
A Guide to Using the

National Fish Strain Registry

<https://systems.fws.gov/nfsr>

U.S. Fish and Wildlife Service
Warm Springs Fish Technology Center

	<p>U.S. Fish & Wildlife Service</p> <p>National Fish Strain Registry</p>
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Overview

The National Fish Strain Registry (NSFR) is an Internet-based program that assembles performance and characterization information on strains of both wild populations and domestic broodstock. These strains are managed by state and federal agencies and cultured by private growers. The database enables fishery managers and producers to make sound decisions regarding management and culture of species. Broodstock managers and producers can access the database and report information on their strains so that other managers can compare fish strains side-by-side and determine what will work best. The goals of the NFSR are: 1) to protect the nation's aquatic resources through information management, 2) to promote responsible use of fish strains for recreational opportunities, 3) to advance scientific knowledge, and 4) to be accountable, functionally integrated, and result-oriented.

This document uses the following conventions:

1. *Italic* text indicates an important word or phrase.
2. **Bold, underlined** text indicates page links.
3. **Bolded** text indicates new sections.
4. Underlined text indicates potential useful information.
5. "Text in Quotation Marks" indicates words directly from survey questions.
6. *Blue text with asterisk indicates required fields.
7.

Boxes indicate important information to NOTE .

History

The NFSR was originally developed as a trout management tool in the 1970's with the idea that managers needed essential information on strain history, post-stocking performance, habitat requirements, and genetic profiles to effectively manage fish populations for both sustained public use and genetic conservation. Fish from readily available populations were shipped throughout the country and stocked indiscriminately into many fisheries. Today, the long-term detrimental impacts of this practice on resident natural fish populations are well documented. As managers became aware of the genetic consequences of mixing adapted and non-adapted populations, the need for detailed information for all managed fish populations increased dramatically. Comparative information on performance, behavioral, and genetic traits of candidate populations frequently was not available to the fisheries personnel who made the decision on which population was used in a production or management program. A centralized database was needed to make strain characterization and performance information readily available to all fisheries personnel.

In 1994, the U.S. Geological Survey, Research & Development Laboratory (Wellsboro, Pennsylvania) and the U.S. Fish and Wildlife Service, Division of Hatcheries undertook a joint project to catalog the strain characteristics and performance information of managed fish populations, both cultured and wild populations, into a single database. Harold Kincaid and others developed the resulting database, the NFSR, to provide a standardized data set for each reported population of a species. Types of information in the NFSR include: broodstock history, life history, behavior, reproduction, stress tolerance, disease resistance, culture, post-stocking performance, habitat preference, and genetic profile traits. The NFSR is a dynamic database that can be updated as new information become available on each population.

Getting Started

Strain records are assigned a unique numeric *Strain Record Identification Number* for permanent identification as they are entered into the NFSR. Information on each population report is divided into three sections based on the type and source of the information: Broodstock, Production Information, and Post-Stocking.

1. **Broodstock** section contains information used to uniquely identify the broodstock and to establish relationships that associate information among database segments. This section contains three types of information:
 - a. **Species, Strain, and Broodstock Names:** The species, strain, and broodstock names are required information.
 - b. **Broodstock Contact Person:** The first and last names of the broodstock contact person are used in combination to assign a unique **Contact number** for each person. This number is used to "relate" a specific contact person with an individual broodstock. The same person may be the designated contact person for multiple broodstocks. Contact person name, title, organization, address, telephone, and email are required information.
 - c. **Broodstock Information:** Broodstock origin, reproductive characteristics, source information, and publications/reports are included in this section.
2. **Production Information** section contains information provided by managers at facilities where progeny from the broodstock have been cultured. Data includes performance, feed, and water quality information along with other production information.
3. **Post-Stocking** section contains information about broodstock progeny in different post-stocking situations. Data includes stocking, growth and survival, and habitat assessment information.

Home Page

The **Home** screen is the starting point for each of the seven sections.

 <p>U.S. Fish & Wildlife Service</p> <p>National Fish Strain Registry</p>	
<p>Home</p> <p>Search Registry</p> <p>Create Strain Record</p> <p>Registration</p> <p>Request</p> <p>Glossary</p> <p>Admin</p> <p>Help</p> <p>Information Links</p>	<p>Mission</p> <ul style="list-style-type: none"> • The National Fish Strain Registry provides information on the life history, genetics, reproduction and behavior of specific strains. • This management tool can assist resource managers with decisions on which populations will be most effective for each production or conservation management application. • The database is responsive to the needs of our partners and to the mission of the U. S. Fish and Wildlife Service (i.e., to conserve and protect aquatic resources) and is available to fisheries managers, fish producers, and researchers throughout the United States. <p>Registry usage</p> <p>You must be a registered user of the National Fish Strain Registry to create a new record. Users can submit, edit, search, and download records. The database will store documentation related to submitted records including research and photographs. Please contact Chester R. Figiel, Jr. or Nicole Rankin to become a registry user.</p>  <p>NFSR User Guide</p> <p>The National Fish Strain Registry user guide is currently unavailable. If you have any questions or require help in accessing or using the NFSR, please send an email to chester_figiel@fws.gov or nicole_rankin@fws.gov.</p>

1. **Search Registry**
2. **Create Strain Record**
3. **Registration**
4. **Request**
5. **Glossary**
6. **Help**
7. **Information Links**

Registration

You must be a registered user to login to the NFSR. Registered users can create, edit, and query strain records. To become a registered user, please contact Chester Figiel, Jr. or Nicole Rankin.

Chester Figiel, Jr., NFSR Manager

Telephone: (706) 655-3382 ext. 1244

Email: chester_figiel@fws.gov

Nicole Rankin, NFSR Data Steward

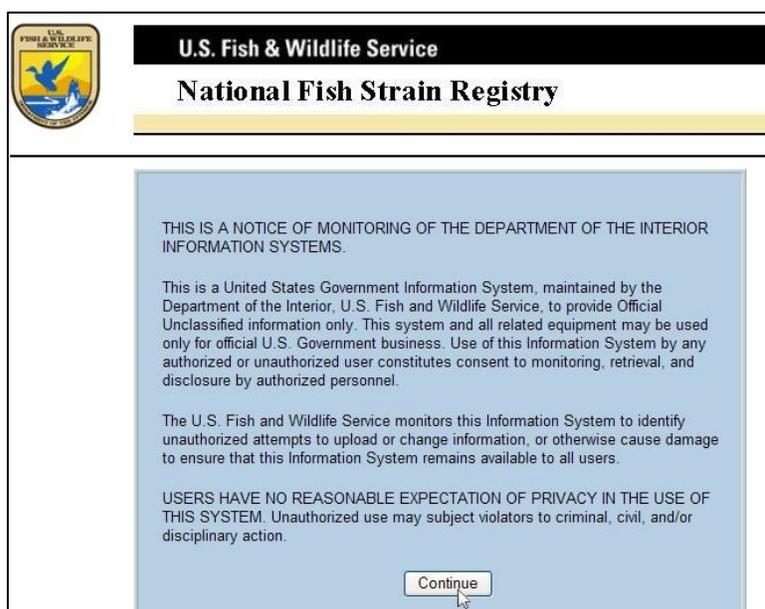
Telephone: (706) 655-3382 ext. 1246

Email: nicole_rankin@fws.gov

Login to the NFSR

Registered users are required to login to the NFSR using their FWS active directory (assigned) email address and password.

1. To login to NFSR, visit <https://systems.fws.gov/nfsr>, read the *Notice of Monitoring of the DOI Information Systems*, and click **Continue**.



2. Enter your assigned email address and password and click **OK to continue**.



Search Strain Records

To view, edit, or copy an existing strain record, choose **Search Registry**.

1. From the Home page, choose **Search Registry**.



2. Enter the criteria for one or more of the following search categories and click **Query for Strain**:

Species Name- enter the common or scientific name for species of interest

Strain Name- enter the strain name

Broodstock Name- enter the broodstock name

Strain Record Identification Number- enter the number assigned when record was created

Contact First and/or Last Name- enter first and/or last name of broodstock contact

State- enter the contact state abbreviation

Keyword- enter a keyword to search documents and publications associated with records

Promotion Status- choose from the drop-down list the status of the record

Promoted- record available for registered users to search, view, or copy; promoted status is the default

New- record created but not submitted to NFSR administrators; the person who created the record will be able to search and edit the strain record

Submitted- record created and submitted but not verified by NFSR administrators; the person who created the record will be able to search, view, or copy the record

All- promoted, new, and submitted records

Page Size- enter the number of records returned per page

NOTE: Keyword field only searches for keywords associated with uploaded documents.

NOTE: After clicking Query for Strain, search results will appear in table. If your search yields no results, **No Rows Returned** will appear on the screen.

4. Scan the results table to find appropriate record.

ID- Strain Record Identification Number

First Name- Broodstock contact first name

Last Name- Broodstock contact last name

Species- Common name for queried species of interest

Scientific- Scientific name for queried species of interest

Strain- Strain name for queried species of interest

Broodstock Name- Broodstock name for queried species of interest

Strain Status- P= promoted, N= new, or S= submitted

Modified By- Registered user who last modified the strain record

Modified Date- Date record was last modified

Created By- Registered user who created the strain record

Created Date- Date record was created

Result(s)												
Previous - Next - 1 - 2 - 3 - 4 - 5											Viewing Results: 1 to 20 (83 total)	
ID	First Name	Last Name	Species	Scientific	Strain	Broodstock Name	Strain Status	Modified By	Modified Date	Created By	Created Date	Actions
500	Mike	Wicker	Channel Catfish	Ictalurus punctatus	Cape Fear Farm	Sunnybrook	P	nicole_rankin@fws.gov	12/21/2009	Lizz	05/04/2009	 
501	Chester	Stephens	Channel Catfish	Ictalurus punctatus	Stral County	Stephens	P	nicole_rankin@fws.gov	12/21/2009	Lizz	05/04/2009	 
502	Bob	Hopper	Channel Catfish	Ictalurus punctatus	Joe Hogan SFH	Hopper-Stephens	P	nicole_rankin@fws.gov	12/21/2009	Lizz	05/04/2009	 
503	Steve	Kueter	Channel Catfish	Ictalurus punctatus	Kueter Lake	Kueter Fish	P	nicole_rankin@fws.gov	12/21/2009	Lizz	05/04/2009	 
504	William	Easterling	Channel Catfish	Ictalurus punctatus	Auburn University	Easterling Fish Hatchery	P	nicole_rankin@fws.gov	12/21/2009	Lizz	05/04/2009	 
505	William	Easterling	Channel Catfish	Ictalurus punctatus	Auburn University	Mac's Fish Farm	P	nicole_rankin@fws.gov	12/21/2009	Lizz	05/04/2009	 

5. To view, copy, or edit a strain record, click one of the icons below Actions.

Choose the  icon to view a strain record

Choose the  icon to copy the strain information into a new record

Choose the  icon to edit the strain record

NOTE: Available Actions depends on promotion status of the strain record. New records can be searched and edited by the person who created the record. Submitted records can be searched, viewed, or copied by the person who created the record. Promoted records can be searched, viewed, or copied by registered users.

View a Strain Record

- To view a strain record, choose the  icon. The page will automatically refresh to the **Broodstock** page for the queried strain record. Registered users can view any promoted strain record. Registered users also can view submitted records created by them.

Result(s)												
Previous - Next - 1 - 2 - 3 - 4 - 5										Viewing Results: 1 to 20 (83 total)		
ID	First Name	Last Name	Species	Scientific	Strain	Broodstock Name	Strain Status	Modified By	Modified Date	Created By	Created Date	Actions
500	Mike	Wicker	Channel Catfish	Ictalurus punctatus	Cape Fear Farm	Sunnybrook	P	nicole_rankin@fws.gov	12/21/2009	Lizz	05/04/2009	 
501	Chester	Stephens	Channel Catfish	Ictalurus punctatus	Stral County	Stephens	P	nicole_rankin@fws.gov	12/21/2009	Lizz	05/04/2009	 
502	Bob	Hopper	Channel Catfish	Ictalurus punctatus	Joe Hogan SFH	Hopper-Stephens	P	nicole_rankin@fws.gov	12/21/2009	Lizz	05/04/2009	 
503	Steve	Kueter	Channel Catfish	Ictalurus punctatus	Kueter Lake	Kueter Fish	P	nicole_rankin@fws.gov	12/21/2009	Lizz	05/04/2009	 

- To view strain production information, click **Production Information**.
- To view strain post-stocking information, click **Post-Stocking**.

Edit a Strain Record

- To edit a strain record, choose the  icon. The page will automatically refresh to the **Broodstock** page for the queried strain record. Registered users can only edit new records created by them.

Result(s)												
Previous - Next - 1										Viewing Results: 1 to 1 (1 total)		
ID	First Name	Last Name	Species	Scientific	Strain	Broodstock Name	Strain Status	Modified By	Modified Date	Created By	Created Date	Actions
5060	Mike	Wicker	Channel Catfish	Ictalurus punctatus	Cape Fear Farm	Sunnybrook	N	lfw9bct-SDS-nfruser@fws.doi.net	04/22/2011	lfw9bct-SDS-nfruser@fws.doi.net	04/22/2011	

- Change appropriate field information in the **Broodstock**, **Production Information**, and **Post-Stocking** pages and click save at the bottom of each page. *See the [How to Create a Strain Record Guide](#) for more information about creating/editing strain records.*

Copy a Strain Record

- To copy strain record information into a new record, choose the  icon. The page will automatically refresh to the **Broodstock** page for the queried strain record. Registered users can copy any promoted strain record. Registered users also can copy submitted records created by them.

Result(s)												
Previous - Next - 1 - 2 - 3 - 4 - 5										Viewing Results: 1 to 20 (83 total)		
ID	First Name	Last Name	Species	Scientific	Strain	Broodstock Name	Strain Status	Modified By	Modified Date	Created By	Created Date	Actions
500	Mike	Wicker	Channel Catfish	Ictalurus punctatus	Cape Fear Farm	Sunnybrook	P	nicole_rankin@fws.gov	12/21/2009	Lizz	05/04/2009	 
501	Chester	Stephens	Channel Catfish	Ictalurus punctatus	Stral County	Stephens	P	nicole_rankin@fws.gov	12/21/2009	Lizz	05/04/2009	 
502	Bob	Hopper	Channel Catfish	Ictalurus punctatus	Joe Hogan SFH	Hopper-Stephens	P	nicole_rankin@fws.gov	12/21/2009	Lizz	05/04/2009	 
503	Steve	Kueter	Channel Catfish	Ictalurus punctatus	Kueter Lake	Kueter Fish	P	nicole_rankin@fws.gov	12/21/2009	Lizz	05/04/2009	 
504	William	Easterling	Channel Catfish	Ictalurus punctatus	Auburn University	Easterling Fish Hatchery	P	nicole_rankin@fws.gov	12/21/2009	Lizz	05/04/2009	 
505	William	Easterling	Channel Catfish	Ictalurus punctatus	Auburn University	Mac's Fish Farm	P	nicole_rankin@fws.gov	12/21/2009	Lizz	05/04/2009	 

- Document the *Strain Record Identification Number* for the new record from the top left corner.

Strain Record Identification Number: 5060

Broodstock Culture Section

*1. Species: Channel Catfish-Ictalurus punctatus  [Uploaded Photos](#)

*2. Strain name of broodstock: Cape Fear Farm

*3. Broodstock name: Sunnybrook

- To edit the (copied) new strain record, choose **Search Registry** and enter the documented *Strain Record Identification Number* (i.e., 5060) into the Strain Record Identification Number search category. Choose New from the Promotion Status search category. Click **Query for Strain**.

Search Strain Registry

Species Name: Strain Name:

Broodstock Name: Keyword:

Strain Record Identification Number: 5060

Contact First Name: Contact Last Name:

State:

Promotion Status: New

Page Size: 20

- From the results table, choose the  icon to edit the (copied) new strain record.

Result(s) Previous - Next - 1 Viewing Results: 1 to 1 (1 total)

ID	First Name	Last Name	Species	Scientific	Strain	Broodstock Name	Strain Status	Modified By	Modified Date	Created By	Created Date	Actions
5060	Mike	Wicker	Channel Catfish	Ictalurus punctatus	Cape Fear Farm	Sunnybrook	N	lfw9bct-SDS-infruser@fws.doi.net	04/22/2011	lfw9bct-SDS-infruser@fws.doi.net	04/22/2011	

- Change appropriate field information in the **Broodstock**, **Production Information**, and **Post-Stocking** pages and click **Save** at the bottom of each page. See the How to Create a Strain Record Guide for more information about creating/editing strain records.

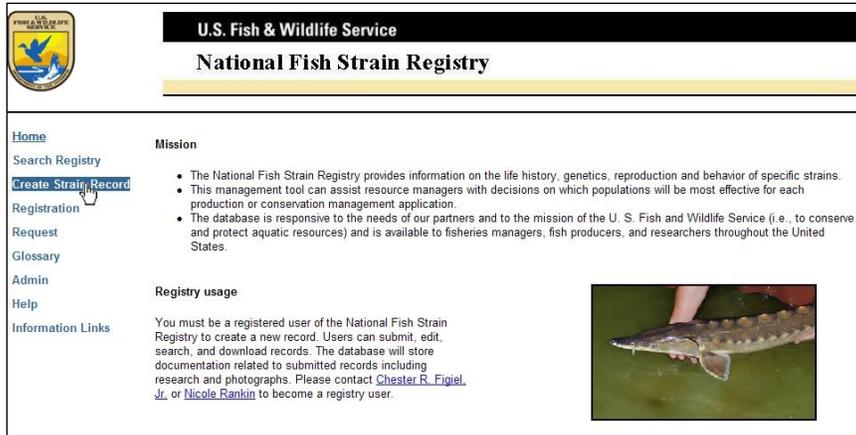
NOTE: At this time, users are not able to download strain records or strain record query results as Adobe PDFs. Users can copy and paste record information to word processor documents.

How to Create a Strain Record

The record entry procedure is menu driven with the operator entering information in a series of screens.

NOTE: The next consecutive *Strain Record Identification Number* is assigned automatically each time a new strain record is saved.

1. From the Home page, choose **Create Strain Record**.

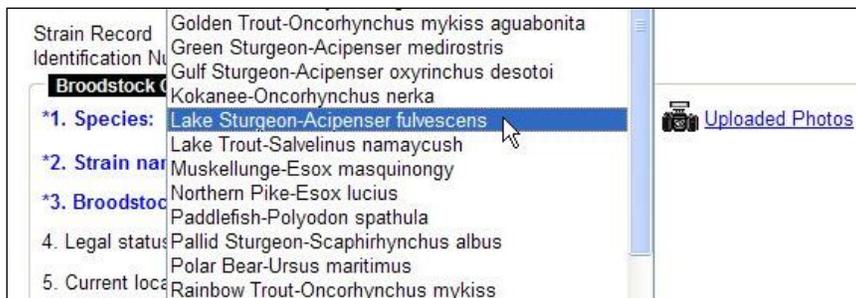


2. From the Create Strain Record page, choose **Broodstock**.



3. Fill out **Broodstock Culture Section**. Fill in ***required** fields before saving your strain record.

- 3A. Enter the **"*Species"** name (Question 1). Choose the species from the drop-down list. The user cannot add a species to the list. If a species name is not listed, please contact Chester Figiel (chester_figiel@fws.gov) and Nicole Rankin (nicole_rankin@fws.gov) to have the species added.



- 3B. Enter the “*Strain name of broodstock” (Question 2). The drop-down list displays the strain names currently in the database for the species identified in Step 3A. Determine if the correct strain name is present. If the strain is listed, choose it from the list. If the strain name is not listed, please contact Chester Figiel (chester_figiel@fws.gov) and Nicole Rankin (nicole_rankin@fws.gov) to have the strain added.

- 3C. Enter the “*Broodstock name” (Question 3). The drop-down list displays the broodstock names currently in the database for the strain identified in Step 3B. Determine if the correct broodstock name is present. If the broodstock name is listed, choose it from the list. If the broodstock name is not listed, please contact Chester Figiel (chester_figiel@fws.gov) and Nicole Rankin (nicole_rankin@fws.gov) to have the broodstock added.

- 3D. Enter the “Legal status” of the broodstock (Question 4). *Choose the most appropriate answer.*

- 3E. Enter the “Current location of broodstock” (Question 5).

- 3F. Upload an image of the fish strain. Click the camera icon  next to Question 1. Enter a Title for the image to be uploaded. Browse your computer to find the image. Click Save. File sizes are currently limited to <1 MB.

To view the uploaded image, click the **Uploaded Photos** link. Image file name will appear below Question 1. Click the image file name to open and view image. Image file name link will be active after the strain record is saved.

4. Enter **Contact Information for Broodstock** (Question 6). Fill in ***required** fields before saving your strain record. *Please enter contact information for your business and/or organization.*

4A. Enter the ***required** contact information:

4B. If you have previously entered your contact information to another strain record, click the **Search for a Contact** link.

A popup window, **Find a Contact**, will appear and your email address will populate the Email field. Click **Query Contacts**.

All strain records associated with your contact information will appear in the Result(s) section. To choose information from a previous strain record, click the  icon. Your contact information is now populated in the **Contact Information for Broodstock** section.

Result(s)			
Previous - Next - 1		Viewing Results: 1 to 1 (1 total)	
ID	First Name	Last Name	Actions
5000	Nicole	Rankin	

4C. If you would like to add an alternate contact to the broodstock, click the **Add/View the Alternate Contact** link (Question 7).

Contact Information for broodstock

[Search for a contact](#)

*6.First Name: *Last Name:

Middle Initial: *Title:

*Organization: *Organization Type:

*Office Phone: Mobile Phone:

Fax: *Email:

*Address: *City:

*State: *Postal Code:

Add/View the Alternate Contact [Click here](#)

Enter the ***required** information. *Please enter business and/or organization contact information for the alternate contact.*

Alternate Contact Information

7. *First Name: *Last Name:

Middle Initial: *Title:

*Organization: *Organization Type:

*Office Phone: Mobile Phone:

Fax: *Email:

*Address: *City:

*State: *Postal Code:

NOTE: If you have no broodstock data to enter, enter ***required** information in **Broodstock Culture** and **Contact Information for Broodstock** sections. Click the **Save** button at bottom of the Broodstock page to advance to the **Production Information** section. *Strain Record Identification Number* (Broodstock Identification) is generated and will appear at the top left portion of the screen. Document this number for future reference. Proceed to Step 9.

Broodstock Section

5. Fill out **Broodstock Information** section.

Broodstock Information

8. Source of the original broodstock: Year when original broodstock was started:

9. How was the original broodstock classified?

10. Are there publications or in-house reports describing the origin, breeding history, reproductive characteristics or performance for this broodstock? Yes No If yes, attach document  [Uploaded Documents](#)

11. Number of males and females from the source population contributing progeny: Males: Females:

12. Number of males and females used as parents to produce the current generation of broodstock: (if not F1) Males: Females:

13. Generations the broodstock has been removed from the source population:

14. Average age of broodstock when the next broodstock generation is produced: Males: Females:

15. Males and females are chosen for broodstock based on the following traits (list):

5A. Enter “Source of the original broodstock” and “Year when original broodstock was started” (Question 8).

5B. Choose from the drop-down list the “classification of the original broodstock” (Question 9). *Choose the most appropriate answer.*

5C. Enter Yes or No for whether there are “publications and/or in-house reports for this broodstock” (Question 10). If yes, attach document. Click the  icon next to Question 10. Enter a Title and Keywords for the document to be uploaded. Browse your computer to find the document. Click Save. File sizes are currently limited to <1 MB.

10. Are there publications or in-house reports describing the origin, breeding history, reproductive characteristics or performance for this broodstock? Yes No If yes, attach document  [Uploaded Documents](#)

To view an uploaded document, click the **Uploaded Documents** link. Document file name will appear below Question 10. Click the document file name and choose to Open, Save, or Cancel this file. Document file name link will be active after the strain record is saved.

10. Are there publications or in-house reports describing the origin, breeding history, reproductive characteristics or performance for this broodstock? Yes No If yes, attach document  [Uploaded Documents](#)

Title	File Name	Keywords	Actions
Test	5024This is a test publication document for NFSR.doc	Test	

5D. Enter the “Number of males and females from the source population contributing progeny” (Question 11).

5E. Enter the “Number of males and females used as parents to produce the current generation of broodstock” (Question 12).

5F. Choose from the drop-down list the “Generations the broodstock has been removed from the source population” (Question 13). *Choose the most appropriate answer.*

5G. Enter the “Average age of broodstock when the next broodstock generation is produced” (Question 14).

5H. List the traits for which “Males and females are chosen for broodstock” (Question 15).

6. Fill out **Reproductive Characteristics** section.

6A. Enter information for male and female broodstock about “Spawning Period, Age when first mature, Percent mature, Eggs per female, Mean fish weight (lbs), and Period when eggs or fry are available for distribution” (Question 16).

Reproductive Characteristics		
16. Characteristics	Male from and to dates	Female from and to dates
Spawning Period	From: <input type="text"/> To: <input type="text"/>	From: <input type="text"/> To: <input type="text"/>
Age when first mature	<input type="text"/>	<input type="text"/>
Percent mature in year when lot first matures	<input type="text"/>	<input type="text"/>
Eggs per female at first maturity	N/A	<input type="text"/>
Mean fish weight at first maturity (lbs)	<input type="text"/>	<input type="text"/>
Eggs per female at last maturity	N/A	<input type="text"/>
Mean fish weight at last maturity (lbs)	<input type="text"/>	<input type="text"/>
Period when eggs or fry are available for distribution	From: <input type="text"/> To: <input type="text"/>	From: <input type="text"/> To: <input type="text"/>

7. Fill out **Source Information** section.

Source Information	
17. Source of replacement broodstock:	<input type="text"/>
18. Has genetic characterization been performed on this broodstock?	<input type="radio"/> Yes <input type="radio"/> No If yes, attach document  Uploaded Documents
19. Is this stock renewed periodically by addition of genetic material from original broodstock source?	<input type="radio"/> Yes <input type="radio"/> No
Broodstock is supplemented from source every	<input type="text"/>
How is stock renewed?	<input type="text"/>
20. The breeding system used to maintain this broodstock is:	<input type="text"/>
21. Male to female ratio used in the spawning season operation:	Males: <input type="text"/> Females: <input type="text"/>
22. How is the natural spawning season modified?	<input type="text"/>
Additional information:	<input type="text"/>
23. Has cold storage of gametes (cryopreservation) been performed for this strain?	<input type="radio"/> Yes <input type="radio"/> No If yes, attach document  Uploaded Documents

7A. Choose from the drop-down list the “Source of replacement broodstock” (Question 17). Choose the most appropriate answer.

7B. Enter Yes or No for whether “genetic characterization has been performed for this broodstock” (Question 18). If yes, attach document. Click the  icon next to Question 18. Enter a Title and Keywords for the document to be uploaded. Browse your computer to find the document. Click Save. File sizes are currently limited to <1 MB.

18. Has genetic characterization been performed on this broodstock?	<input checked="" type="radio"/> Yes <input type="radio"/> No If yes, attach document  Uploaded Documents
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To view an uploaded document, click the **Uploaded Documents** link. Document file name will appear below Question 18. Click the document file name and choose to Open, Save, or Cancel this file. Document file name link will be active after the strain record is saved.

18. Has genetic characterization been performed on this broodstock? Yes No If yes, attach document  [Uploaded Documents](#)

Title	File Name	Keywords	Actions
Test	5025This is a test publication document for NFSR.doc	Test	

7C. Enter Yes or No for whether this “stock is renewed periodically by addition of genetic material from original broodstock source” (Question 19).

Choose from the drop-down list how often (in years) the “Broodstock is supplemented from source”. *Choose the most appropriate answer.*

Enter information about the “How stock is renewed”.

7D. Choose from the drop-down list “The breeding system used to maintain broodstock” (Question 20). *Choose the most appropriate answer.*

7E. Enter the “Male to female ratio used in the spawning season operation” (Question 21).

7F. Choose from the drop-down list “How the natural spawning season is modified” (Question 22). *Choose the most appropriate answer.*

Enter “Addition information” about how the natural spawning season is modified.

7G. Enter Yes or No for whether “cold storage of gametes (cryopreservation) has been performed for this strain” (Question 23). If yes, attach document. Click the  icon next to Question 23. Enter a Title and Keywords for the document to be uploaded. Browse your computer to find the document. Click Save. File sizes are currently limited to <1 MB.

23. Has cold storage of gametes (cryopreservation) been performed for this strain? Yes No If yes, attach document  [Uploaded Documents](#)

To view an uploaded document, click the **Uploaded Documents** link. Document file name will appear below Question 23. Click the document file name and choose to Open, Save, or Cancel this file. Document file name link will be active after the strain record is saved.

23. Has cold storage of gametes (cryopreservation) been performed for this strain? Yes No If yes, attach document  [Uploaded Documents](#)

Title	File Name	Keywords	Actions
Test	5026This is a test publication document for NFSR.doc	Test	

8. Click **Save** to save your strain record and generate the *Strain Record Identification Number*.

20. The breeding system used to maintain this broodstock is:

21. Male to female ratio used in the spawning season operation:
 Males: Females:

22. How is the natural spawning season modified?

 Additional information:

23. Has cold storage of gametes (cryopreservation) been performed for this strain? Yes No If yes, attach document  [Uploaded Documents](#)

After clicking save, the page will automatically refresh to the **Production Information** page. *Strain Record Identification Number* (Broodstock Identification) is generated and will appear at the top left portion of the screen. *Document this number for future reference.*

Broodstock Identification: 368

Production Information Section

24. Egg source facility name: Egg source water body name:

25. Production facility where fish were reared:

26. Management program for which fish were produced: ▼

27. Life stage when fish were brought to station for rearing: ▼

28. Water source used to rear fish: ▼

29. Is water treated? Yes No

If so, what treatments are used?

NOTE: If you have no production data to enter, enter **required* information in **Broodstock Culture** and **Contact Information for Broodstock** sections. Click the **Save** button at bottom of the Broodstock page to advance to the **Production Information** section. Click the **Save** button at the bottom of the Production Information page to advance to the **Post-Stocking** section. *Strain Record Identification Number* (Broodstock Identification and Production Information) is generated and will appear at the top left portion of the screen. Document the Broodstock Identification number for future reference. Proceed to Step 15.

Production Information Section

9. Fill out **Production Information Section**.

Production Information Section

24. Egg source facility name: Egg source water body name:

25. Production facility where fish were reared:

26. Management program for which fish were produced:

27. Life stage when fish were brought to station for rearing:

28. Water source used to rear fish:

29. Is water treated? Yes No

If so, what treatments are used?

30. Is water disinfected? Yes No

If yes, how?

31. Is water treated prophylactically for pathogens? Yes No

If yes, please describe:

32. Are fish vaccinated? Yes No

If yes, please describe:

33. Culture system:

9A. Enter “Egg source facility name” and “Egg source water body name” (Question 24).

9B. Enter “Production facility where fish were reared” (Question 25).

9C. Choose from the drop-down list the “Management program for which fish were produced” (Question 26). *Choose the most appropriate answer.*

9D. Choose from the drop-down list the “Life stage when fish were brought to station for rearing” (Question 27). *Choose the most appropriate answer.*

9E. Choose from the drop-down list the “Water source used to rear fish” (Question 28). *Choose the most appropriate answer.*

9F. Enter Yes or No for whether “water is treated” (Question 29).

Enter information about “what treatments are used”.

9G. Enter Yes or No for whether “water is disinfected” (Question 30).

Enter information about “How” water is disinfected.

9H. Enter Yes or No for whether “water is treated prophylactically for pathogens” (Question 31).

Enter information describing how water is treated prophylactically for pathogens.

9I. Enter Yes or No for whether “fish are vaccinated” (Question 32).

Enter information describing how fish are vaccinated.

9J. Choose from the drop-down list the “Culture system” (Question 33). *Choose the most appropriate answer.*

10. Fill out **Water Quality During Production Period** section.

Water Quality During Production Period								
34. Mean water temperatures and water quality parameters during the production period report:								
	Temp (°C)	pH	Hardness (CaCO ₃)	Alkalinity	DO (mg/L)	Saturation (%)	Nitrites (NO ₂)	Salinity (ppt)
January								
February								
March								
April								
May								
June								
July								
August								
September								
October								
November								
December								

35. Data are based on the following production year class(es): from: to:

10A. Enter “Mean water temperatures and water quality parameters during the production period report” (Question 34). Water quality section accepts only integer values.

10B. Choose from drop-down lists the “production year class(es)” the water quality data is from (Question 35). *Choose the most appropriate answer.*

11. Fill out **Feed Information** section.

Feed Information			
36. Feed type and method by life stage:			
	Feed Type	Feed Method	Feed Style
Fry	N/A	N/A	N/A
Fingerling	N/A	N/A	N/A
Juvenile	N/A	N/A	N/A
Adult	N/A	N/A	N/A

37. Are fish fed organic tissue? Yes No

Describe type and method

38. Mean growth, survival and Feed Conversion Efficiency (FCE) during production period:

	Mean	High	Low
Percent eye of egg lots (green egg to eyed egg stage)			
Percent hatch (eyed stage to hatch)			
Percent fry survival (hatch to first feeding stage)			
Percent fry survival (first feeding to 90 d on feed)			
Mean fish weight (no./lb) at 90 d on feed			
Mean fish weight (no./lb) at 1 year of age			
Feed conversion from 90 d to 1 year (lb feed/lb weight gain)			
Frequency of yearling precocious males (%)			

11A. Choose from drop-down lists the “Feed type, method, and style by life stage” (Question 36).
Choose the most appropriate answer.

11B. Enter Yes or No for whether “fish are fed organic tissue” (Question 37).

Enter information to “Describe type and method”.

11C. Enter “Mean, high, and low: growth, hatch, survival, weight, feed conversion efficiency, and precocious males during production” (Question 38).

12. Fill out **Performance Information** section.

Performance Information

39. Rearing density? Examples: Number of fish per gallon or Number of fish per liter

Swim-up	Fingerling	Juvenile	Adult

40. Stress reactions - Do fish react to the following stress types:

Panic Yes No

Crowding Yes No

Temperature fluctuation Yes No

Transport Yes No

41. Documentation on strain performance: [Uploaded Documents](#)

42. Do fish require special consideration during handling and transport?
 Yes No

If yes, describe:

43. Are fish tolerant to health/disease problems? Yes No

Describe:

Please attach health reports: [Uploaded Documents](#)

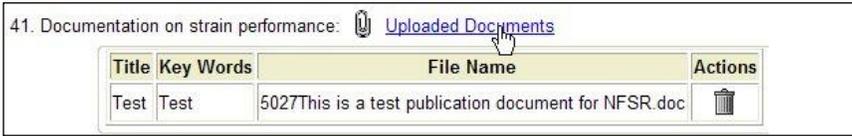
12A. Enter “Rearing density” by Life Stage (Question 39). Rearing density unit should be fish per liter.

12B. Enter Yes or No for whether “fish react negatively to the following stress types: Panic, Crowding, Temperature fluctuation, Transport” (Question 40).

12C. Click the icon to upload “Documentation on strain performance” (Question 41). Enter a Title and Keywords for the document to be uploaded. Browse your computer to find the document. Click Save. File sizes are currently limited to <1 MB.

41. Documentation on strain performance: [Uploaded Documents](#)

To view an uploaded document, click the **Uploaded Documents** link. Document file name will appear below Question 41. Click the document file name and choose to Open, Save, or Cancel this file. Document file name link will be active after the strain record is saved.



12D. Enter Yes or No for whether “fish require special consideration during handling and transport” (Question 42).

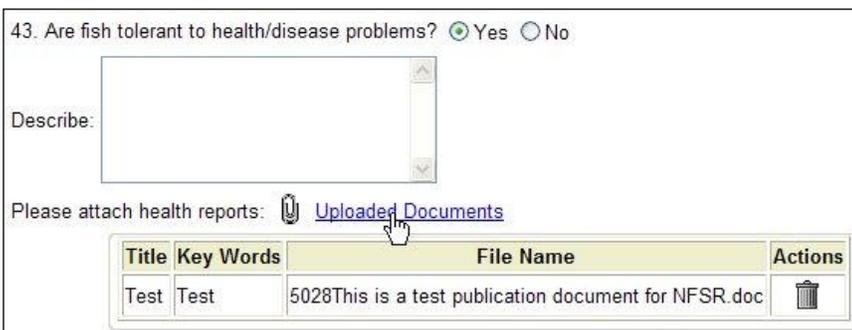
Enter information describing special considerations.

12E. Enter Yes or No for whether “fish are tolerant to health/disease problems” (Question 43).

Enter information describing how fish are tolerant to health/disease problems. If yes, attach health report. Click the icon next to Question 43. Enter a Title and Keywords for the document to be uploaded. Browse your computer to find the document. Click Save. File sizes are currently limited to <1 MB.



To view an uploaded document, click the **Uploaded Documents** link. Document file name will appear below Question 43. Click the document file name and choose to Open, Save, or Cancel this file. Document file name link will be active after the strain record is saved.



13. Fill **Production Contact** section.

Enter "Contact person for fish production information if different from submitter" (Question 44).
Please enter business and/or organization contact information for the Production contact.

Production Contact

44. Contact person for fish production information if different from submitter:

First Name: <input type="text"/>	Last Name: <input type="text"/>
Middle Initial: <input type="text"/>	Title: <input type="text"/>
Organization: <input type="text"/>	Organization Type: <input type="text" value="v"/>
Office Phone: <input type="text"/>	Mobile Phone: <input type="text"/>
Fax: <input type="text"/>	Email: <input type="text"/>
Address: <input type="text"/>	City: <input type="text"/>
State: <input type="text" value="v"/>	Postal Code: <input type="text"/>

14. Click **Save** to save your strain record.

Production Contact

44. Contact person for fish production information if different from submitter:

First Name: <input type="text"/>	Last Name: <input type="text"/>
Middle Initial: <input type="text"/>	Title: <input type="text"/>
Organization: <input type="text"/>	Organization Type: <input type="text" value="v"/>
Office Phone: <input type="text"/>	Mobile Phone: <input type="text"/>
Fax: <input type="text"/>	Email: <input type="text"/>
Address: <input type="text"/>	City: <input type="text"/>
State: <input type="text" value="v"/>	Postal Code: <input type="text"/>

After clicking save, the page will automatically refresh to the **Post-Stocking** page. Production Identification number is generated and will appear at the top left portion of the screen next to Broodstock Identification number. Broodstock Identification Number will be the same as *Strain Record Identification Number*. Document the *Strain Record Identification Number* for future reference.

Broodstock Identification: 368 Production Identification: 1

Post Stocking Section

45. Name the bodies of water where fish are stocked: GPS coordinates (in decimal degrees):

NOTE: If you have no post-stocking data to enter, enter **required* information in **Broodstock Culture** and **Contact Information for Broodstock** sections. Click the **Save** button at bottom of the Broodstock page to advance to the **Production Information** section. Click the **Save** button at the bottom of the Production Information page to advance to the **Post-Stocking** section. Click the **Save** button at the bottom of the Post-Stocking page to advance to the **Submit Strain** section. Proceed to **Step 18**.

Post-Stocking Section

15. Fill out **Post-Stocking** section.

Post Stocking Section

45. Name the bodies of water where fish are stocked: GPS coordinates (in decimal degrees): Latitude Longitude

46. What are the goals of the stocking program?

47. Does the stocking program meet these goals? Yes No

48. Is this a self-sustaining population? Yes No

49. Is there a management plan for this strain in these bodies of water? Yes No If yes, attach documentation  [Uploaded Docs](#)

50. Please give survival and growth data if relevant and provide documentation: attach documentation  [Uploaded Docs](#)

51. Has habitat assessment been completed? Yes No If yes, attach documentation  [Uploaded Docs](#)

52. How was the assessment done?

53. Does this strain have special habitat preferences? Yes No

Please describe:

15A. Enter the “Names of bodies of water where fish are stocked” and “GPS coordinates in decimal degrees” (Question 45).

15B. Enter the “goals of the stocking program” (Question 46).

15C. Enter Yes or No for whether the “stocking program meet these goals” (Question 47).

15D. Enter Yes or No for whether the “population is self-sustaining” (Question 48).

15E. Enter Yes or No for whether there is a “management plan for this strain in these bodies of water” (Question 49). If yes, attach management plan. Click the  icon next to Question 49. Enter a Title and Keywords for the document to be uploaded. Browse your computer to find the document. Click Save. File sizes are currently limited to <1 MB.

49. Is there a management plan for this strain in these bodies of water? Yes No If yes, attach documentation  [Uploaded Docs](#)

To view an uploaded document, click the **Uploaded Documents** link. Document file name will appear below Question 49. Click the document file name and choose to Open, Save, or Cancel this file. Document file name link will be active after the strain record is saved.

49. Is there a management plan for this strain in these bodies of water? Yes No If yes, attach documentation  [Uploaded Docs](#)

Title	Key Words	File Name	Actions
Test	Test	5029This is a test publication document for NFSR.doc	

15F. Enter “survival and growth data” into field (Question 50). Click the  icon next to Question 50 to upload documentation for Survival and Growth. Enter a Title and Keywords for the document to be uploaded. Browse your computer to find the document. Click Save. File sizes are currently limited to <1 MB.

50. Please give survival and growth data if relevant and provide documentation: attach documentation  [Uploaded Docs](#)

To view an uploaded document, click the **Uploaded Documents** link. Document file name will appear below Question 50. Click the document file name and choose to Open, Save, or Cancel this file. Document file name link will be active after the strain record is saved.

50. Please give survival and growth data if relevant and provide documentation: attach documentation  [Uploaded Docs](#)

Title	Key Words	File Name	Actions
Test	Test	5030This is a test publication document for NFSR.doc	

15G. Enter Yes or No for whether a “habitat assessment has been completed” (question 51). If yes, attach habitat assessment. Click the  icon next to Question 51. Enter a Title and Keywords for the document to be uploaded. Browse your computer to find the document. Click Save. File sizes are currently limited to <1 MB.

51. Has habitat assessment been completed? Yes No If yes, attach documentation  [Uploaded Docs](#)

To view an uploaded document, click the **Uploaded Documents** link. Document file name will appear below Question 51. Click the document file name and choose to Open, Save, or Cancel this file. Document file name link will be active after the strain record is saved.

51. Has habitat assessment been completed? Yes No If yes, attach documentation  [Uploaded Docs](#)

Title	Key Words	File Name	Actions
Test	Test	5031This is a test publication document for NFSR.doc	

15H. Enter information about “How the assessment was done” (Question 52).

15I. Enter Yes or No for whether this “strain has special habitat preferences” (Question 53).

Enter information describing the “special habitat preferences.”

16. Fill out **Contact Information** section.

Enter “Contact person for post-stocking information if different from submitter” (Question 54). *Please enter business and/or organization contact information for the Post-Stocking contact.*

Contact Information

54. Contact person for post-stocking information if different from submitter:

First Name: Last Name:

Middle Initial: Title:

Organization: Organization Type:

Office Phone: Mobile Phone:

Fax: Email:

Address: City:

State: Postal Code:

17. Click **Save** to save your strain record.

Contact Information

54. Contact person for post-stocking information if different from submitter:

First Name: Last Name:

Middle Initial: Title:

Organization: Organization Type:

Office Phone: Mobile Phone:

Fax: Email:

Address: City:

State: Postal Code:

After clicking save, the page will automatically refresh to the **Submit Strain Record** page. Stocking Identification number is generated and will appear below Broodstock Identification number and Production Identification number. Broodstock Identification Number will be the same as *Strain Record Identification Number*. Document the *Strain Record Identification Number* for future reference.

Submit Strain Record

18. Once you are finished entering and editing your strain record, click **Submit Strain Record** to submit the strain record for promotion.

Submit Strain Record

Broodstock Identification	5000
Production Identification	5000
Stocking Identification	5000

NOTE: If you are not ready to submit your strain record for review and approval, do not click **Submit Strain Record** but navigate away from the **Submit Strain Record** page (i.e. exit page, click **Search Strain Registry**). When you are finished creating or editing your strain record, click **Submit Strain Record**. Once you submit your strain record for approval, you can no longer edit record information.

System Requirements

The NFSR is a J2EE application powered by JBoss/Tomcat. The minimum requirement for using this system is Internet Explorer 5.x or any higher version. If you are having trouble viewing the NFSR, please check your internet browser. The NFSR works best using Internet Explorer.

Request Assistance

If you have any questions or require assistance in using the NFSR, please contact Chester Figiel, Jr. or Nicole Rankin.

Chester Figiel, Jr., NFSR Manager

Telephone: (706) 655-3382 ext. 1244

Email: chester_figiel@fws.gov

Nicole Rankin, NFSR Data Steward

Telephone: (706) 655-3382 ext. 1246

Email: nicole_rankin@fws.gov

Frequently Asked Questions

I forgot my NFSR username. How do I find out my username?

I forgot my password. How to I reset my password?

I have reset my password and still cannot access the NFSR. What do I need to do?

How do I become a registered user?

I want more than one person to create/edit records for my facility. Can this be done?

The species that I work with is not listed. How do I get the species name added?

The strain that I work with is not listed. How do I get the strain name added?

The broodstock that I work with is not listed. How do I get the broodstock name added?

I'm trying to upload a photo or document, and an error occurred while uploading because the uploaded file is too large. What is the file size limit?

I entered data into the water quality table, and the data did not save. Why is the data not saved?

I forgot my NFSR username. How do I find out my username?

If you are a FWS employee, your username is your FWS active directory email address (e.g. firstname_lastname@fws.gov).

If you are an external NFSR user, your username is your email address used when you originally requested the NFSR account. If you cannot remember your email address, please contact [Chester Figiel, Jr.](#) or [Nicole Rankin](#) for assistance.

I forgot my password. How to I reset my password?

To reset your password, visit <https://myaccount.fws.gov/> and select **No**. Follow the instructions on the screen to reset your password. You will receive an email with instructions on how to change your password.

I have reset my password and still cannot access the NFSR. What do I need to do?

External NFSR user accounts will disable if the NFSR is not accessed in over 90 days. Please contact [Chester Figiel, Jr.](#) or [Nicole Rankin](#) for assistance in enabling your account.

How do I become a registered user?

To become a registered user, please contact [Chester Figiel, Jr.](#) or [Nicole Rankin](#).

I want more than one person to create/edit records for my facility. Can this be done?

Yes, there is Group functionality in the NFSR. This functionality allows users to be more flexible when creating records for their hatchery or facility. Now, more than one user at a hatchery can create and edit records for that hatchery. Please contact [Chester Figiel, Jr.](#) or [Nicole Rankin](#) to discuss having your group added to the NFSR.

The species that I work with is not listed. How do I get the species name added?

The NFSR user cannot add a species to the list. If a species name is not listed, please contact Chester Figiel, Jr. or Nicole Rankin to have the species added.

The strain that I work with is not listed. How do I get the strain name added?

The NFSR user cannot add a strain to the list. If a strain name is not listed, please contact Chester Figiel, Jr. or Nicole Rankin to have the strain added.

The broodstock that I work with is not listed. How do I get the broodstock name added?

The NFSR user cannot add a broodstock to the list. If a broodstock name is not listed, please contact Chester Figiel, Jr. or Nicole Rankin to have the broodstock added.

I'm trying to upload a photo or document, and an error occurred while uploading because the uploaded file is too large. What is the file size limit?

File sizes are currently limited to <1 MB. We are working to get the file size limit increased.

I entered data into the water quality table, and the data did not save. Why is the data not saved?

Water quality section accepts only integer values and does not accept decimals.