

Dear {user\_name},

Your reservation for {site\_display\_name} has been confirmed for Week of Rivers {year}.

Event Dates: {event\_start\_date} to {event\_end\_date} Additional Guests ({guest\_count}): {guest\_list}

If you have any questions, please visit: https://smokymtnmeadows.com/

See you at Week of Rivers!

**Incomplete Transaction:** Subject: Week of Rivers Reservation Not Completed

Dear {user\_name},

Your reservation for {site\_display\_name} was not completed within the time limit and has been cancelled.

To make a new reservation, please visit the reservation page.

**Annual Status Removed:** Subject: Annual Site Status Update

Dear {user\_name},

Your annual status for {site\_display\_name} has been removed due to [membership change/missed reservation periods].

You may still reserve available sites during the general reservation period starting {general\_availability\_date}.

**9. Error Messages & Validation**

**Error Messages**

**Reservation validation errors:**

* "You already have a current annual reservation for this site."
* "This site is already reserved for [YEAR]."
* "You can only have one annual site reservation."
* "This site is only available to annual members during the annual period."
* "You must be a member to make reservations."
* "Reservations are not currently open."

**Admin warning messages:**

* "Warning: Changing this site type will affect an active reservation. Continue?"
* "Cannot delete site [SITE\_ID]: Active reservation exists."
* "Missing WooCommerce product: [PRODUCT\_NAME]. Please create this product."

**Form Validation Messages**

**Reservation Form**

* "Please select a site before proceeding."
* "Guest count must be a number."
* "Please provide a name for each guest."
* "Guest names cannot be empty."

**Admin Forms**

* "Site ID must be unique."
* "Site type is required."
* "Start date must be before end date."
* "Email address is required for CSV import."

**10. Logging and Audit Trail**

Log each transaction with the user ID of the user that made the change for all admin changes and reservations. Logs should be viewable in the admin/settings interface.

**11. Transaction Export Feature**

**Export Functionality**

Admins (users with the ccc\_officer role and WordPress admins) should be able to export a comprehensive transaction report containing:

**Export Data Fields:**

* Date of transaction (reservation completion date)
* User ID (WordPress user ID)
* User Name (display name)
* User Email
* Site Type (Campsite, Electric Site, RV Site, Cabin)
* Site ID (campsite\_25, cabin\_sycamore, etc.)
* Number of guests
* Names of guests (comma-separated list)
* Total transaction amount ($)

**Export Format:**

* CSV file download
* File naming: week\_of\_rivers\_transactions\_YYYY-MM-DD-HH-SS.csv

**Data Source:**

* Pull from Reservations table joined with:
  + WordPress users table for user details
  + Guest Names table for guest information
  + WooCommerce orders table for transaction amounts
  + Sites table for site type information

**Admin Interface:**

* Add "Export Transactions" button to the Reservations section of Settings Dashboard
* Include date range filter options (current year by default)

**Access Control:**

* Same permissions as other admin functions (ccc\_officer role and WordPress admins)
* Log export actions in Transaction Log table

**12. Database Schema Details**

**Sites Table**

* site\_id - VARCHAR(50) PRIMARY KEY (e.g., "campsite\_25", "cabin\_sycamore")
* site\_type - VARCHAR(20) NOT NULL (Campsite, Electric Site, RV Site, Cabin)
* site\_number - VARCHAR(10) (25, 9a, Sycamore, etc.)
* display\_name - VARCHAR(100) (Campsite 25, RV Site 9a, Cabin Sycamore)
* is\_active - BOOLEAN DEFAULT TRUE
* created\_date - DATETIME
* modified\_date - DATETIME

**Reservations Table**

* reservation\_id - INT AUTO\_INCREMENT PRIMARY KEY
* user\_id - BIGINT (WordPress user ID)
* site\_id - VARCHAR(50) FOREIGN KEY
* reservation\_year - YEAR (2024, 2025, etc.)
* guest\_count - INT DEFAULT 0
* order\_id - BIGINT (WooCommerce order ID)
* status - ENUM('pending', 'confirmed', 'cancelled')
* created\_date - DATETIME
* payment\_completed\_date - DATETIME NULL

**Annual Status Table**

* annual\_id - INT AUTO\_INCREMENT PRIMARY KEY
* user\_id - BIGINT (WordPress user ID)
* site\_id - VARCHAR(50) FOREIGN KEY
* last\_reserved\_year - YEAR
* status - ENUM('active', 'under\_review', 'removed')
* created\_date - DATETIME
* modified\_date - DATETIME

**Guest Names Table**

* guest\_id - INT AUTO\_INCREMENT PRIMARY KEY
* reservation\_id - INT FOREIGN KEY
* guest\_name - VARCHAR(100) NOT NULL
* created\_date - DATETIME

**Transaction Log Table**

* log\_id - INT AUTO\_INCREMENT PRIMARY KEY
* user\_id - BIGINT (WordPress user ID who made the change)
* action - VARCHAR(100) (reservation\_created, site\_added, annual\_status\_removed, etc.)
* target\_user\_id - BIGINT NULL (affected user, if different from acting user)
* site\_id - VARCHAR(50) NULL
* details - TEXT (JSON or serialized data with specific changes)
* ip\_address - VARCHAR(45) (supports IPv6)
* created\_date - DATETIME

**Plugin Settings Table**

* setting\_name - VARCHAR(100) PRIMARY KEY
* setting\_value - LONGTEXT (supports large email templates)
* autoload - BOOLEAN DEFAULT TRUE

**Index Specifications**

* reservations: INDEX on (user\_id, reservation\_year), INDEX on (site\_id, reservation\_year)
* annual\_status: UNIQUE INDEX on (user\_id, site\_id), INDEX on (site\_id)
* guest\_names: INDEX on (reservation\_id)
* transaction\_log: INDEX on (created\_date), INDEX on (user\_id), INDEX on (action)

**Character Set and Collation**

* All tables: UTF8 character set with utf8\_general\_ci collation (standard text support, no emoji)

**Storage Engine**

* InnoDB for all tables (supports foreign key constraints and transactions)

**Additional Constraints**

* Foreign key constraints with CASCADE DELETE where appropriate
* CHECK constraints for YEAR fields to prevent invalid years
* NOT NULL constraints on required fields

**13. File Structure**

\ccc-wor-camping\admin

\ccc-wor-camping\assets

\ccc-wor-camping\ccc-wor-camping.php

\ccc-wor-camping\Complete Installation Guide.txt

\ccc-wor-camping\frontend

\ccc-wor-camping\includes

\ccc-wor-camping\admin\pages

\ccc-wor-camping\admin\annual.php

\ccc-wor-camping\admin\dashboard.php

\ccc-wor-camping\admin\emails.php

\ccc-wor-camping\admin\logs.php

\ccc-wor-camping\admin\reservations.php

\ccc-wor-camping\admin\settings.php

\ccc-wor-camping\admin\sites.php

\ccc-wor-camping\assets\admin.css

\ccc-wor-camping\assets\admin.js

\ccc-wor-camping\assets\frontend.css

\ccc-wor-camping\assets\frontend.js

\ccc-wor-camping\frontend\reservation-form.php

\ccc-wor-camping\includes\class-admin.php

\ccc-wor-camping\includes\class-cron.php

\ccc-wor-camping\includes\class-database.php

\ccc-wor-camping\includes\class-email.php

\ccc-wor-camping\includes\class-frontend.php

\ccc-wor-camping\includes\class-woocommerce.php

\ccc-wor-camping\includes\functions.php