Access Tutorial

How to access Access

# What is Microsoft Access

* Database manager
* Made up of tables that are interconnected to allow for data analysis
* Queries can be performed to manipulate your data, such as join tables, filter tables, update data, make new tables
* Queries can be automated through building Macros

## How are the tables connected?

* Go to Database Tools/ Relationships





* Every table is connected via a “Primary key”
* Primary key is one or more fields (column) that exists in every table and “links” tables together
	+ No duplicates
	+ Not to be changed
	+ Unique identifier
* “Foreign key” is one or more fields in a table that refers to a primary key
	+ Can have duplicates
* E.g. State\_ID.State is a primary key for the State table, but is a foreign key in the Polygon table
* You can tell which is which by the symbol in the map, the 1 signifies primary key and the infinity symbol signifies foreign key
* If you delete a primary key, make sure you understand what tables it was connected to and how they are all interlinked!

# Access and FPS Atlas

* FPS Atlas is a visual and spatial representation of all of your Access tables
* Changes in these tables will be translated in FPS

### Descriptive Statistics

* Quickly summarize data in Access
* Open a table



* Select “Total” under the home tab



* An extra row will appear at the bottom of your table. These will have a drop down arrow with different descriptive statistics you would like to select



## Queries

* Answer specific questions about your data that would be difficult to answer by looking at the data directly, good for descriptive statistics
* 3 main actions: Append a table, update a table or create a table

## Queries – Update a table – Defining a Zone

* First, we need to define our zones. For this example we will be assigning 2 zones: Timber harvest landbase (THLB) and a non-timber harvest landbase (NTHLB)
* Open the Zone Table and define each zone



* Then we will create a query to do this update.
* Under “Create” tab, select “Query Design”
* Select the table that holds the data you would like to look at or change



* Click on “Update”



* There are 4 main rows to build a query:
	+ Field: Column of data you want to look up
	+ Table: From within which table you want to look up
	+ Update to: If you wish to make changes to a specific field, in this row you specify to what you want it to change to
	+ Criteria: Specific criteria that the data will only be processed for those particular cases

Example:

Update stand group 4 from THLB to NTHLB

* Field: Zone\_ID
* Table: Polygon
* Update To: “2”
* Field: StandGroup\_Id
* Table: Polygon
* Update To:
* Criteria: =4
* Field: StandGroup\_Id
* Table: Polygon
* Update To:
* Criteria: =5
* Field: StandGroup\_Id
* Table: Polygon
* Update To:
* Criteria: =3
* Field: Description
* Table: Polygon
* Update To: “NTHLB”.



So, stand group “4” will be updated to zone 2 and the description updated as NTHLB within the Polygon table.

\*\*\*\*THINGS TO REMEMBER\*\*\*\*

* ”Criteria” row needs to be written using =, >, < symbols. The “Update To” row can use either “ “ or =

## Queries – Append a table - Making a Clique

* First, Cliques need to be defined in the Clique Table. We will keep it simple by only creating 3 cliques: Moose Habitat, Dead pine, Regen.
* Open the Clique Table.



* Then we will create a query to do this.
* Open the Polygon table in the query.
* Select Append under “Design”



* Then select “Polygon\_Clique for the table to append.

 

* Fill out the query as follows:



* Field: Polygon\_ID
* Table:Polygon
* Append To: Polygon\_Id

What this is telling Access is to take the Polygon\_Id values from the Polygon table and append them to the Polygon\_Id field in the Polygon\_Clique table

* Expr1:1
* Append To: Priority

What this does is assigns a value of 1 to the Priority field in the Polygon\_Clique table.

* Expr2: IIf([StandGroup\_Id]=1,1,IIf([StandGroup\_Id]=3,1,IIf([StandGroup\_Id]=2,2,3)))
* Append To: Clique\_Id

This nested IF function is assigning the designated stand groups to 3 different cliques: If StandGroup\_Id is equal to 1, then assign it a value of 1, If StandGroup\_Id is equal to 3, then assign it a value of 1, if StandGroup\_Id is equal to 2, then assign it a value of 2, if not, assign it a value of 3

So StandGroup “1” and “3”, will be assigned to Clique 1 (Moose Habitat), “2” to Clique 2 (Dead pine) and all remaining stand groups to Clique 3 (Regen).