BPS database test queries

## General workflow

1. Mathurin et al., creates a sql-powered database with the tables contained in the ‘tables’ sub-directory housed in the bps\_dosc\_parse git repo. This database should be simple for starters, and be able to eventually interface with R, be able to add a GUI for filtering and a console for SQL queries and be hosted online (dream list).
   1. PostgreSQL
   2. My SQL
2. Meet with team to demo
3. Brainstorm next steps---what is easy, hard, etc. Chose and implement where possible

## General Notes:

* Need multiple filters, e.g., “All BpSs in Map Zone 51 with Oaks”. In database lingo what is this called?
* Returns should always include:
  + BpS Models (e.g., 13620\_51\_63\_64\_65\_66)
  + Associated BpS name(s)
  + Link or way to obtain associated documents
  + Ideally closely related BpSs
* Dream (note comments from ecologist Richard Sample (aka “RD”) that it would be ideal to just get certain components of a BpS description. In our example that would be getting back certain components from the various tables.
  + For example, get list of BpSs, then build a table of disturbances
* We understand BpS names the easiest, e.g., “Laurentian-Acadian Northern Pine(-Oak) Forest” as this is an ecosystem, but that is not the whole story though:
  + That BpS Name may occur across multiple Map Zones
  + There may be one or there may be multiple variants across the Map Zones it occurs in.
  + The BpS Name is linked to the first five numbers of the bps\_model, e.g., 13620, the following numbers in the bps\_model are Map Zones. The first five numbers are called the bps\_code.
  + This example type occurs in Map Zones 41, 50, 51, 63, 64, 65, 66
  + This example has two variants:
    - 13620\_41\_50
    - 13620\_51\_63\_64\_65\_66
  + If Randy says “BpS” he is loosely referring to a name, but again this is not the whole story. He is being lazy.

## Queries

1. Click on Map Zone(s), get all BpSs in that Map Zone
2. Search by Species in bps\_indicators.csv
   1. By Symbol
   2. By Scientific Name
   3. By CommonName
   4. Autofill? Dropdown probably too long
3. BpSs with fire return interval of less than X years
   1. Use fire\_frequency.csv;
   2. Should have dropdown with Severity types

OR see next query

1. Query probabilistic.csv for disturbances with specific range of, less than or more than X years return interval (years between disturbance(s))
   1. E.g., BpSs with Native Grazing
   2. E.g., “BpSs with Fires with return interval of less than 15yrs”
2. Fire regime group
3. Query scls\_descriptions
   1. BpSs with OPN classes
   2. Should be paired with ref\_con\_long to get BpSs with majority OPN classes (in Map Zone or with Oaks or similar)
4. Query by veg type