State of Iowa Manufacturer API guide

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Version History

Version Number	Date	End Point	Change Note
3.7	12/1/2019		Initial version for start of program
3.8	3/20/2019	Process Lot Product Lot	Added completion to processes
4.0	3/28/2019	All sections	Added page numbers, object definitions and modified field descriptions
4.1	4/8/2019	Plant Batch Process Lot	Combined potted date and identified date Clarified plants can be added/removed up until plant harvested Removed solvent quantity and added process lot to adjustment where solvent is identified
4.2	4/9/2019	Batch Process Lot	Definition of batch at harvest Added end points for process lot subs
4.3	4/16/2019	Fields	Deleted fields the state felt were no longer required Clarified definitions
4.4	4/22/2019	Additives	Page 24 Create an additive adjustment
4.5	6/7/2019	CBD Isolate	Added endpoint to track CBD isolate (page 16) and consumed in the product lot (page 19)
4.6	8/16/19	Sub Process Lot and Product Lot	Added weights to sub process lots and how those will be

			consumed in product lot (Pages 16 and 20)
5.0	10/10/2019	Updated Indicated by **	Update URL, Batch, Process Lot, Product Lot relationships, Consolidated Endpoints
5.1	11/5/2019	Process Lots	Update Process Lot end points to allow for Crude, Winterized Oil and Process Lot (Distillate) Multi to Multi relationship
5.2	1/21/2020	Lot Completed flag Package lot location Adj/waste for crude and winterized oil	Updated all complete flags to t/f Package lot location no longer required Adjustments and waste need to indicate if crude/winterized oil
6.0	8/22/2020	latest version to be used with validation guide	Overview, removed asterisks, included postman curl requests

Overview

The Iowa Department of Public Health (IDPH) provides the compliance system for the Medical Cannabidiol program. This system is the master repository of all data related to the manufacturing, sales and inventory management for all licensees in the program. Manufacturers and Dispensaries are required to send all compliance data to the system through an Application Program Interface (API) real time. The API for this program is a post only system, meaning that you do not have the ability to retrieve data from the API. No records are created by the state system, so all of the records for your company were created by the interaction with the API. This API Integration Guide should be used in conjunction with the State API Validation process to ensure a manufacturer can successfully send all API transactions to the state system.

Middleware API Overview

The system provided by (IDPH) through OstriJ is a one-way API where each event that needs to be reported to the state system is a unique end point. This document reviews each event, the end point details, the fields with data type and if a field is required or optional. The flow chart listed in the introduction is to be used as a general guideline for the timing of each event. The state requirements supersede the flow chart as events may occur in a different order based on each

manufacturer's process. Data Integration will consist of data being posted or updated from the Manufacturer system to the State compliance system. The state system will not make outbound calls to the manufacturer and the data containing in the State system cannot be queried.

All External ID's will have a Manufacturer prefix, and an object indicator following the prefix, to indicate the organization and ensure unique ID's are used across the statewide program. Each record will have a unique ID that is generated by the Manufacturers system. External ID's will be Alpha numeric and not less than 16 characters. External ID's can be reused in the Sandbox and Production systems.

Request Details

POST Format **https://ostrij.io/runflow/{*FlowURL*}**

Content-Type – application/Json

Authentication – Not Needed. Each Flow ID is encrypted, and authentication Is handled in middleware.

Parameters – See events below for expected parameters per request.

Example Requests:

Single Item No Related Date

Postman CURL example

The following CURL can be entered in Postman (An API testing tool) to ensure that your data is correct for each endpoint.

```
curl --location --request POST
'https://ostrij.io/runflow/{flowURL} \
--header 'Content-Type: application/json' \
--data-raw '[

  {"Company_ID":"1214",
   "Room_ID":"2800",
   "Immature_Plant_Group_ID":"KDP0000123",
   "Employee_ID":"EMP-010115",
   "Initial_Count":"250",
   "Strain":"KELLY CBD",
   "Group_Type":"CLONE",
   "Planted_Date":"2019-10-01",
   "Mother_Plant":"",
   "Id":7445}
     ]'

Details of the Data
HEADER Content-Type application/json
BODY [for single records]
[
  {"Company_ID":"1214",
   "Room_ID":"2800",
   "Immature_Plant_Group_ID":"KDP0000123",
   "Employee_ID":"EMP-010115",
   "Initial_Count":"250",
   "Strain":"KELLY CBD",
   "Group_Type":"CLONE",
   "Planted_Date":"2019-10-01",
   "Mother_Plant":"",
   "Id":7445
  }
]
```

Staging AI Endpoints

Bulk API – Multiple Items with no related items

HEADER Content-Type application/json
BODY [for Multiple records]
BULK Operations, Send an array of records where applicable

```
[
{
  "Room_ID": “4879”,
  "Immature_Plant_Group_ID": “123456”,
  "Employee_ID": “EMP-01112”,
  "Initial_Count": “20”,
  "Strain": “BlueDesl”,
  "Group_Type": “Clone”,
  "Planted_Date": “2019-03-21” ,
  "Mother_Plant": “98765433”
}
,
{
  "Room_ID": “4879”,
  "Immature_Plant_Group_ID": “123457”,
  "Employee_ID": “EMP-01112”,
  "Initial_Count": “10”,
  "Strain": “DosiDo”,
  "Group_Type": “Clone”,
  "Planted_Date": “2019-03-21” ,
  "Mother_Plant": “9876564”
}
,
{
  "Room_ID": “4879”,
  "Immature_Plant_Group_ID": “123458”,
  "Employee_ID": “EMP-01112”,
  "Initial_Count": “30”,
  "Strain": “XJ10”,
  "Group_Type": “Clone”,
  "Planted_Date": “2019-03-21” ,
  "Mother_Plant": “9876557”
}
]
```

Single Item with Related Items

HEADER Content-Type application/json
BODY [When sending multiple items in one object]

```
[
      {
            "Company_ID": "313",
            "Employee_ID": "789456123",
            "Reconciliation_ID": "456789123",
            "Retry": "",
            "Line": [
                  {
                        "Room_ID": "445",
                        "Quantity": "210",
                        "Unit_Of_Measure": "Gram",
```

Staging AI Endpoints


```
                        "Type": "CBD Oil"
                },
                {
                        "Room_ID": "447",
                        "Quantity": "210",
                        "Unit_Of_Measure": "Each",
                        "Type": "Plant"
                },
        ]
    }
]
```


Response Details

200: Success
500:System Error
401:Malformed Data

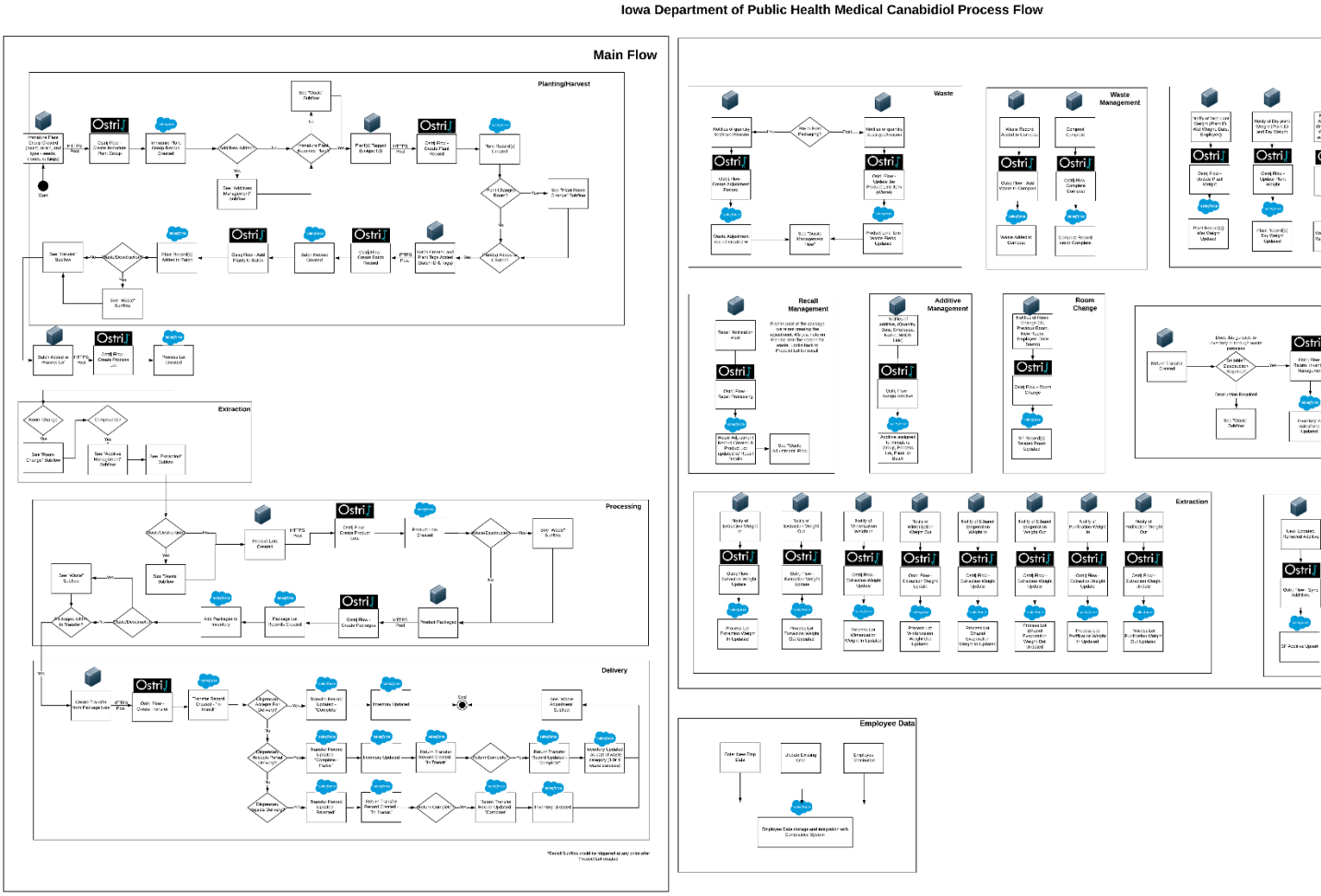
Pre-populated Data

When a new licensee is integrating with the state there are a set of record IDs that must be pre-populated in the system. Licensee will need to coordinate the following information with the state:

- Room – Provided by the licensee – Name, ID
- Employee – Entered by the Licensee – ID Provide by the state system

Staging AI Endpoints

Process Flow:



Staging AI Endpoints

Events

Event: Create Immature Plant Group (IPG)

Object definition: An immature plant group is created when seeds or clones are propagated on the same day from the same strain and source (mother or seed) and are grown in the same conditions (together). This IPG can be created from multiple trays. Example: 50 clones of the same strain are started on the same day from the same mother and propagated in 5 trays of 10 plants each tray, in the same conditions. A single IPG can be created with 50 clones in the initial count. The planted date and mother are identified. The strain, group type (clones, seeds) employee that planted them and room they are in are also identified. IPG is considered complete when the initial count is converted into plants, all destroyed via waste, or the total plants and waste count equal the initial count.

Event Description – When each immature plant group is created.

Dependencies – Employee and Room must exist

POST URL – See URL Reference

Parameters:

Field Name	Data Type	Required	Description
Company_ID	Text (255)	Y	External System ID for the company related to this record
Room_ID	Text (255)	Y	External System ID for the room
Immature_Plant_Group_ID	Text (255)	Y	External ID for the Immature Plant Group (IPG)
Employee_ID	Text (255)	Y	External ID of employee creating the IPG
Initial_Count	Number (5, 0)	Y	The count of items in the IPG
Strain	Text (255)	Y	The Cannabis Strain of the Mother Plant
Group_Type	Text (Picklist)	Y	Seeds, Clones
Planted_Date	Date	Y	YYYY-MM-DD
Mother_Plant	Text (255)	Y	External ID for the Mother Plant

Event: Create / Update Plant (Bulk Operation enabled, Send Array to improve performance)

Object definition: When plants are moved and/or growing phases change, these must be logged. Rooms and employees are pre-populated so they just need to be selected. This event requires previous room moved to current room, the date moved and the employee that moved it. The growing phase and status are also required when they change. This would be a natural part of movement. Example: Moved from veg room to flowering room changes the growing phase and move from flower to harvest also changes the plant status from growing to curing. When a plant reaches flowering it will either be designated as a Mother plant, or assigned to a batch and processed.

Event Description – Each time a plant is moved to a different room or the state of that plant is changed it is reported via this API

Dependencies – The related plant, rooms and employee must exist

POST URL – See URL Reference

Parameters:

Field Name	Data Type	Required	Description
Company_ID	Text (255)	Y	External System ID for the company related to this record
Plant_ID	Text (255)	Y	External System ID for the plant ID
Immature_Plant_Group_ID	Text (255)	Y	External System ID for the IPG ID
Tagged_Date	Date	Y	YYYY-MM-DD
Tagged_by_Employee	Text (255)	Y	External ID of the employee moving the plant
Mother_Plant	Boolean	N	(true, false) Select if this is, or becomes, a Mother Plant
Previous_Room	Text (255)	Y	External ID for the Original room
Current_Room	Text (255)	Y	External ID for the Destination room
Moved_by_Employee	Text (255)	Y	External ID of the employee moving the plant
Moved_Date	Date	Y	YYYY-MM-DD
Growing_Phase	Text (picklist)	Y	Vegetative, Flower, Curing
Plant_Status	Text (Picklist)	Y	Growing, Destroyed, Harvested

Staging AI Endpoints

Event: Create / Update Batch

Object definition: A batch ID is created at the time of plant harvest. A batch is defined as: a specifically identified quantity of dried flower and other cannabis plant matter that is uniform in strain or cultivar, harvested at the same time, and cultivated using the same pesticides and other crop inputs. Once a batch is harvested, the wet weight and dry weight of the harvested batch are required. Once a batch is consumed by process lots (extraction) it is critical to mark this batch is complete (consumed) or the batch will remain open (not consumed). Harvest weight should be provided in total grams at the batch level. A waste adjustment should be made at the batch level so moisture loss of the batch can be calculated. Moisture loss = Wet Weight of batch – Waste of batch – dry weight of batch plant material ready for extraction (ground biomass).

Event Description – Creation of a batch for plant tracking. Updating wet weight and dry weight of batch.

Dependencies – Room must exist

POST URL – See URL Reference

Parameters:

Field Name	Data Type	Required	Description
Company_ID	Text (255)	Y	External System ID for the company related to this record
Batch_ID	Text (255)	Y	External System ID for the new batch
Room_ID	Text (255)	Y	External ID for the room
Batch_Created_Date	Date	N	YYYY-MM-DD is the date when weights were entered
Employee_ID	Text(255)	Y	External ID of the employee creating the batch
Harvest_Weight	Number (10, 2)	N	Wet weight (g) of the harvested batch, Required for Harvest
Cured_Dry_Weight	Number (10, 2)	N	Dry weight (g) of the harvested batch, Required when curing is completed
Batch_Processed	Text (Picklist)	N	true/false (t/f)

Staging AI Endpoints

Event: Add Plant to Batch (Bulk Operation enabled, Send Array to improve performance)

Object definition: Plants are added to the batch at harvest and become a permanent part of that batch. Plants cannot be moved out of a batch once they are part of that harvest batch. See create/update batch for batch ID and batch created date.

Event Description – Add a plant to a batch.

Dependencies – Create batch first, Plants must exist, plants must not be in harvested stage

POST URL – See URL Reference

Parameters:

Field Name	Data Type	Required	Description
Company_ID	Text (255)	Y	External System ID for the company related to this record
Batch_ID	Text (255)	Y	External System ID for the batch
Plant_ID	Text (255)	Y	External System ID for the plant ID

Staging AI Endpoints

Event: Create / Update Crude Lot

Object definition: Crude oil is the first output in a standard extraction process. The input to the Crude process is biomass from one or many batches. See **Event: Add Batch to Crude Lot for updating batch plant input**. This endpoint establishes the unique ID for a crude lot and allows updates for crude oil output weight and completion when the crude oil lot is consumed (no longer available as inventory).

Event Description – This event tracks the creation and completion of the Crude Oil Lot

Dependencies –Room and Employee must exist

POST URL – See URL Reference

Parameters:

Field Name	Data Type	Required	Description
Company_ID	Text (255)	Y	External System ID for the company related to this record
Crude_Lot_ID	Text (255)	Y	External System ID for the crude lot
Current_Room	Text (255)	Y	External ID for the Destination room
Extraction_Date	Date / Time	N	YYYY-MM-DD is the date when weights were entered
Crude_Weight	Number (10, 2)	N	Crude oil weight at the end of the process
Extraction_Employee	Text (255)	Y	External System ID for the Employee performing the purification
Crude_UOM	Number (10, 2)	N	Unit of measure of the extracted oil weight Accepted Values are (gallons, liters, grams, kilograms)
Crude_Lot_Complete	Text (Picklist)	N	true/false (t/f)

Staging AI Endpoints

Event: Add Batch to Crude Lot

Object definition: Once the Crude lot ID has been created in the previous endpoint, batch plant material can be added to the Crude lot. The plant weight and unit of measure must be entered for each batch of plant materials going in to this crude process lot. Multiple batches of plants can go in to a single process lot. A new payload is required for every batch input added to this crude lot.

Event Description –This event is assigning the plant batch(s) used to create the crude process lot.

Dependencies – Crude process lot must exist, Batch(s) must exist and contain unused plant weight

POST URL – See URL Reference

Parameters:

Field Name	Data Type	Required	Description
Company_ID	Text (255)	Y	External System ID for the company related to this record
Batch_ID	Text (255)	Y	External System ID for the new batch
Crude_Lot_ID	Text (255)	Y	External System ID for the crude lot
Biomass_Input_Weight	Number (10, 2)	Y	Weight of plant material used from each batch

Staging AI Endpoints

Event: Create / Update Winterized Oil Lot

Object definition: Winterized or Precipitated Oil is the next output in a standard extraction process. The input to the Winterized Oil Lot is Crude Oil from one or many crude lots. **See Event: Add Crude to Winterized Oil Lot for updating crude oil input.** This endpoint establishes the unique ID for a winterized lot and allows updates for winterized oil output weight and completion when the winterized oil lot is consumed (no longer available as inventory).

Event Description – This event tracks the creation and completion of the Winterized Oil Lot

Dependencies – Rooms and Employee must exist

POST URL – See URL Reference

Parameters:

Field Name	Data Type	Required	Description
Company_ID	Text (255)	Y	External System ID for the company related to this record
Winterized_Lot_ID	Text (255)	Y	External System ID for the winterized lot
Current_Room	Text (255)	Y	External ID for the Destination room
Extraction_Date	Date / Time	N	YYYY-MM-DD is the date when weights were entered
Winterized_Oil_Weight	Number (10, 2)	N	Winterized oil weight at the end of the process
Extraction_Employee	Text (255)	Y	External System ID for the Employee performing the purification
Winterized_Oil_UOM	Number (10, 2)	N	Unit of measure of the winterized oil weight Accepted Values are (gallons, liters, grams, kilograms)
Winterized_Lot_Complete	Text (Picklist)	N	true/false (t/f)

Staging AI Endpoints

Event: Add Crude to Winterized Oil Lot

Object definition: Once the Winterized lot ID has been created in the previous endpoint, Crude lot oil can be used as input into the Winterized lot. Multiple lots of crude oil can go in to a single or multiple winterized lots. A new payload is required for every crude oil input added to this winterized lot.

Event Description – Establishes the relationship between crude oil as an input to one or many winterized oil lots

Dependencies – Crude Lot and Winterized Lot must exist with remaining crude material

POST URL – See URL Reference

Parameters:

Field Name	Data Type	Required	Description
Company_ID	Text (255)	Y	External System ID for the company related to this record
Winterized_Lot_ID	Text (255)	Y	External System ID for the Winterized Oil Lot
Crude_Lot_ID	Text (255)	Y	External System ID for the Crude lot
Crude_Input_Weight	Number (10, 2)	Y	Weight of crude oil used for each crude oil lot added to winterized lot

Event: Create / Update Process Lot

Object definition: Distillate oil is the final output from the extraction process. The date the process lot is completed and the total weight of purified oil produced for this process lot must be recorded, along with the employee who completed the extraction process. See Event: Add Winterized Oil to Process Lot for updating winterized oil input. This endpoint establishes the unique ID for a process lot (distillate) and allows updates for distillate oil output weight and completion when the distillate oil lot is consumed (no longer available as inventory).

Event Description – This event tracks the creation and completion of the process lot

Dependencies – Rooms and Employee must exist

POST URL – See URL Reference

Parameters:

Field Name	Data Type	Required	Description
Company_ID	Text (255)	Y	External System ID for the company related to this record
Process_Lot_ID	Text (255)	Y	External System ID for the process lot
Current_Room	Text (255)	Y	External ID for the Destination room
Purification_Date	Date	N	YYYY-MM-DD is the date when weights were entered
Purified_Oil_Output_Weight	Number (10, 2)	N	Purified oil weight at the end of the purification process
Purification_Employee_ID	Text (255)	Y	External System ID for the Employee performing the purification
Output_Oil_UOM	Number (10, 2)	N	Unit of measure of the extracted oil weight Accepted Values are (gallons, liters, grams, kilograms)
Process_Lot_Complete	Text (Picklist)	N	true/false (t/f)

Event: Add Winterized Oil to Process Lot

Object definition: Once the Process Lot ID has been created in the previous endpoint, Winterized lot oil can be used as input into the Winterized lot. Multiple lots of winterized oil can go into a single or multiple process lots. A new payload is required for every winterized oil input added to this process lot.

Event Description – Establishes the relationship between winterized oil as an input to one or many process lots (distillate).

Dependencies –Winterized Lot must exist with remaining winterized material and the Process Lot must exist.

POST URL – See URL Reference

Parameters:

Field Name	Data Type	Required	Description
Company_ID	Text (255)	Y	External System ID for the company related to this record
Winterized_Lot_ID	Text (255)	Y	External System ID for the Winterized Oil Lot
Process_Lot_ID	Text (255)	Y	External System ID for the Process lot
Winterized_Oil_Input_Weight	Number (10, 2)	Y	Weight of all winterized oil used for this process lot from each batch

Event: Create / Update Isolate Process Lot

Object definition: When CBD isolate has been purchased for use in the manufacturing process, the state will track this inventory and use of this process lot type just like other process lots. The difference is there are no predecessor lots, batches, plants, or IPGs tied to this type of process lot as those are unknown. The CBD isolate will be tested just like other process lots to ensure contaminants are within thresholds. The isolate will be tracked through completion like other process lots as they are consumed.

Event Description – This endpoint creates a unique isolate process lot type. The CBD Isolate process lot is created when received by the manufacturer. The quantity and unit of measure identify the amount of CBD Isolate purchased. The room where the isolate is stored should be indicated as the current room. This endpoint tracks the creation and completion of the isolate process lot.

Dependencies – None

POST URL – See URL Reference

Parameters:

Field Name	Data Type	Required	Description
Company_ID	Text (255)	Y	External System ID for the company related to this record
Process_Lot_ID	Text (255)	Y	External System ID for the Existing Parent Process Lot
Isolate_Quantity	Number (10,2)	Y	The Quantity of CBD Isolate product in this lot
Isolate_UOM	Text (255)	Y	Unit of measure of the CBD Isolate. Accepted Values are (grams, kilograms)
Current_Room	Text (255)	Y	External ID for the Destination room
Process_Lot_Complete	Text (Picklist)	N	true/false (t/f)

Staging AI Endpoints

Event: Add/Update Products

Object definition: All products that are produced by the manufacturer need to be identified here. The type of product, the product name (as labeled to the consumer) the product SKU and the product ID are created and maintained here.

Event Description – Finished Good products will be referenced throughout the system. This end point is designed to map the product ID to the products available for each manufacturer

Dependencies – Company must exist

POST URL – See URL Reference

Parameters:

Field Name	Data Type	Required	Description
Company_ID	Text (255)	Y	External System ID for the company related to this record
Product_ID	Text (255)	Y	External System ID for the product
SKU	Text (255)	Y	Product SKU
Product_Name	Text (255)	Y	Plain name for the product
Type	Text (255)	Y	Form of the product (Capsule, Tincture, Cream, Lotion, Suppository)

Staging AI Endpoints

Event: Create / Update Product Lot

Object definition: The product lot is the starting point for the product in bulk form before being at a sellable state. The date the product lot is manufactured, the product type and the total weight produced for this lot must be recorded. See Event: Add Process Lot to Product Lot for updating process lot input. This endpoint establishes the unique ID for a product lot and allows updates for product lot output weight and completion when the product lot is consumed (no longer available as inventory).

Event Description – This event tracks the creation and completion of the product lot

Dependencies – Process Lot(s), Product lot, Rooms and Employee must exist

POST URL – See URL Reference

Parameters:

Field Name	Data Type	Required	Description
Company_ID	Text (255)	Y	External System ID for the company related to this record
Product_Lot_ID	Text (255)	Y	External System ID for the Product Lot
Expiration_Date	Date	Y	YYYY-MM-DD
Previous_Room	Text (255)	Y	External ID for the Original room
Current_Room	Text (255)	N	External ID for the Destination room
Manufacture_Date_Time	Date	N	YYYY-MM-DD is the date when products were created
Product_Type	Text (Picklist)	Y	Capsule, Lotion, Tincture, Vape
Quantity	Number (10, 2)	N	The Quantity of raw material product produced in the Lot
Unit_of_Measure	Text (Picklist)	N	Grams for the quantity produced – need to add “each” to picklist for capsule or vape product lots
Employee_ID	Text (255)	Y	External ID of the employee completing the product process
Product_Lot_Complete	Text (Picklist)	N	true/false (t/f)

Staging AI Endpoints

Event: Add Process Lot to Product Lot

Object definition: Now that we have created a product lot ID we can add both process lot (distillate oil) and isolate to the product lot. The input weight is used to calculate the total input to the product lot and reduction of usable material from the process lot(s). Multiple process lots can be associated with multiple product lots. A new payload is required for every process lot input added to this product lot.

Event Description – Once Process and Product lots are created the relationship of input of process lot into product lot is managed by this end point. This simply creates a relationship between the lots for tracking of input and consumption.

Dependencies – Process Lot must exist, Product Lot must exist

POST URL – See URL Reference

Parameters:

Field Name	Data Type	Required	Description
Company_ID	Text (255)	Y	External System ID for the company related to this record
Product_Lot_ID	Text (255)	Y	External System ID for the Product lot
Process_Lot_ID	Text (255)	Y	External System ID for the Process lot (oil or isolate)
Oil_Input_Weight	Number (10, 2)	N	Weight of Process lot Oil used in this product lot
Isolate_Input_Weight	Number (10, 2)**	N	Weight of Process lot Isolate used in this product lot

Staging AI Endpoints

Event: Create/Update Package Lot

Object definition: The package lot is key for traceability back to the product lot, process lot and plants that produced it. The package lot is also maintained by the dispensaries so final sales of products can be traced back to this package lot.

Event Description – The package lot is the starting point for the process of taking bulk product and packaging it for sale. The package lot must be of the same product type as the origin product lot.

Dependencies – Process Lot, Product Lot, Rooms and Employee must exist

POST URL – See URL Reference

Parameters:

Field Name	Data Type	Required	Description
Company_ID	Text (255)	Y	External System ID for the company related to this record
Package_Lot_ID	Text (255)	Y	External System ID for the new Package Lot
Employee_ID	Text (255)	Y	External ID of the employee packaging the product

Event: Add Products to the Package Lot

Object definition: Once a package lot is created, product lots and products can be added to the package lot. The package lot quantity is the number of sellable units of product made from that product lot. Example: If the product lot is a gallon of cream, then that product lot could theoretically produce 128 one ounce bottles of cream (with no waste) for that package lot.

Event Description – When bulk product is put in to packaging to be shipped and sold products are added to the package lot at the time of packaging.

Dependencies – Process Lot, Product Lot, Employee and Package Lot must exist: Package must be the same product type as the origin product lot.

POST URL – See URL Reference

Parameters:

Field Name	Data Type	Required	Description
Package_Lot_ID	Text (255)	Y	External System ID for the Package lot
Product_Lot_ID	Text (255)	Y	External System ID for the Product lot
Product_Lot_Input_Weight	Number (10, 2)	N for capsules	Weight in grams of the product lot quantity input for this package lot
Product_ID	Text (255)	Y	External System ID for the Product
Quantity_Output	Number (10, 2)	Y	The count of individual sellable units that are output for this package lot

Staging AI Endpoints

Event: Create / Update Transfer Object

Object definition: Once products are ready to be shipped a transfer must be created indicating the driver and the vehicle information that will be used for transfer. The State of Iowa uses a mobile transfer application for the driver to track chain of custody throughout the transfer.

Event Description – The transfer object is the starting point for the preparation of setting up a transport to another approved facility.

Dependencies – Process Lot and Product Lot must exist.

POST URL – See URL Reference

Parameters:

Field Name	Data Type	Required	Description
Company_ID	Text (255)	Y	External System ID for the shipping company
Transfer_Lot_ID	Text (255)	Y	External System ID for the origin transfer
Recipient_ID	Text (255)	Y	External System ID for the receiving company
Driver_ID	Text (255)	Y	External System ID for the Driver will be conducting the transfer
Employee_ID	Text (255)	Y	External System ID for the Employee doing the packaging
Vehicle_Make	Text (255)	Y	The make of the transport vehicle to be used for this transfer
Vehicle_Model	Text (255)	Y	The Model of the transport vehicle to be used for this transfer
Vehicle_License_Plate	Text (255)	Y	The License Plate of the transport vehicle to be used for this transfer
License_Plate_State	Text (255)	Y	The state of the license plate of the transport vehicle to be used for this transfer

Event: Add Products to the Transfer

Object definition: This builds the transfer manifest and controls inventory records for the shipper and receiver. It is used for delivery to and from dispensaries and labs. A return transfer is not created via this API but when returns are made to the dispensary returns are generated by Salesforce. The State of Iowa uses a mobile transfer application for the driver to indicate when delivery has been made to the recipient. The State also has a secure site for the recipient to accept the transfer entirely, reject it entirely or partially accept this transfer. The inventory records are maintained by the state according to how much was delivered and received by both parties. This is the same mechanism used for returns of products to the manufacturer for destruction. All delivery of products, samples and returns are the responsibility of the manufacturer to accurately keep records of the transfer. Samples will be created as a product. Process Lot for the sample is assigned to the product (sample) in the transfer.

Event Description – Each transfer must contain all products, package lots of all items that will be transferred to the Lab or Dispensary.

Dependencies – Process Lot, Product Lot, Employee and Package Lot must exist., Line Item ID must be system unique to allow for updates.

POST URL – See URL Reference

Parameters:

Field Name	Data Type	Required	Description
Company_ID	Text (255)	Y	External System ID for the company related to this record
Transfer_Lot_ID	Text (255)	Y	External System ID for the origin transfer
Package_Lot_ID	Text (255)	Y	External System ID for the Package lot
Process_Lot_ID	Text (255)	Y	External System ID for the Process lot
Product_ID	Text (255)	Y	External System ID for the Product
Line_Item_ID	Text (255)	Y	System Unique External ID for this item on this transfer
Quantity	Number (10, 2)	Y	The count of individual units that are being transferred for sale or testing
Total List Price	Currency	Y	The total list price of individual sellable units that are being transferred = unit price X quantity (above)

Staging AI Endpoints

Event: Update Products on the Transfer

Object definition: Update Existing product on an existing transfer

Event Description – If a change to quantity or price of a product on an existing active transfer needs to be done this end point allows for that change. The Line Item ID must be unique in the system. Removal of an item is done by updating quantity to 0, The item will remain listed on the Transfer but with zero quantity and price.

Dependencies – Line Item ID must exist and be system unique to allow for updates.

POST URL – See URL Reference

Parameters:

Field Name	Data Type	Required	Description
Line_Item_ID	Text (255)	Y	System Unique External ID for this item on this transfer
Quantity	Number (10, 2)	Y	The count of individual units that are being transferred for sale or testing
Total List Price	Currency	Y	The total list price of individual sellable units that are being transferred = unit price X quantity (above)

Staging AI Endpoints

Adjustments

Adjustments are made to items throughout the process. In this section we will provide the API for each type of adjustment. The objective of the state system is to ensure that there is traceability for all Plant, Oil and Product as well as a record of all additives used in the process of manufacturing CBD products. Adjustments fall in the following categories:

- Additives applied during the plant phase.
- Recording of Waste when any material is no longer viable or usable

Adjustments can be made at any point in the lifecycle.

Staging AI Endpoints

Event: Create an Additive Adjustment

Event Description – When an additive is introduced to the cultivation or extraction process this record must be sent. The state is interested in what additives are being used, not the quantity or dates (except pesticides) of those additive applications. Example: Each fertilizer/nutrient additive used in the life of a plant can be reported with a single entry. It is not necessary to record every time the fertilizer is applied.

Dependencies – Referenced IPG, Plant or Batch and Employee must exist

POST URL – See URL Reference

Parameters:

Field Name	Data Type	Required	Description
Company_ID	Text (255)	Y	External System ID for the company related to this record
Employee_ID	Text (255)	Y	External System ID for the Employee applying additive.
Adjustment_Type	Text (picklist)	Y	Fertilizer, Nutrient, Solvent, Pesticide
Adjustment_Date	Date	N	YYYY-MM-DD only required for pesticides
Product_Name	Text (255)	Y	Retail name or common name used by manufacturer of the additive used
MSDS_Link	URL	Y	Link to the site containing the product Material Safety Data Sheet. If more than one product, please make multiple adjustments, one for each product.
Immature_Plant_Group_ID	Text (255)	N*	External System ID for the IPG
Plant_ID	Text (255)	N*	External System ID for the plant ID
Batch_ID	Text (255)	N*	External ID of the Batch
Crude_Lot_ID	Text (255)	N*	External ID of the Crude lot
Winterized_Lot_ID	Text (255)	N*	External ID of the Winterized lot
Process_Lot_ID	Text (255)	N*	External ID of the Process Lot

* NOTE: At least one record must be applied to the additive.

Event: Create a Waste Adjustment

Event Description – When any form of inventory needs to be destroyed for Plant, Oil, Product or Package this record must be sent. Harvest Waste is reported against the Batch object.

Dependencies – Referenced IPG, Plant of Batch, Process Lot, Product Lot, Package Lot and Employee must exist

POST URL – See URL Reference

Parameters:

Field Name	Data Type	Required	Description
Company_ID	Text (255)	Y	External System ID for the company related to this record
Employee_ID	Text (255)	Y	External System ID for the Employee handling the waste
Waste_Collection_Date	Date	Y	YYYY-MM-DD
Waste_Weight	Number (10, 2)	Y	Weight of material going to waste
Immature_Plant_Group_ID	Text (255)	N*	External System ID for the IPG
Plant_ID	Text (255)	N*	External System ID for the plant ID
Batch_ID	Text (255)	N*	External ID of the Batch
Crude_Lot_ID	Text (255)	N*	External ID of the Crude lot
Winterized_Lot_ID	Text (255)	N*	External ID of the Winterized lot
Process_Lot_ID	Text (255)	N*	External ID of the Process Lot
Product_Lot_ID	Test (255)	N*	External ID of the Product Lot
Package_Lot_ID	Text (255)	N*	External ID of the Package Lot
Unit_Of_Measure	Text (255)	N*	Unit of Measure for Waste record

* NOTE: At least one record must be applied to the waste adjustment.

Event: Send Inventory Reconciliation

Event Description – Every other week, the manufacturer is required to physically count all Plant, Oil, Product and Package items by location and phase. The report is a total count of each item in each room. The reconciliation data is compared to the State system inventory. In the event of a discrepancy a notification will be sent to the Manufacturer and the State. Subsequent reconciliations can be sent once the discrepancy is mitigated. If any items do not have a value, a zero value should be passed. It is critical that the manufacturer mark completed batches, process lots and package lots so they do not continue to appear as open inventory items.

Dependencies – Referenced IPG, Plant of Batch, Process Lot, Product Lot, Package Lot and Employee must exist

POST URL – See URL Reference

Parameters:

Field Name	Data Type	Required	Description
Reconciliation Record			
Company_ID	Text (255)	Y	External System ID for the company related to this record
Employee_ID	Text (255)	Y	External System ID for the Employee accountable for the physical inventory
Reconciliation_ID	Text (255)	Y	External System ID for the Reconciliation request
Retry	Boolean(true, false)	N	True if the reconciliation is a retry after a failure
Inventory Line Items			
Room_ID	Text (255)	Y	External ID of the room
Quantity	Number (10, 2)	Y	Total count of each line item
Unit_Of_Meausure	Number (10, 2)	Y	Unit of Measure of each line item
Type	Text(255)	Y	Type / Form of material being counted (plants, harvested plant material, purified oil, finished product by SKU)