Louisiana Underground Injection Control Program Workshop Introduction



Joseph S. Ball, Jr.

Underground Injection Control (UIC) Program

- March 23, 1982 Under provisions of the Safe Drinking Water Act of 1974, the U.S. Environmental Protection Agency (USEPA) delegated Louisiana with full permitting and enforcement authority (primacy) of the state's UIC Program. Semi-annual USEPA oversight.
- Goal is to protect Underground Sources of Drinking Water (USDW) and other state natural resources from endangerment by regulating the subsurface emplacement of fluids through the use of well injection by:
 - ☑ Processing applications for various subsurface injection projects.
 - ☑ Conduct field surveillance and enforcement at injection well sites and facilities.
 - ☑ Test injection wells for mechanical integrity.
 - ☑ Monitor injection well operations (cradle-to-grave).

Underground Source of Drinking Water

An *Underground Source of Drinking Water* is defined by the United States Environmental Protection Agency as:

- an aquifer or its portion which supplies any public water system; or
- 2. an aquifer or its portion which contains a sufficient quantity of ground water to supply a public water system; and
 - a. currently supplies drinking water for human consumption; or
 - b. contains fewer than 10,000 mg/l total dissolved solids and which is not an exempted aquifer.

Regulatory Classes of Injection Wells

Class I Industrial (hazardous or nonhazardous) or Municipal Waste Oil and Gas Waste, Enhanced Recovery of Hydrocarbons, or Class II Hydrocarbon Storage in a Salt Cavern Class III Mineral Solution Mining (salt, sulfur, etc.) Wells injecting Hazardous or Radioactive Waste into or above a USDW. Banned unless authorized as a RCRA or Class IV CERCLA cleanup. Wells not covered under any other Class (e.g., aquifer Class V remediation, heat pump/ac return flow well, etc.) Class VI Carbon Dioxide (CO₂) Sequestration

Injection & Mining Division - Regulations

The basic regulations of the Office of Conservation are a series of documents called **Statewide Orders**. These Orders form the backbone of the regulatory scheme and provide structure for operational requirements. The regulations are lawfully codified in the **Louisiana Administrative Code** and are prefixed by the letters **LAC**.

Louisiana Administrative Code	Statewide Order	Subject of Regulation		
LAC 43:XIX.Chapter 3	Statewide Order No. 29-B, Chapter 3	Onsite storage, treatment and disposal of oilfield waste. Primarily oilfield pit regulations, but also has some general requirements for Class II disposal wells		
I AC 43:XIX Chanter 4		General regulations for a Class II produced fluids disposal well		
LAC 43:XIX.Chapter 5	Statewide Order No. 29-B, Chapter 5	Regulations specific to commercial oilfield waste facilities		
LAC 43:XVII.Chapter 1	Statewide Order No. 29-N-1	Class I Nonhazardous Industrial Waste, Class III Mineral Solution Mining, Class IV, Class V, Class VI		
LAC 43:XVII.Chapter 2	Statewide Order No. 29-N-2	Class I Hazardous Industrial Waste		
LAC 43:XVII.Chapter 3	Statewide Order No. 29-M	Class II Hydrocarbon Storage in Salt Dome Caverns		
LAC 43:XVII.Chapter 31	Statewide Order No. 29-M-2	Class II Disposal of Oilfield Waste in Solution-Mined Salt Caverns		

Fee Schedule at LAC 43:XIX.Chapter 7 (including application fees)

- ☑ Commercial Class I \$1,264
- ✓ Noncommercial Injection Well ⇒ \$ 252
- ✓ Amend Permit to Drill

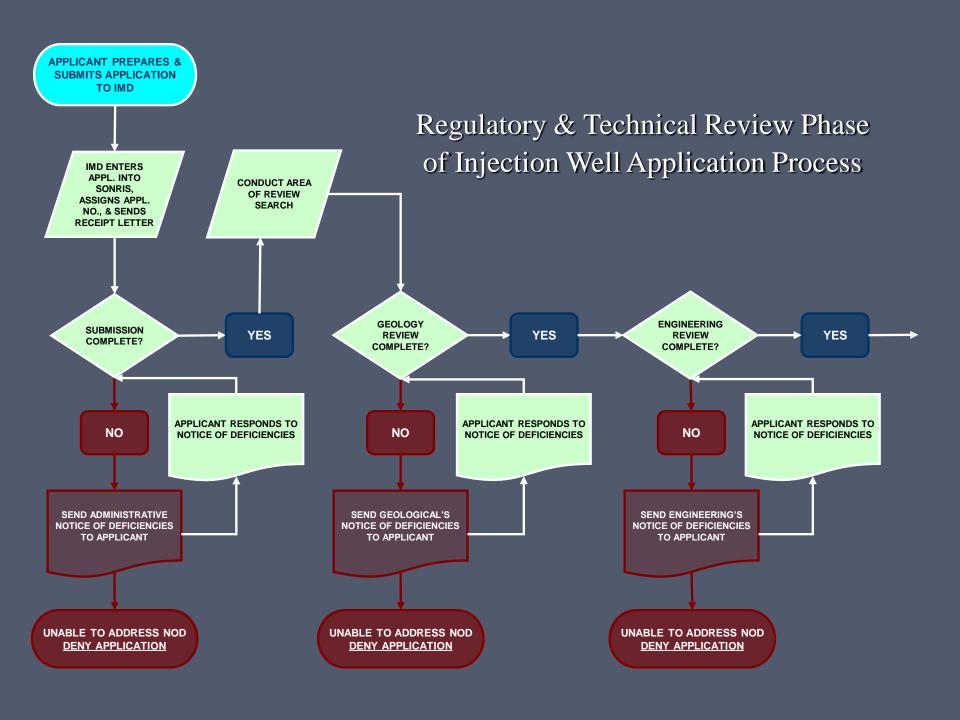
 (amend, alter, or change a permit after its issuance)

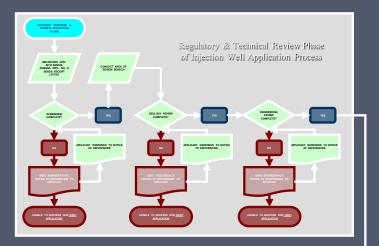
 \$\forall \text{Amend Permit to Drill}\$
- ✓ Well Workovers
 FREE

Two-Part Permitting Process

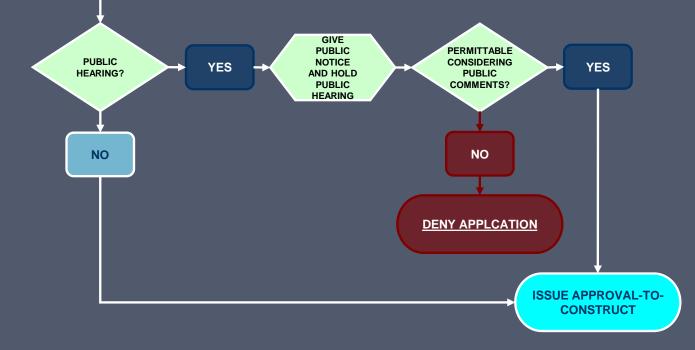
Part I: Permit-to-Construct:

- ☑ Public Notice of Application. Usually a Notice of Intent to file. Public hearing is not generally required, but will be held if requested.
- ☑ <u>Administrative Review</u> (properly completed forms, required documents, compliance history, financial responsibility, etc.)
- ✓ <u>Technical Review</u> to assure that well constructed to prevent movement of fluids into USDW's. (hydrology, geology, well construction and operation, area-of-review, corrective action, etc.).
- ☑ Notice of Application Deficiency if additional data needed.
- ☑ <u>Permit-to-Construct</u> issued when the application is administratively complete





Public Review Phase of Injection Well Application Process



Two-Part Permitting Process

Part II: Permit-to-Inject:

- ✓ Technical evaluation of well construction and completion report. Was the well completed as permitted?
- ☑ Well or reservoir tests.
- ☑ Field inspection reports, well mechanical integrity tests.
- ☑ If needed, well operator performs corrective action.
- ☑ Permit-to-Inject issued with operational restrictions as Maximum Authorized Surface Injection Pressure (MASIP), injection rate/volume, frequency for well or reservoir testing, etc.

When to Publish a Public Notice

Well Type	Timing of Public Notice			
Class I Noncommercial	Injection and Mining Division (IMD) publishes after application deemed complete			
Class II Saltwater Disposal for oil and gas operations	Applicant publishes Notice of Intent at least 15 days prior to filing application			
Class II Saltwater Disposal for salt cavern operations	Applicant publishes notice of application filing within 30 days from the date of receipt of the application by IMD (after receipt of application number)			
Class II Enhanced Recovery	Public notice not required. Public hearing is required for Office of Conservation's approval of an enhanced recovery project. Only approves project, not UIC well.			

When to Publish a Public Notice

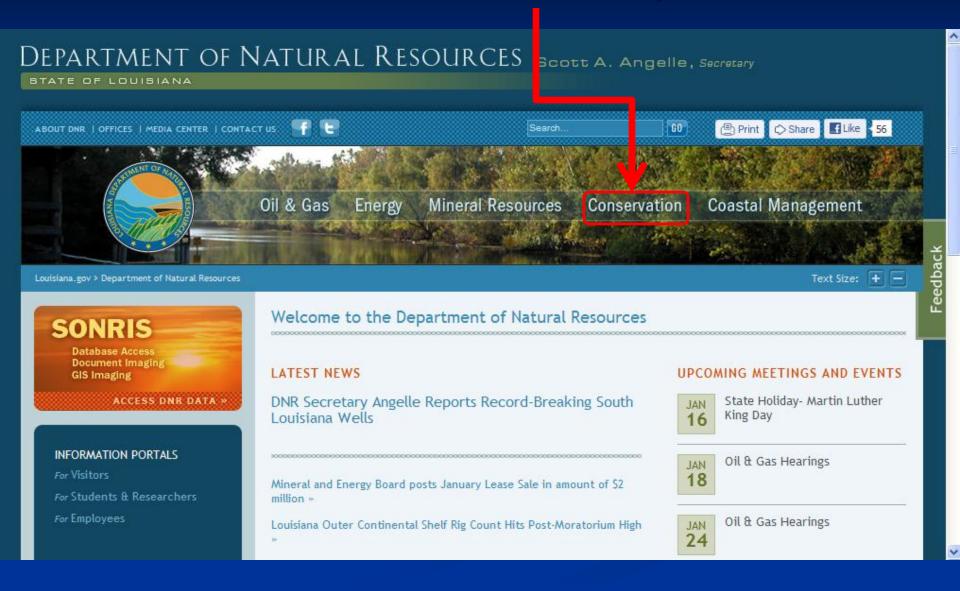
Well Type	Timing of Public Notice			
Class II Commercial Exploration & Production Waste	New Facility: Notice of Intent at least 30 days prior to filing the application			
Refer to LAC 43:XIX.519.B and 529.B for details	 Existing Facility: Notice of Intent at least 15 days prior to filing an application 			
Class II Hydrocarbon Storage in Salt Dome	Applicant publishes Notice of Intent at least 30 days but no more than 180 days before filing application			
Class III Solution Mining	Applicant publishes Notice of Intent at least 30 days but no more than 180 days before filing application			
Class V	Not required			
Class VI CO ₂ Sequestration	Injection and Mining Division publishes after application deemed complete			

UIC Well Application Forms

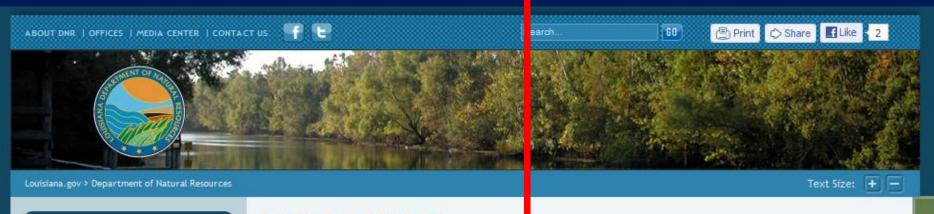
Well Type	UIC Form		
Class I	UIC-1		
CLASS II Saltwater Disposal	UIC-2 SWD Conversion UIC-2 SWD New Drill UIC-2 SWD Re-Entry		
Class II Enhanced Recovery	UIC-2 ER Conversion UIC-2 ER New Drill UIC-2 ER Re-Entry		
Class II Commercial Injection Well	UIC-2 COM		
Class II Hydrocarbon Storage	UIC-2 HSW		
Class II Slurry Fracture Injection	UIC-2 SFI		
Class II Annular	UIC-9		
Class II Change of Zone	UIC-32		
Class II E&P Waste Disposal in a Cavern	UIC-43		
Class III Solution Mining	UIC-3 BR		
Class V	UIC-25		

WHERE CAN I FIND UIC-RELATED FORMS?

Step 1: Go to the DNR Homepage at http://dnr.louisiana.gov/ and Click on the Conservation option



Step 2: Click on Forms



Oil & Gas

Energy

Mineral Resources

Conservation

Divisions District Offices

Directory

Haynesville Smale

Hearings — Oil & Gas History

Online Data (SONRIS) Rules

Search by Topic

Coastal Management

OFFICE OF CONSERVATION

The Office of Conservation is charged with conserving and regulating oil, gas, and lignite resources of the state. This state tory responsibility is to regulate the exploration and production of oil, as and other hydrocarbons and lignite; to control and allocate energy supples and distribution; and to protect public safety and the environment from oilfield waste, including regulation of underground injection and dispose practices.

The Commissioner of Conservation is responsible for administering all activities involving the conservation and development of all natural and mineral resources of the state. The Commissioner also oversees the administration of six divisions and three district offices within the Office of Conservation.

LATEST NEWS AND EVENTS

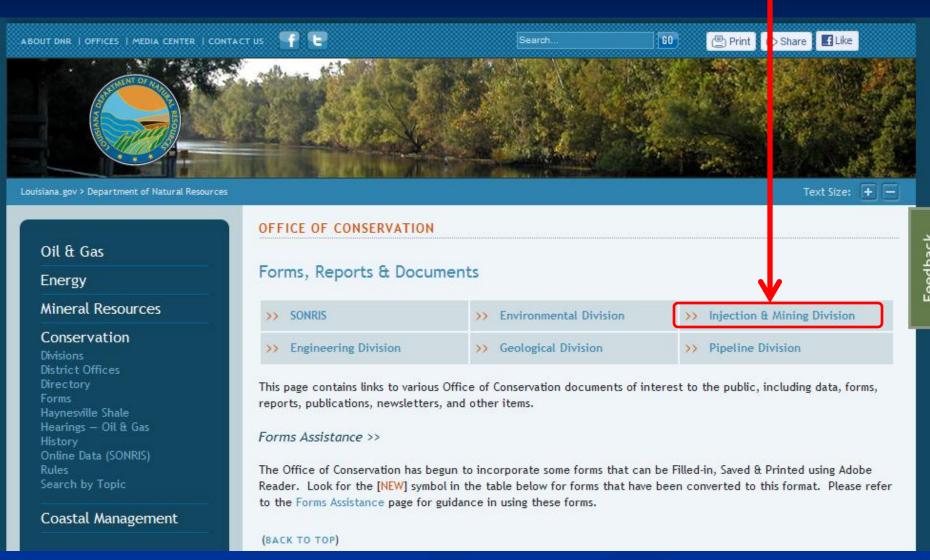
 [NEW] Commissioner Extends Emergency Order No. ENV 2011-GW014 (12/22/2011) >>



James "Jim" H. Welsh Commissioner of Conservation

> PHONE (225) 342-5540 FAX (225) 342-3705

Step 3: Under Forms, Reports & Documents, Click Injection & Mining

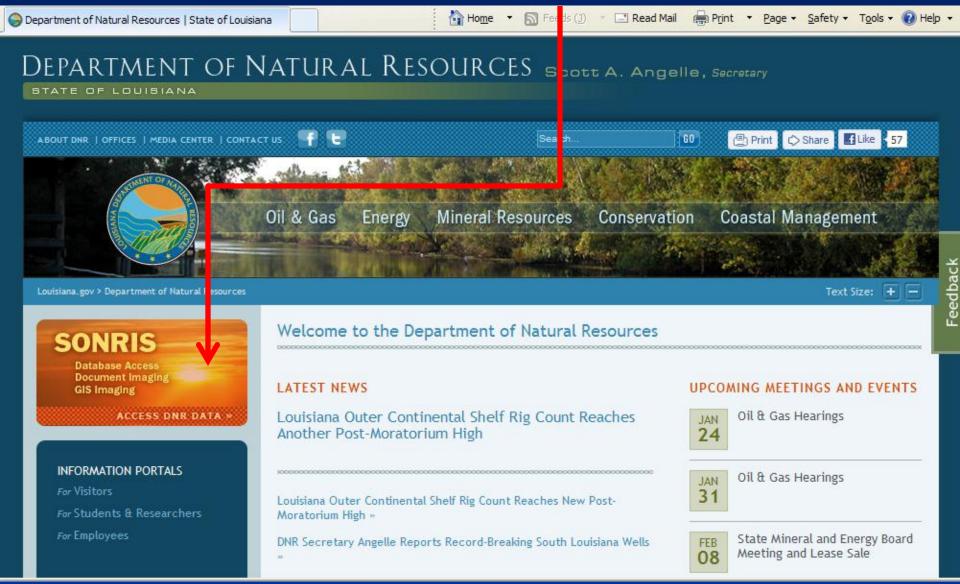


List of Forms Used by the Injection and Mining Division

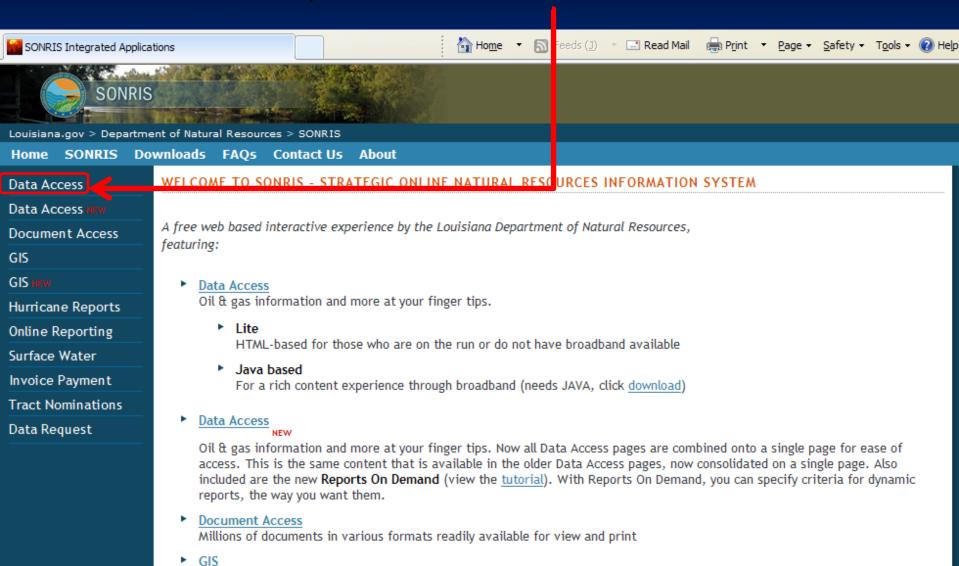
(BACK TO TO	DP)					^
Injection (t Mining Division					
FORM	DESCRIPTION	X	W			ı
UIC-1	Class-I Injection Well Application			PDF		
UIC-2 SWD	Class-II Injection Well Application		Word	PDF		
UIC-2 EOR	Class-II EOR Application			PDF		
UIC-2 HSW	Class-II Hydrocarbon Storage Well Application			PDF		
UIC-2 COM	Class-II Commercial Injection Well Application			PDF		
UIC-2 SFI COM	Class-II Commercial Slurry Fracture Injection Well Application			PDF		ł
UIC-3 BR	Class-III Brine Extraction Well Application		Word	PDF	-	4
UIC-4	Class-II Hydrocarbon Storage Inspection Form	CES	Use O	nly		reedback
UIC-5	Class-II Well Integrity Affidavit			PDF	3	2
UIC-6	Class-I Well Integrity Affidavit			PDF	l c	ก
UIC-7	Class-II Injection Well Inspection Form	CES	Use O	nly		١.
UIC-8	Class-I Injection Well Inspection Form	CES	Use O	nly		
UIC-9	Class-II Annular Saltwater Disposal Well Application			PDF		
UIC-10A	Annual Disposal/Injection Well Monitoring Report		Word			
	UIC-10A: Source Fluid Attachment	Excel				
	UIC-10A: Report, Attachment, and Instructions			PDF		
UIC-11	Mechanical Integrity Noncommercial Class II Daily Monitor Log			PDF		
UIC-13	Community Saltwater Disposal System Initial Notification		Word	PDF		
UIC-14	Application for Annular Disposal of Reserve Pit Fluids		Word	PDF		
UIC-17	Injection Well Work Permit			PDF		
UIC-24	Class-I Quarterly Report			PDF		
UIC-25	Class-V Well Application			PDF		

How Do I Check the Status of an Application

Step 1: Go To DNR Homepage & Click within the Orange **SONRIS** Rectangle



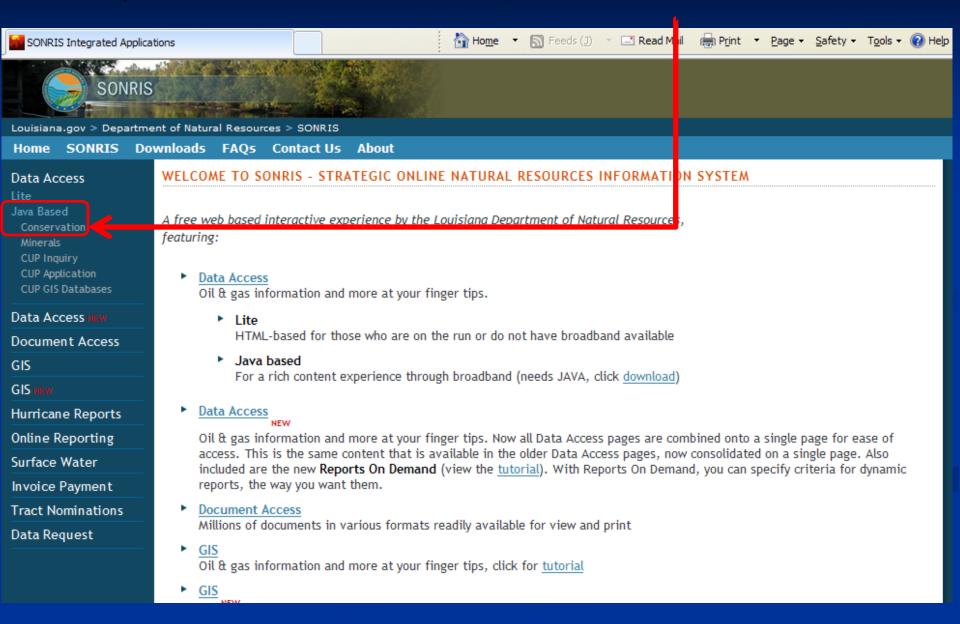
Step 2: Click DATA ACCESS



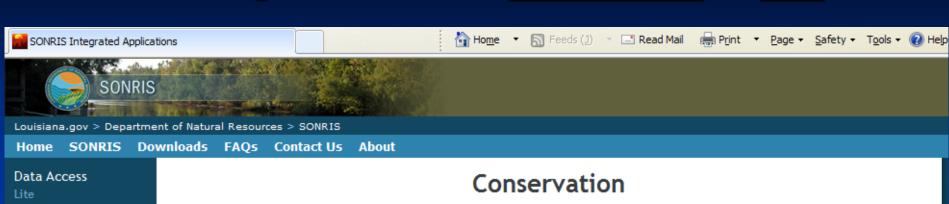
Oil & gas information and more at your finger tips, click for tutorial

GIS

Step 3: Under Java Based, Click CONSERVATION



This Page is Similar in Java-Based or Lite



Wall Information

Java Based

Conservation

Mineral

CUP Inquiry

CUP Application

CUP GIS Databases

Data Access NEW

Document Access

GIS

GIS NEW

Hurricane Reports

Online Reporting

Surface Water

Invoice Payment

Tract Nominations

Data Request

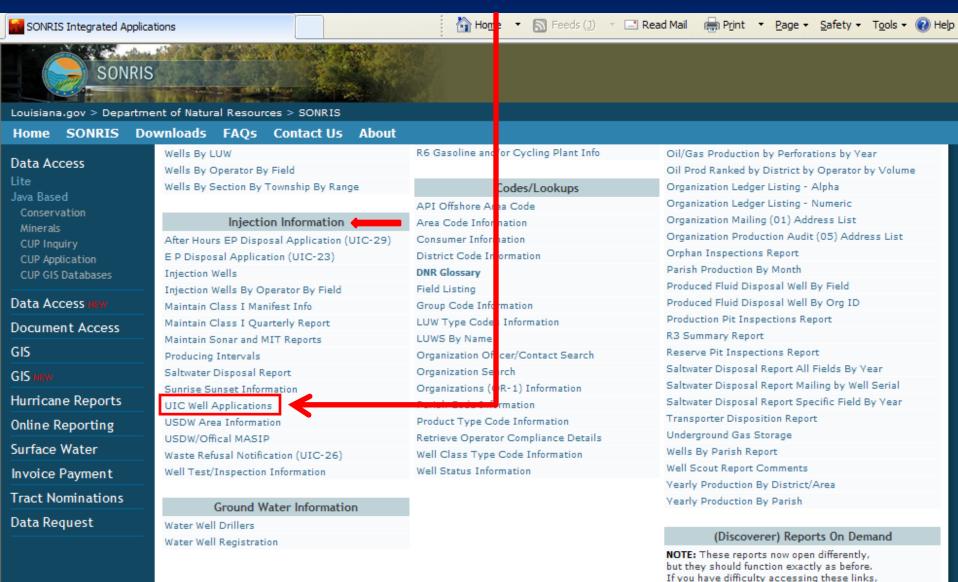
NOTE: These links have been migrated to the New <u>Data Access</u> page. This page is no longer being updated with the latest content. You will find recently used items at the top of the new page. Tutorial for Data Access is available <u>here</u>.

Concomption Poports

Daniel Later and Later and

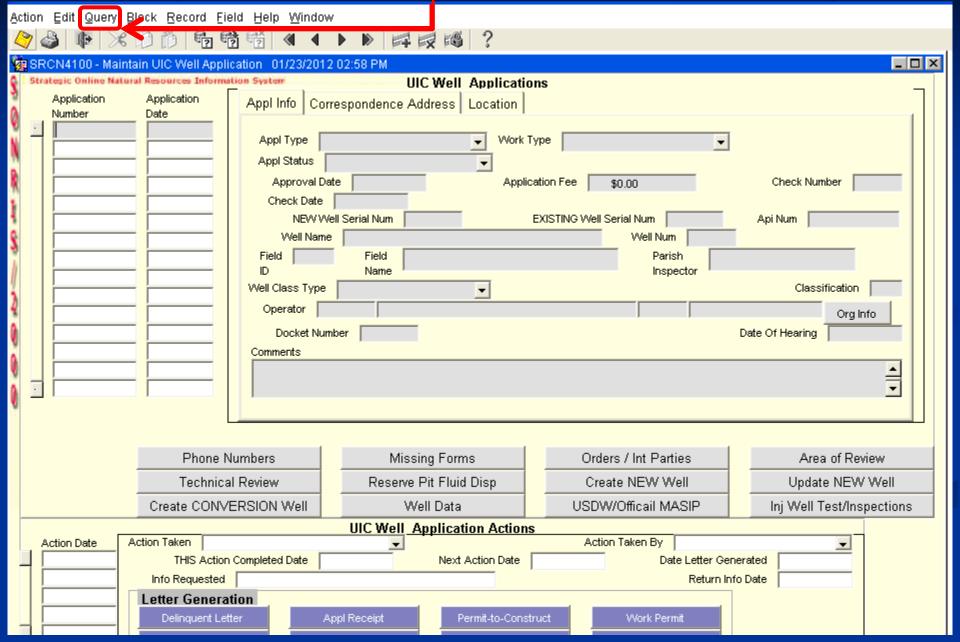
Well Information	Production Information	Conservation Reports
Amended Permit To Drill	Gas Disposition Yearly Summary	Assessors Report
Electric Logs & Directional Survey	Gas Production Yearly Summary	Error List - OGP Operator
LUW History By Well	Inception To Date Production By Operator	Error List - R2 Transporter
Operator History By Well	OGP Data Entry	Error List - R3 Oil Refiners
Orphan Inspection	OGP Ledger by LUW	Error List - R5D Operator
Plugged and Abandoned Wells	formerly OGP-LUW Information	Error List - R5T Transporters
Production Pit Notification	Oil Production Yearly Summary	Error List - R6 Gas Cycling Plants
Reserve Pit Violation	R4 & Emergency Clearance Information	Field Ledger Listing
Salt/Sulfur/Brine Summary	R4 Disposition Information	Field Production By Year Report
Scout Report Information	R5D Data Entry (Gas Disposition)	Gas Prod Ranked by District by Operator by Volume
Severance Tax Relief Re[prt	R5D Gas Disposition Ledger	Import/Export By State/Country By Year
Well Data		Import/Export Detail By Company By Year
Well Engineering Information	Transportation Information	Ind. Field Production By Operator By Month
Well History By Operator	R2 Data Entry (Oil Transporter)	Injection Wells By Parish
Well Profile	R2 Oil Transporter/Storer Information	Lease Facility Inspection Report
Well Test Information	R3 Data Entry (Refinery)	LUW Production By Month Report
Well/LUW Allowable Information	R3 Refiner Information	LUW Production By Year Report
Wells By API or Field	R5T Data Entry (Natural Gas Transporter)	Monthly Refinery Crude Oil Summary
Wells By Field By Operator	R5T Natural Gas Transporter Information	Oil/Gas Producing Well Profile by Month
Walls By Lambort Coordinates	R6 Data Entry (Gasoline and/or Oveling Plant)	Oil/Gae Broducing Woll Brofile by Voas

Step 4: Scroll to Injection Information, click UIC WELL APPLICATIONS

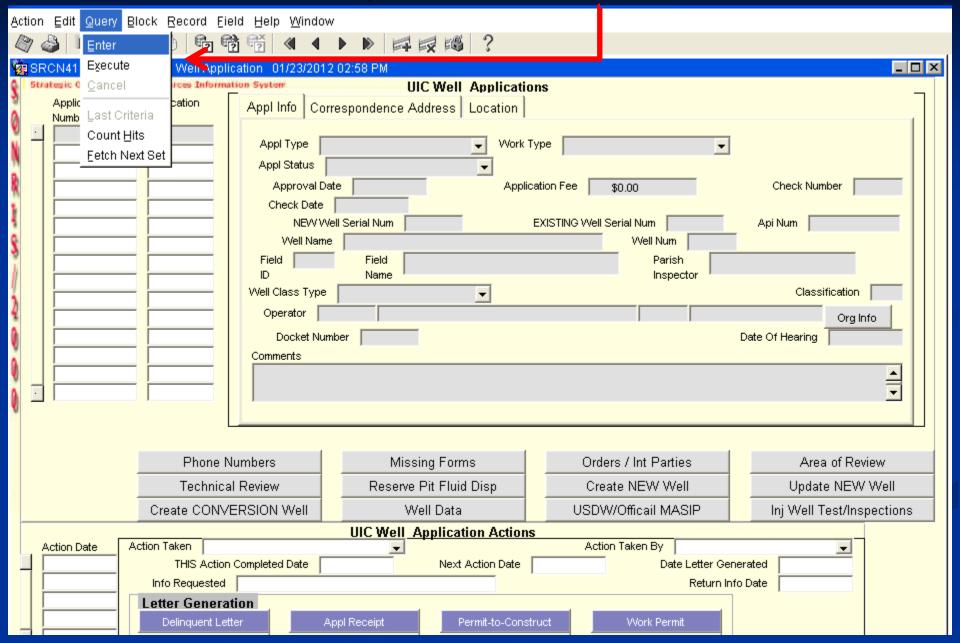


nlease contact us.

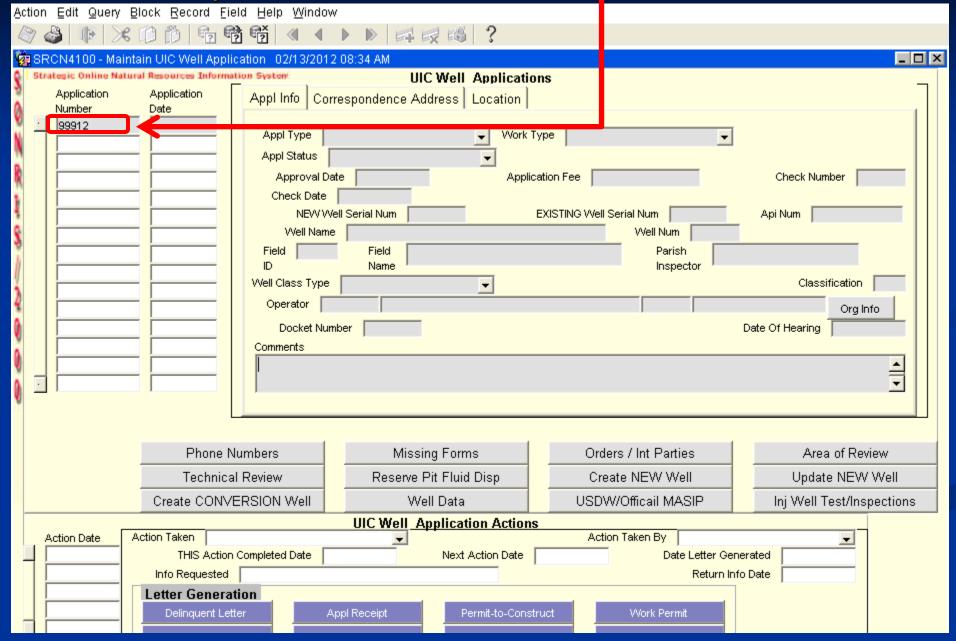
Step 5: Click QUERY or Hit Function 7 Key



Step 6: Click ENTER



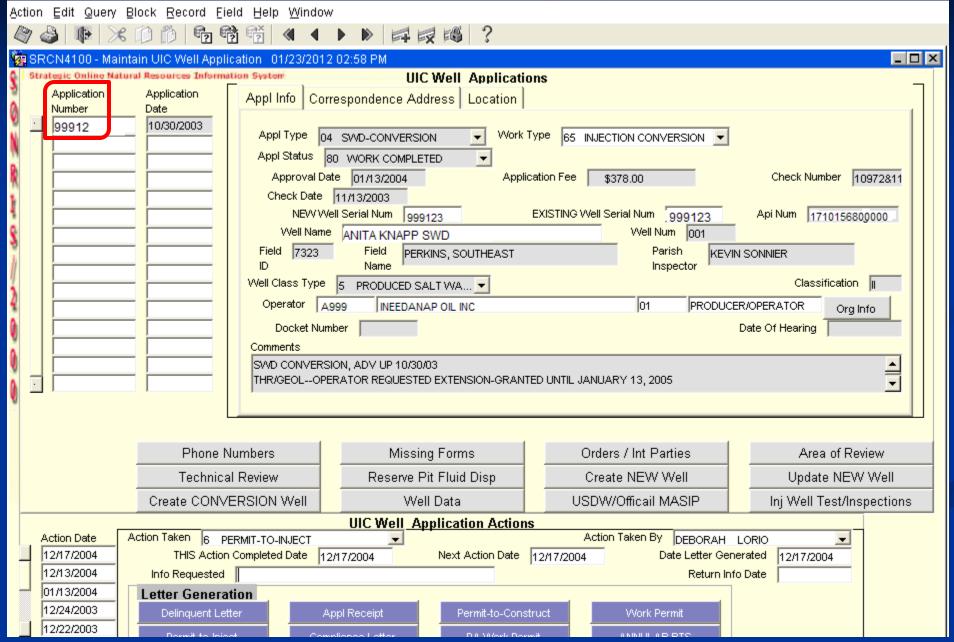
Step 7: Enter APPLICATION NUMBER



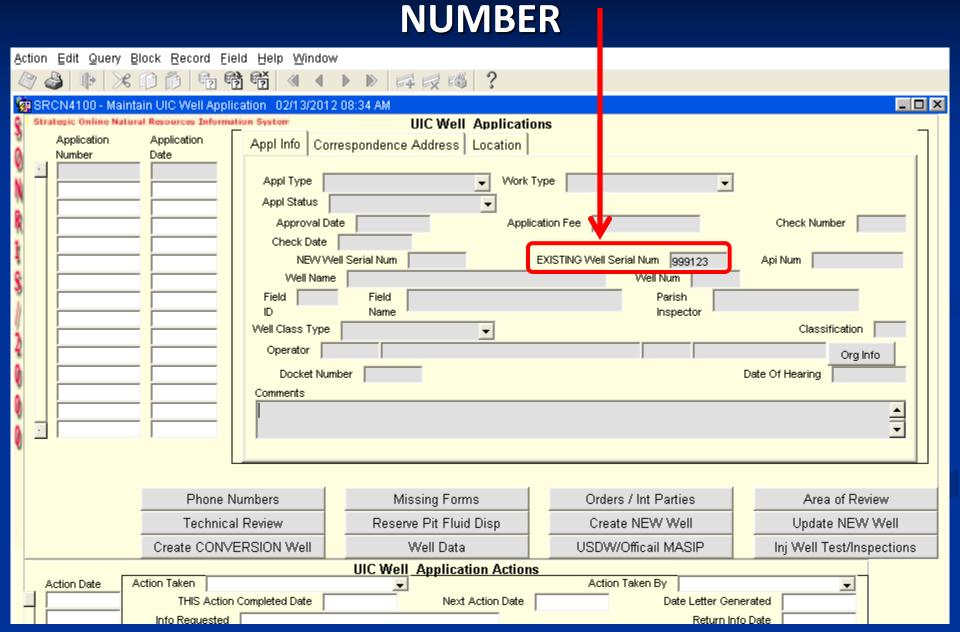
Step 8: Click QUERY, then Click EXECUTE. As an alternate, Hit Function 8 Key

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Technical Review Reserve Pit Fluid Disp Create NEW Well Update NEW										
Create CONVERSION Well		Well Data				nj Well Test/Inspections				
-	UIC Well Application Actions									
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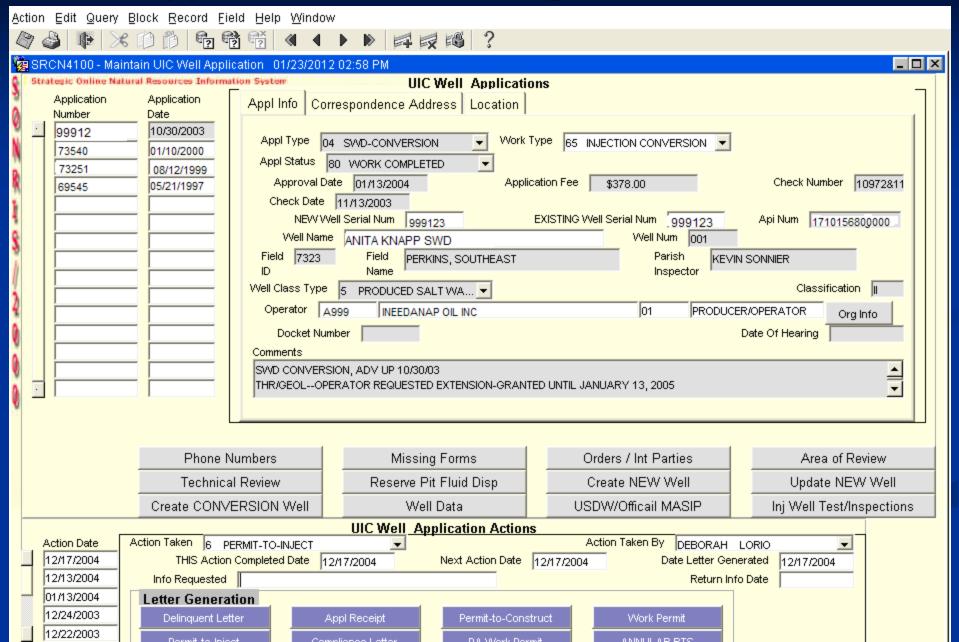
View Application Details Using Application Number



Step 7 alternate: Enter EXISTING WELL SERIAL



View Application Details using Well Serial Number



Upcoming Changes

- UIC application forms are being revised. There will be new forms created for each well type; i.e. UIC-2 SWD Conversion, UIC-2 SWD New Drill, UIC-2 SWD Re-entry.
- Check the Injection & Mining Division's forms page for up-to-date forms.
- There will be changes common to all application forms.
- Do not submit a copy of the instructions with the application.
- The Form MD-10-R (yellow card) is no longer required with a UIC application. The Form MD-10-R-A (pink card) will still be required to amend permits.
- New Form UIC-WH-1 replaces the Form WH-1 for injection wells only.

The following section is included on all the revised forms. By checking each item, the applicant is attesting that each item has been included with the application.

PLEASE ENSURE THAT ALL ATTACHMENTS BELOW ARE INCLUDED WITH THIS APPLICATION								
FILING FEE	ATTACHMENT 6 - AREA OF REVIEW (AOR)							
ATTACHMENT 1 – PUBLIC NOTICE			6A- AREA OF REVIEW MAP					
ATTACHMENT 2 – LOCATION PLAT			6B- AREA OF REVIEW WELL LIST					
ATTACHMENT 3 - WELL HISTORY & WORK RESUME REPORT (FORM WH-1)			6C-FRESHWATER WELL LIST					
ATTACHMENT 4 - WELLHEAD DIAGRAM, WELL SCHEMATIC(S) AND WORK			6D- SONRIS PRINTOUT OF REGISTERED WATER WELLS					
PROGNOSIS			6E- FRESHWATER LABORATORY ANALYSES					
4A - CURRENT WELLBORE SCHEMATIC		ATTACHMENT 7 – FACILITY DIAGRAM						
☐ 4B - PROPOSED WELLHEAD DIAGRAM		ATTA	TTACHMENT 8 - INJECTION FLUID SOURCE					
4C - PROPOSED WELLBORE SCHEMATIC			8A - INJECTION FLUID SOURCE LIST					
☐ 4D - WORK PROGNOSIS			8B - INJECTION FLUID SOURCE ANALYSES					
ATTACHMENT 5 - LOGS	ATTACHMENT 9 - MASIP CALCULATION REQUEST							
5A - ELECTRIC LOG FOR THE BASE OF THE USDW			9A - PROCEDURE TO DETERMINE GEOMECHANICAL DATA					
5B – LOG(S) OF THE INJECTION ZONE & INJECTION PERFORATIONS			9B - GROUNDWATER MONITORING PLAN					
5C – CEMENT BOND LOG (CBL)		DUPL	LICATE COPY OF THE APPLICATION					

Things to Remember

- ☑ Respond to all correspondences <u>before</u> the specified due date.
- ☑ If an extension of the expiration date for a Permit-to-Construct is needed, submit a written request and a \$126 Amend Permit-to-Drill fee to the Injection and Mining Division <u>before</u> the permit expiration date.
- All matters regarding injection wells are administered by the Injection and Mining Division in Baton Rouge. <u>Do Not Contact A Conservation District Office</u>.

Injection & Mining Division Contact Information

Telephone: 225-342-5515

Fax: 225-342-3094, or

225-242-3441

Email: Injection-Mining@LA.Gov

Websites of Interest

Louisiana Department of Natural Resources:

www.dnr.louisiana.gov/

Louisiana Office of the State Register:

www.doa.louisiana.gov/osr/osr.htm

United States Environmental Protection Agency:

- www.epa.gov
- www.epa.gov/region6/water
- www.epa.gov/region6/water/swp/uic/index.htm