

A large orange shape on the left side of the slide, consisting of a rectangle on the left and a quarter-circle on the right.

Request to Reality

Developing and Implementing Electronic Searches

Presenters:

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- *Ken Hugoniot, Jefferson County*
- *Anthony Esposito, Port of Anacortes*



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In this presentation

1. Developing Search Terms
2. Basic Boolean Searches
3. Building Queries in Barracuda Archive Search
4. Q&A



Search Terms:

Words that you think will appear in documents that are responsive to a request, and not in tons of documents that aren't responsive to a request



Search Terms: Exact Words and Phrases

- Can be Keywords or Phrases
 - Keywords: Cats, Dogs
 - Phrases: “Animal Shelter” “Critter Care Guides”
- Search terms are EXACT
 - Cat does NOT return “cats”
 - “Animal Shelters” does NOT return “Animal Shelter”

Developing Good Search Terms

- Terms from request
- Terms from subject matter experts
- Commonly used abbreviations/acronyms
- Expanded abbreviations/acronyms
- Variations of terms

Wildcards (*)

- Adding asterisk (*) searches for all words BEGINNING with the letters
- Cat* returns cat and cats, but also:

Catherine	Catapult
Cathy	Catering
Category	Caterpillar
Catch	Catalog
Catching	Catheter

- Makes queries take longer, may cause errors if use too many
- Does NOT work with phrases! “cool cat*” (or “cool cat”*) = WRONG
- Can only be used at the END of a keyword! *cat or cat*y = WRONG

Good Wildcard Example:

Vaccinee

Vaccinate

Vaccines

Vaccinates

Vaccination

Vaccinated

Vaccinations

Vaccinating

Vaccin* returns all these words!



Boolean Searches:

Connect search terms to find relevant documents and exclude as many non-relevant documents as reasonably possible.

Parts of a Boolean Search

- Search Terms
- Operators
- Grouping punctuation “ ” and ()

“Animal Shelter” AND (Cats OR Dogs)

Parts of a Boolean Search

- **Search Terms**
- Operators
- Grouping punctuation “ ” and ()

“Animal Shelter” AND (Cats OR Dogs)

Parts of a Boolean Search

- Search Terms
- **Operators**
- Grouping punctuation “ ” and ()

“Animal Shelter” **AND** (Cats **OR** Dogs)

Parts of a Boolean Search

- Search Terms
- Operators
- Grouping punctuation “ ” and ()

“Animal Shelter” AND (Cats OR Dogs)

Boolean Operators

- AND – must contain ALL terms (narrower)
- OR – must contain ANY term (broader)
- NOT – must NOT contain any term (narrow)

This training will not cover NOT because:

- Not always available
- Tricky to combine with other operators
- Risk excluding relevant documents covering multiple topics

Very simplified example:

“I want all emails about cats and dogs at the animal shelter.”

Very simplified search terms:

- Animal Shelter
- Cats
- Dogs

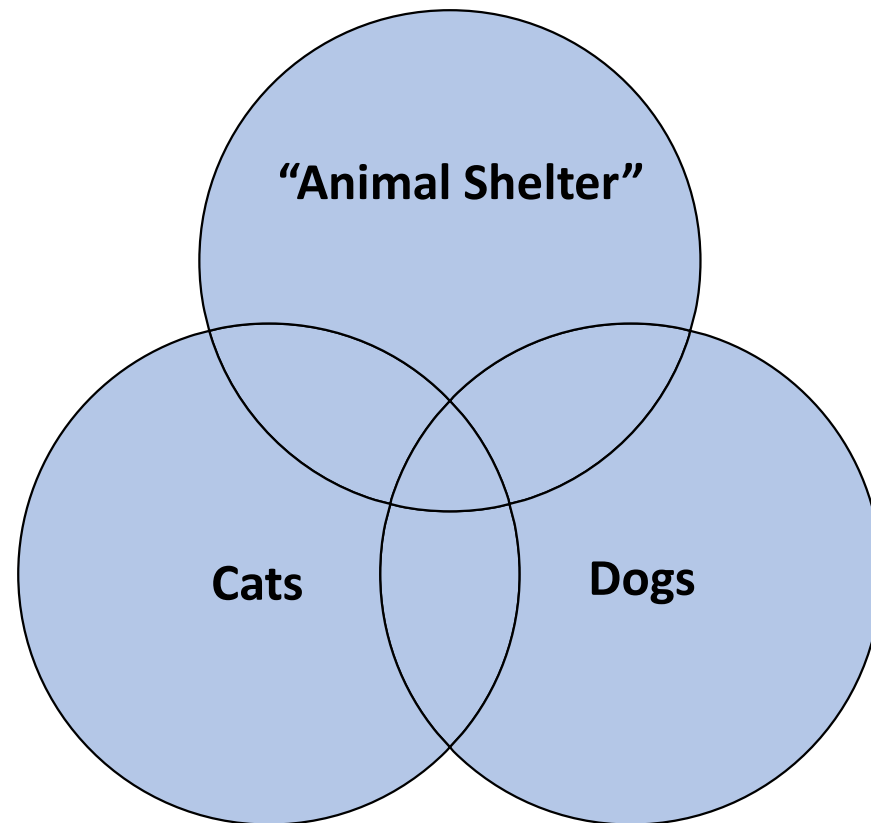
“Animal Shelter” OR Cats OR Dogs

Archive Search

Standard PSTs & Tags Saved Searches Tasks

☐	☐	Email	▼	Entire Message	▼	contains	▼	"animal shelter"	OR
☐	☐	Email	▼	Entire Message	▼	contains	▼	cats	OR
☐	☐	Email	▼	Entire Message	▼	contains	▼	dogs	

“Animal Shelter” OR Cats OR Dogs



“Animal Shelter” AND Cats AND Dogs

Archive Search

Standard

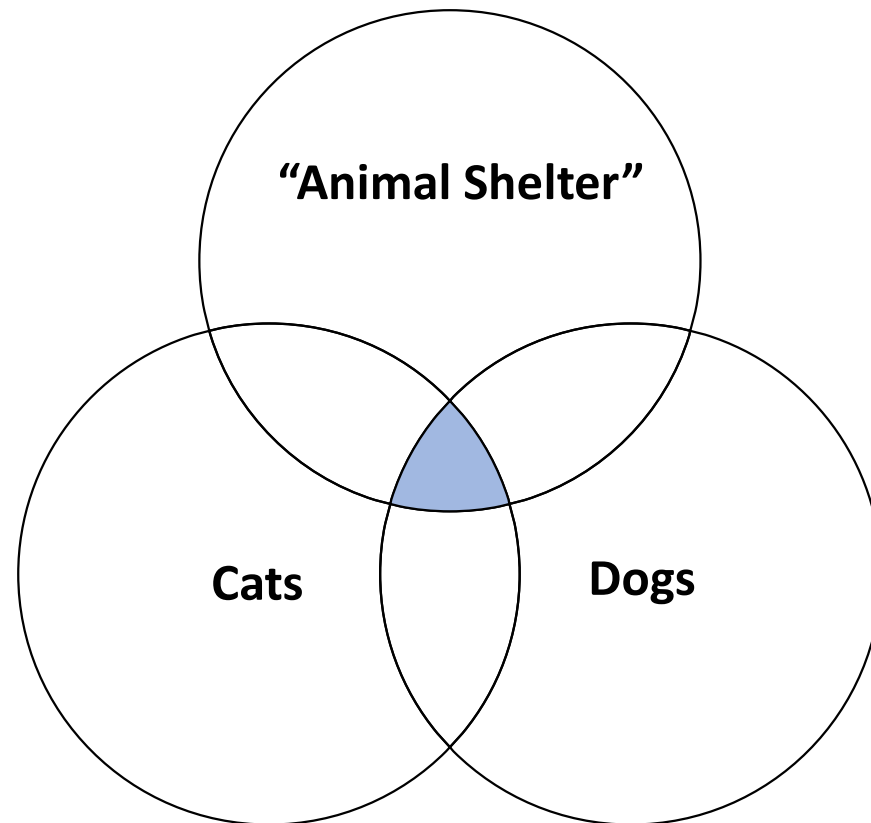
PSTs & Tags

Saved Searches

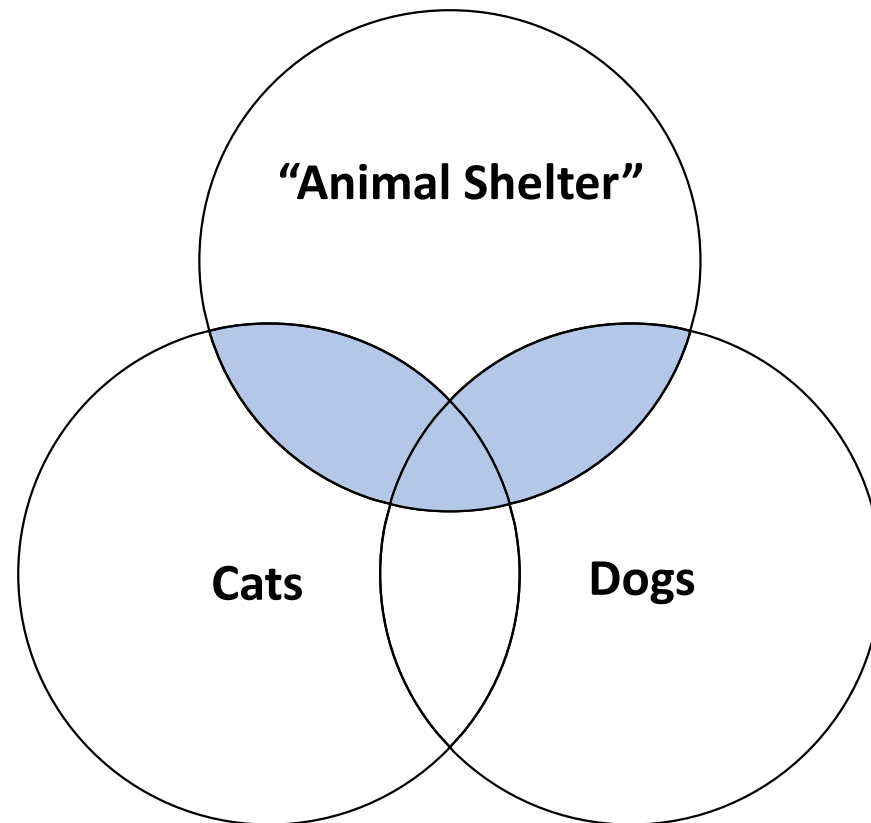
Tasks

☐ + ☐ -	Email	Entire Message	contains	"animal shelter"	AND
☐ + ☐ -	Email	Entire Message	contains	cats	AND
☐ + ☐ -	Email	Entire Message	contains	dogs	

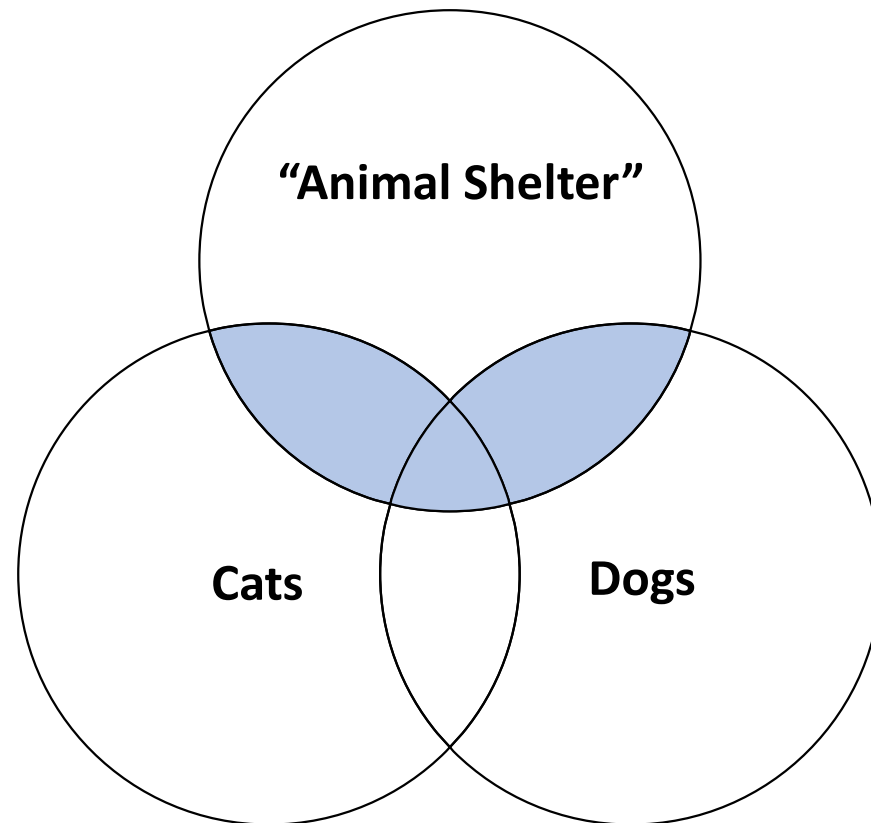
“Animal Shelter” AND Cats AND Dogs



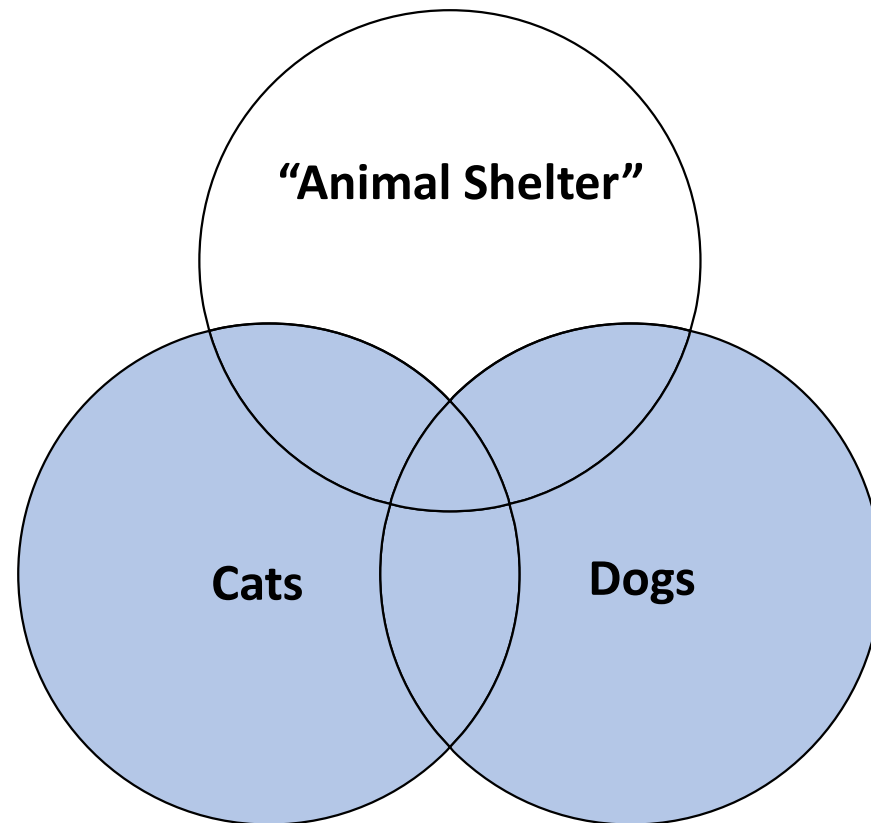
How do we get emails about dogs OR cats at the animal shelter?



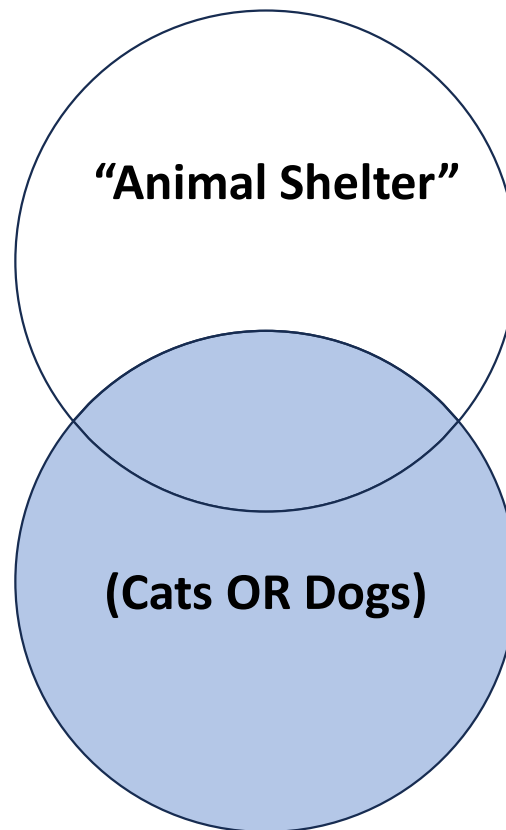
“Animal Shelter” AND (Cats OR Dogs)



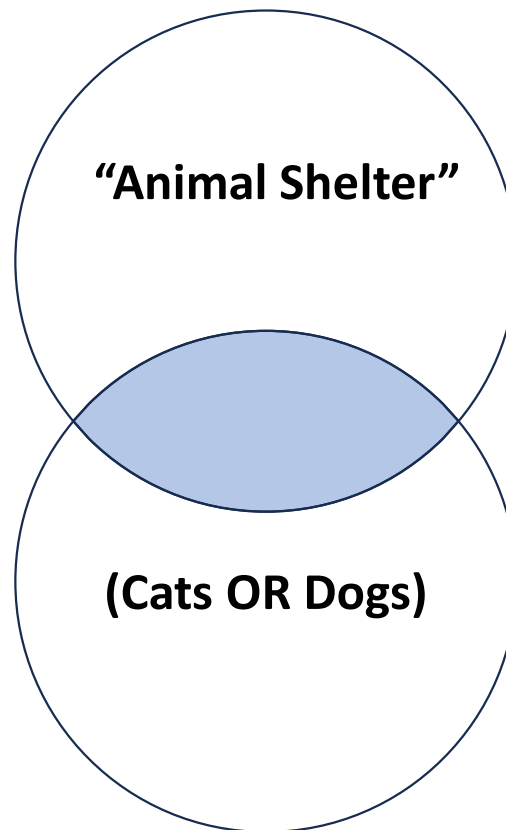
(Cats OR Dogs)



(Cats OR Dogs)



“Animal Shelter” AND (Cats OR Dogs)



“Animal Shelter” AND Cats OR Dogs

Archive Search

Standard PSTs & Tags Saved Searches Tasks

+ -	Email	Entire Message	contains	"animal shelter"	AND
+ -	Email	Entire Message	contains	cats	OR
+ -	Email	Entire Message	contains	dogs	

Important:

Barracuda's default Boolean structure is based on *order*

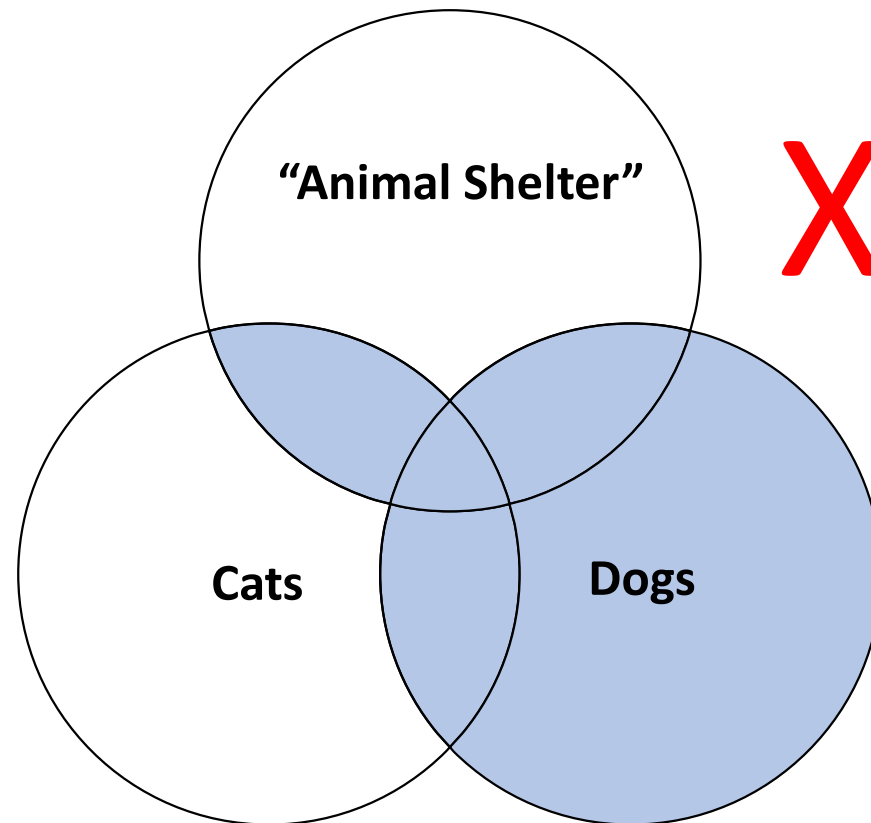
((“Animal Shelter” AND Cats) OR Dogs)

Archive Search

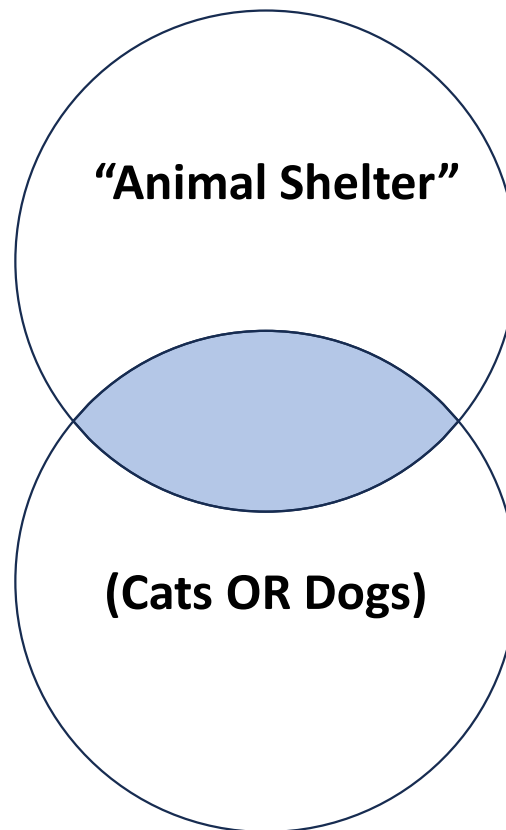
Standard PSTs & Tags Saved Searches Tasks

(	+ -	Email	Entire Message	contains	"animal shelter"	AND
	+ -	Email	Entire Message	contains	cats	OR
	+ -	Email	Entire Message	contains	dogs	)

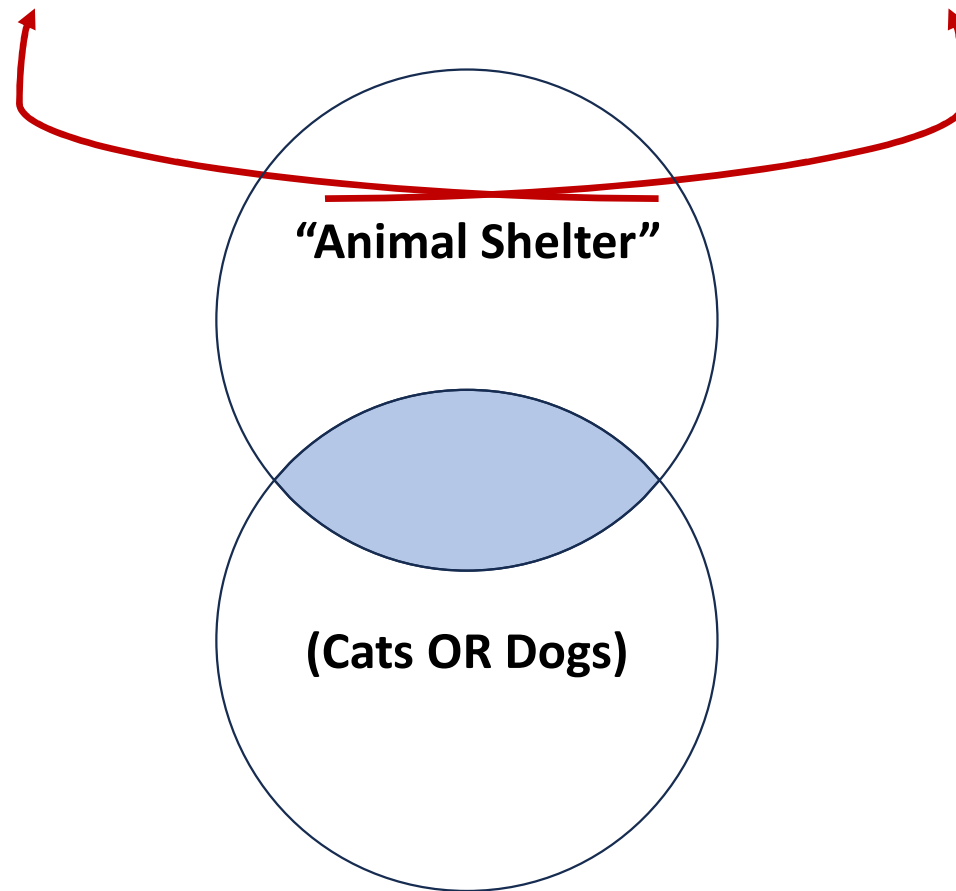
((“Animal Shelter” AND Cats) OR Dogs)



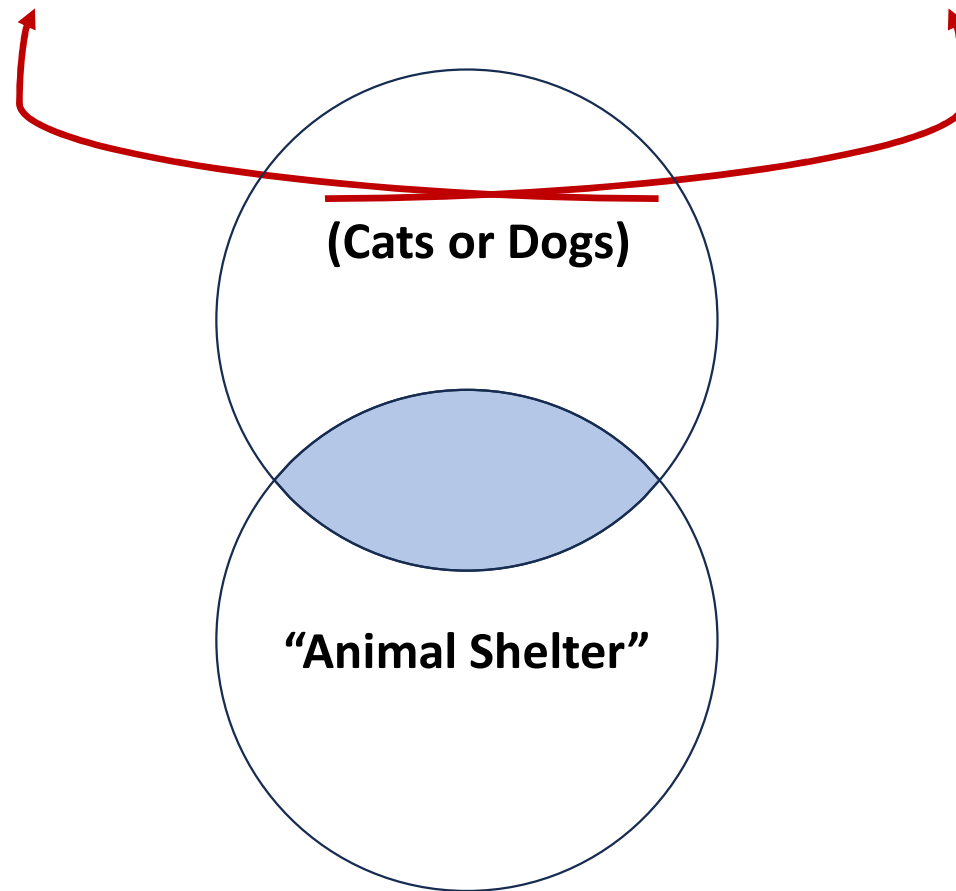
“Animal Shelter” AND (Cats OR Dogs)



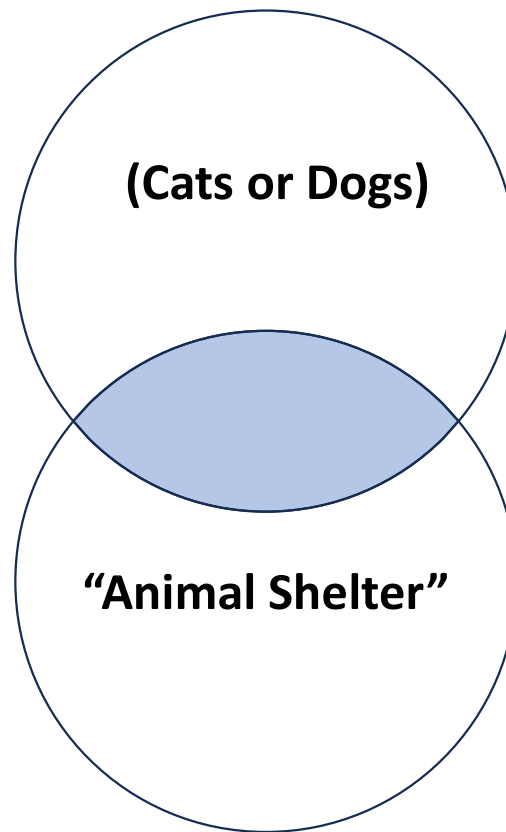
“Animal Shelter” AND (Cats OR Dogs)



(Cats OR Dogs) AND “Animal Shelter”



(Cats OR Dogs) AND “Animal Shelter”



((Cats OR Dogs) AND "Animal Shelter")

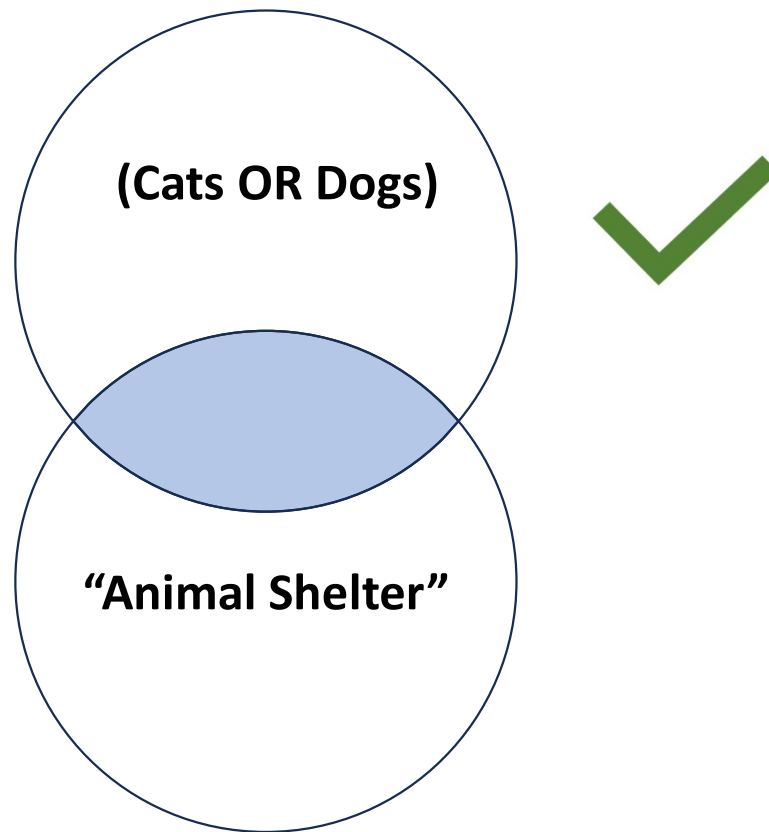
Archive Search

Standard PSTs & Tags Saved Searches Tasks

((	+ -	Email	Entire Message	contains	cats	OR
	+ -	Email	Entire Message	contains	dogs	) AND
	+ -	Email	Entire Message	contains	"animal shelter"	

)

$((\text{Cats OR Dogs}) \text{ AND } \text{"Animal Shelter"})$



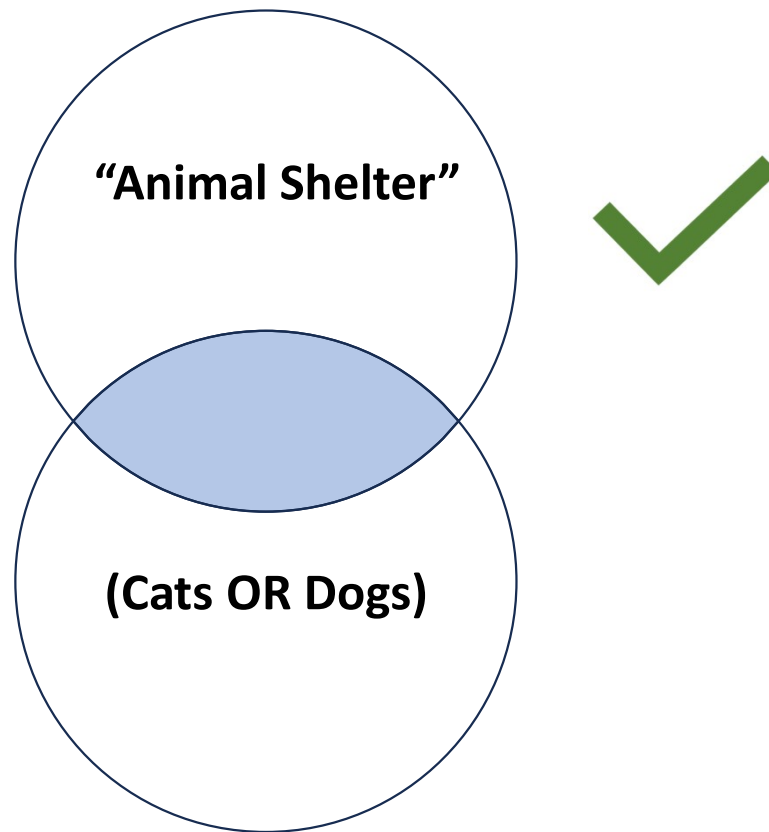
(“Animal Shelter” AND (Cats OR Dogs))

Archive Search

Standard PSTs & Tags Saved Searches Tasks

+ -	Email	Entire Message	contains	"animal shelter"	AND
+ -	Email	Keyword Expression	matches	(all:cats OR all:dogs)	

(“Animal Shelter” AND (Cats OR Dogs))



Cats OR Dogs AND “Animal Shelter”

Archive Search

Standard

PSTs & Tags

Saved Searches

Tasks

+ -	Email ▾	Entire Message ▾	contains ▾	cats	OR
+ -	Email ▾	Entire Message ▾	contains ▾	dogs	AND
+ -	Email ▾	Entire Message ▾	contains ▾	"animal shelter"	OR
+ -	Email ▾	Entire Message ▾	contains ▾	"animal shelters"	

Cats OR Dogs AND “Animal Shelter” OR “Animal Shelters”

Archive Search

Standard

PSTs & Tags

Saved Searches

Tasks

+ -	Email	Entire Message	contains	cats	OR
+ -	Email	Entire Message	contains	dogs	AND
+ -	Email	Entire Message	contains	"animal shelter"	OR
+ -	Email	Entire Message	contains	"animal shelters"	

((Cats OR Dogs) AND (“Animal Shelter”) OR “Animal Shelters”)

Archive Search

StandardPSTs & TagsSaved SearchesTasks

((

+ -

Email▼

Entire Message▼

contains▼

cats

OR

+ -

Email▼

Entire Message▼

contains▼

dogs

)AND

+ -

Email▼

Entire Message▼

contains▼

"animal shelter"

)OR

+ -

Email▼

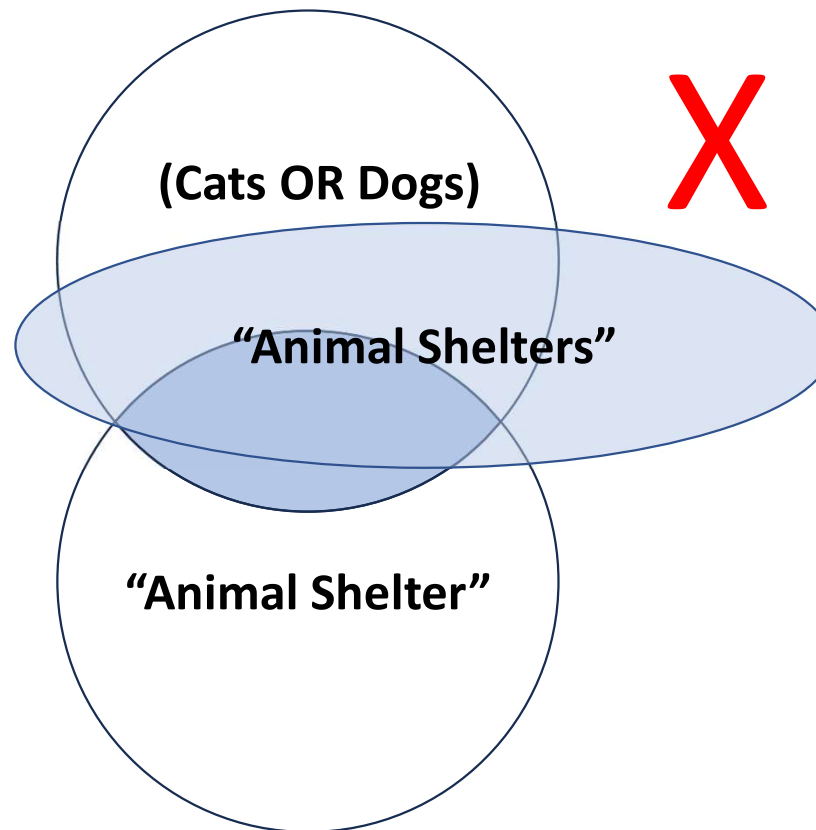
Entire Message▼

contains▼

"animal shelters"

)

$((\text{Cats OR Dogs}) \text{ AND } (\text{"Animal Shelter"})) \text{ OR "Animal Shelters"})$



((Cats OR Dogs) AND (“Animal Shelter” OR “Animal Shelters”))

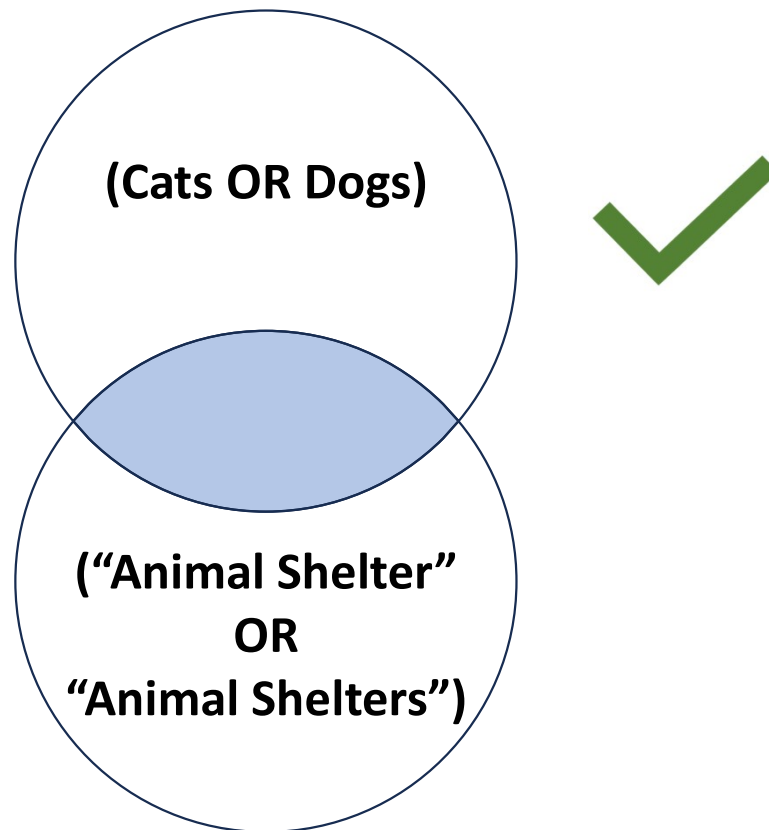
Archive Search

Standard					PSTs & Tags	Saved Searches	Tasks
+ -	Email	Entire Message	contains	cats	OR		
+ -	Email	Entire Message	contains	dogs	AND		
+ -	Email	Keyword Expression	matches	(all:"animal shelter" OR all:"animal shelters")			

Archive Search

Standard					PSTs & Tags	Saved Searches	Tasks
+ -	Email	Keyword Expression	matches	(all:cats OR all:dogs)	AND		
+ -	Email	Keyword Expression	matches	(all:"animal shelter" OR all:"animal shelters")			

((Cats OR Dogs) AND (“Animal Shelter” OR “Animal Shelters”))



Building Queries in Barracuda

Some more realistic examples



The theoretical records request



The real records request



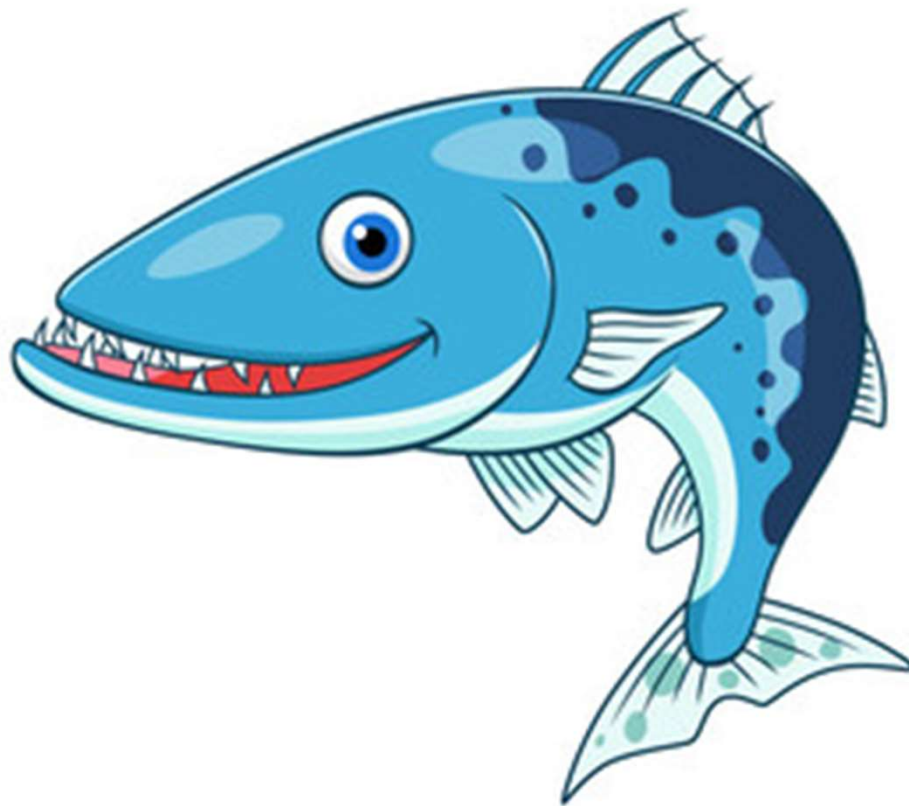
The dreaded barracuda search



Getting from here....



To here!



Structuring Boolean searches in Barracuda

- **Interpret the text** of a records request into a logical and accurate Barracuda search
- **Know Barracuda's default logical structure** so that your search is an accurate interpretation of the text
- **Learn to use Barracuda's keyword expressions** to make your searches reflect the text of a request more accurately and precisely



Records Request

This is a public records request for **all records, including communication, related to** Garth Mann, the Statesman Corporation, the Pleasant Harbor Marina, or the Pleasant Harbor Master Planned Resort from March 1, 2019 to March 31, 2019.

Records Request

This is a public records request for **all records, including communication, related to** Garth Mann, the Statesman Corporation, the Pleasant Harbor Marina, or the Pleasant Harbor Master Planned Resort from March 1, 2019 to March 31, 2019.

Boolean interpretation

("garth mann" OR "statesman") OR "pleasant harbor marina") OR "pleasant harbor master planned resort") OR PHMPR) AND (March 1, 2019 to March 31, 2019)

Archive Search

Standard

PSTs & Tags

Saved Searches

Tasks

 	Email ▼	Entire Message ▼	contains ▼	"garth mann"	OR
 	Email ▼	Entire Message ▼	contains ▼	statesman	OR
 	Email ▼	Entire Message ▼	contains ▼	"pleasant harbor"	OR
 	Email ▼	Entire Message ▼	contains ▼	PHMPR	AND
 	Email ▼	Date ▼	on or after ▼	2019-03-01 00:00:00 -0700 	AND
 	Email ▼	Date ▼	on or before ▼	2019-03-31 00:00:00 -0700 	

Records Request

This is a public records request for **all records of communication to or from** Garth Mann, the Statesman Corporation, the Pleasant Harbor Marina, or the Pleasant Harbor Master Planned Resort from March 1, 2019 to March 31, 2019.

Archive Search

Standard

PSTs & Tags

Saved Searches

Tasks

 	Email ▼	From/To/Cc ▼	contains ▼	"garth mann"	OR
 	Email ▼	From/To/Cc ▼	contains ▼	statesman	OR
 	Email ▼	From/To/Cc ▼	contains ▼	statesmangroup.com	OR
 	Email ▼	From/To/Cc ▼	contains ▼	"pleasant harbor"	OR
 	Email ▼	From/To/Cc ▼	contains ▼	phmresort.com	OR
 	Email ▼	From/To/Cc ▼	contains ▼	pleasantharbormarina.com	AND
 	Email ▼	Date ▼	on or after ▼	2019-03-01 00:00:00 -0700	AND
 	Email ▼	Date ▼	on or before ▼	2019-03-31 00:00:00 -0700	

Records Request

This is a public records request for **all records of communication between** any official or employee of Jefferson County and Garth Mann, the Statesman Corporation, the Pleasant Harbor Marina, or the Pleasant Harbor Master Planned Resort from March 1, 2019 to March 31, 2019.

Archive Search

Standard

PSTs & Tags

Saved Searches

Tasks

		Email	▼	To/Cc	▼	contains	▼	"garth mann"	OR
		Email	▼	To/Cc	▼	contains	▼	statesman	OR
		Email	▼	To/Cc	▼	contains	▼	statesmangroup.com	OR
		Email	▼	To/Cc	▼	contains	▼	"pleasant harbor"	OR
		Email	▼	To/Cc	▼	contains	▼	phmresort.com	OR
		Email	▼	To/Cc	▼	contains	▼	pleasantharbormarina.com	AND
		Email	▼	From	▼	contains	▼	co.jefferson.wa.us	AND
		Email	▼	Date	▼	on or after	▼	2019-03-01 00:00:00 -0700	AND
		Email	▼	Date	▼	on or before	▼	2019-03-31 00:00:00 -0700	

Archive Search

Standard PSTs & Tags Saved Searches Tasks

+ -	Email	From		contains	"garth mann"	OR
+ -	Email	From		contains	statesman	OR
+ -	Email	From		contains	statesmangroup.com	OR
+ -	Email	From		contains	"pleasant harbor"	OR
+ -	Email	From		contains	phmresort.com	OR
+ -	Email	From		contains	pleasantharbormarina.com	AND
+ -	Email	To/Cc		contains	co.jefferson.wa.us	AND
+ -	Email	Date		on or after	2019-03-01 00:00:00 -0700	AND
+ -	Email	Date		on or before	2019-03-31 00:00:00 -0700	

Public records request

Any and all communication to or from the Jefferson County Commissioners regarding the Shoreline Master Plan, from January 1 to January 9, 2024.

Any and all communication to or from the Jefferson County Commissioners regarding the Shoreline Master Plan, from January 1 to January 9, 2024.

Boolean interpretation:

((commissioner #1 OR commissioner #2) OR commissioner #3)
AND (“shoreline master plan” OR SMP)

Archive Search

Standard

PSTs & Tags

Saved Searches

Tasks

 	Email	From/To/Cc	contains	jeffbocc@co.jefferson.wa.us	OR
 	Email	From/To/Cc	contains	kdean@co.jefferson.wa.us	OR
 	Email	From/To/Cc	contains	heisenhour@co.jefferson.wa.us	OR
 	Email	From/To/Cc	contains	gbrotherton@co.jefferson.wa.us	AND
 	Email	Keyword Expression	matches	(all:SMP OR all:shoreline)	AND
 	Email	Date	on or after	2024-01-01	AND
 	Email	Date	on or before	2024-01-09	

Public records request

Any and all communication regarding the three year "operational agreement" between the Jefferson County Fair Association and the Jefferson County Board of Commissioners, from Oct. 1 to Dec. 20, 2023.

Archive Search

Standard

PSTs & Tags

Saved Searches

Tasks

	Email	▼	Entire Message	▼	contains	▼	JCFA	OR
	Email	▼	Entire Message	▼	contains	▼	"fair association"	OR
	Email	▼	Keyword Expression	▼	matches	▼	(all:fair AND all:agreement)	OR
	Email	▼	Keyword Expression	▼	matches	▼	(all:fair AND all:contract)	AND
	Email	▼	Date	▼	on or after	▼	2023-10-01	AND
	Email	▼	Date	▼	on or before	▼	2023-12-20	

Public records request

Any and all communication regarding permit/plan number SUB2023-00025, an application for a plat / subdivision within the Pleasant Harbor Master Planned Resort.

Date range Dec. 1 , 2022 to Dec. 31, 2023.

Archive Search

Standard

PSTs & Tags

Saved Searches

Tasks

☐ + ☐ -	Email ▼	Entire Message ▼	contains ▼	"SUB2023-00025"	OR
☐ + ☐ -	Email ▼	Entire Message ▼	contains ▼	"SUB23-00025"	OR
☐ + ☐ -	Email ▼	Entire Message ▼	contains ▼	"SUB23-25"	OR
☐ + ☐ -	Email ▼	From/To/Cc ▼	contains ▼	cristina.haworth@scjalliance.com	OR
☐ + ☐ -	Email ▼	From/To/Cc ▼	contains ▼	johnholbert@startmail.com	OR
☐ + ☐ -	Email ▼	Keyword Expression ▼	matches ▼	((from:gterry@co.jefferson.wa.us OR to:gterry@co.j	AND
☐ + ☐ -	Email ▼	Date ▼	on or after ▼	2022-12-01	AND
☐ + ☐ -	Email ▼	Date ▼	on or before ▼	2023-12-31	

((from:gterry@co.jefferson.wa.us OR to:gterry@co.jefferson.wa.us) AND subject:PHMPR)

Examples of keyword expressions in searches

FYI

The Barracuda Campus support website has training and resources for using Keyword Expressions, including a glossary and sample expressions:

<https://campus.barracuda.com/product/messagearchiver/doc/2490384/keyword-expressions/>

<https://campus.barracuda.com/product/cloudarchiving/doc/46891963/keyword-expressions/>

<https://campus.barracuda.com/product/cloudarchiving/doc/48202000/how-to-search-and-archive-messages-using-barracuda-archive-search-for-outlook/>

Table 1. Commonly used search_field values.

Term	Description	Search Type
to	Search is limited to the To and Cc fields of each message	Text
from	Search is limited to the From field of each message	Text
domain	Search is limited to the domain names in the From, To, and Cc fields of each message	Domain
subject	Search is limited to the Subject line of each message	Text
body	Searches are performed in the Body of each message as well as in the contents of any message attachments	Text
attachment	Search is limited to the contents of message attachments	Text
all	Searches all fields and all data contained in each message	Text

Barracuda and other scary predators

- Barracuda search terms and Boolean operators can easily be translated into search expressions in other record archiving platforms
- For example, in Laserfiche:
 AND = &
 OR = |
- Your Barracuda search can potentially serve as a template for your entire electronic records search





Questions?

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Anthony.Esposito@portofanacortes.com

