

Big Game Harvest Reporting – A Model for Fish?



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IT Business Analyst

My Background

- IT Analyst for 4 years with NCWRC
- Program / Project Manager for a team that builds, maintains or supports 132 non-licensing applications for Fish, Wildlife, Enforcement, Engineering, Education, & Enterprise use
- Over 25 years of experience in IT – Private industry, Management Consulting & Government
- My first computer experience was over 40 years ago (yikes!!)



Topic

- When a Big Game animal is harvested, Hunters are required to report the kill by state law. This data feeds into statistical reports that Biologists use to monitor the harvest.
- In the early year, harvest reporting required manned check-stations and paper sheets (accuracy and logistical issues). This is now a real-time, electronic, self-service reporting function.
- If Harvest Reporting is being considered for Fish, what are some 'lessons learned' that Wildlife can share?



Definition - Big Game in NC

Quiz:

What are the Big Game species in NC?



Definition - Big Game in NC



Deer



Turkey



Bear



Feral Swine

Big Game Harvest Report Card

Hunters are issued a paper Big Game Harvest Report Card with a set of tags that correspond to the number of Deer, Turkey and Bear that can be taken each season.

This report card is valid for the 2017-18 hunting season. Refer to your license before hunting to ensure your license(s) is valid.

WRC Customer # 012345610

Big Game Harvest Report Card

- Punch or cut the appropriate crosshair symbol before moving the animal from the site of kill.
- All harvests must be reported within 24 hours. Harvest must be reported BEFORE the animal is skinned or dismembered for consumption.
- Each harvest must be reported either by phone at 800-446-8663 or online at ncwildlife.org.
- Record authorization number on the line beside the appropriate crosshair symbol.
- If the animal is left unattended before reporting, it must be identified with your name, WRC customer number, and date of kill.
- Antlerless is defined as does and button bucks.

<p>Harvest ID # 012345620</p> <p> Bear - Non-Resident Hunters see Digest for special licensing requirements</p>	<p>Harvest ID # 012345610</p> <p> Antlered or Antlerless Deer - Statewide</p>	<p>Harvest ID # 012345614</p> <p> Antlerless Deer - Statewide</p>
	<p>Harvest ID # 012345611</p> <p> Antlered or Antlerless Deer - Statewide</p>	<p>Harvest ID # 012345615</p> <p> Antlerless Deer - Statewide</p>
	<p>Harvest ID # 012345612</p> <p> Antlerless Deer - Statewide Also valid for antlered deer in Eastern Season</p>	<p>Harvest ID # 012345640</p> <p> Wild Turkey - Male or Bearded Only</p>
	<p>Harvest ID # 012345613</p> <p> Antlerless Deer - Statewide Also valid for antlered deer in Eastern Season</p>	<p>Harvest ID # 012345641</p> <p> Wild Turkey - Male or Bearded Only</p>



Business Use Case

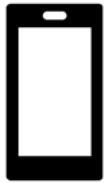
1. Validation: When an animal is taken, the Big Game Harvest Report Card is immediately validated by punching the crosshair symbol on the tag (no physical validation on the animal).
2. Registration: Within 24 hours, the kill is reported. An Authorization # is generated. The Hunter writes the Authorization # on the Big Game Harvest Report Card.



Current Reporting Methods



1. Interactive Voice Response (IVR) – touch-tone reporting by Phone



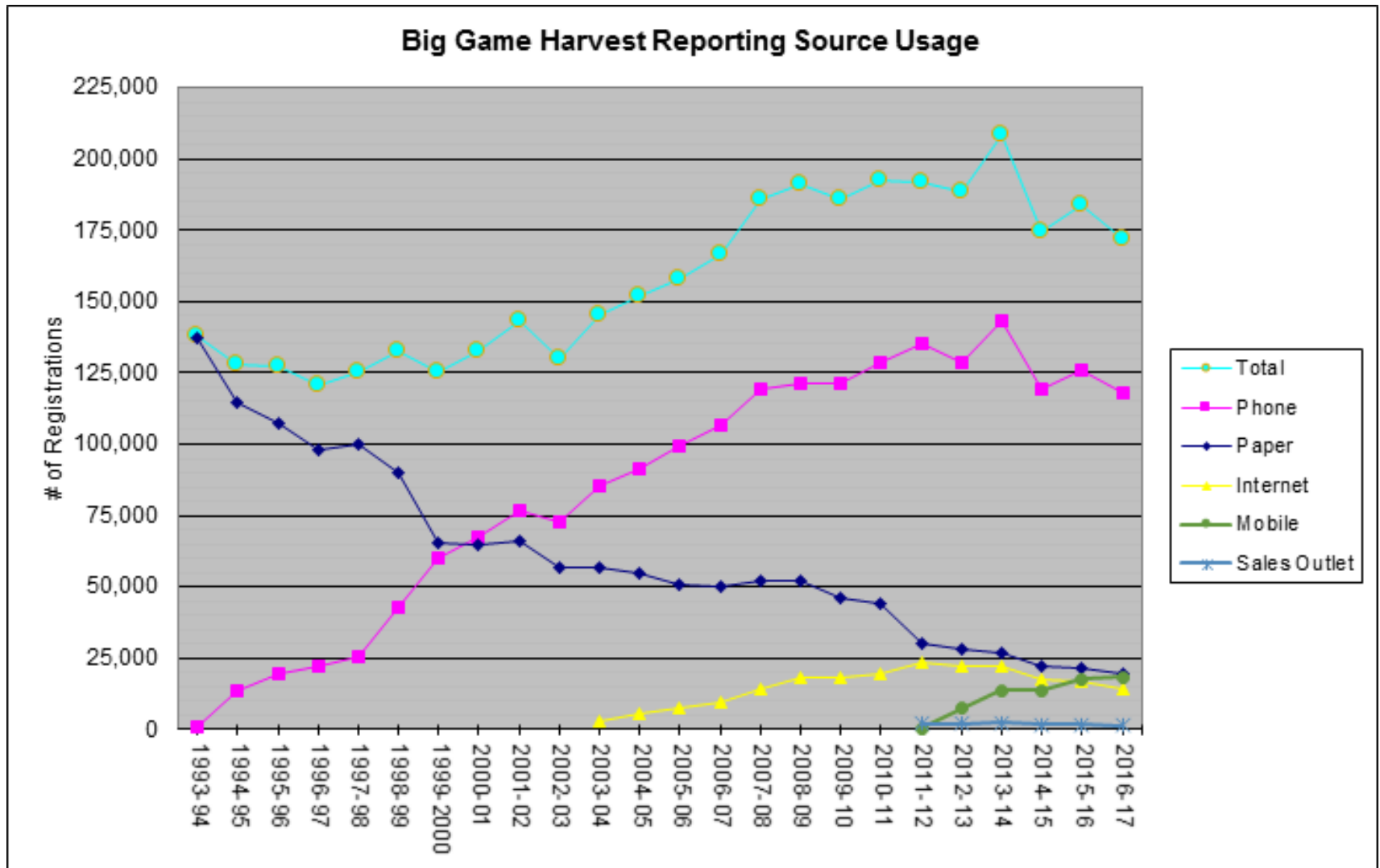
2. Online, responsive web application – for mobile, tablet or desktop reporting through a browser



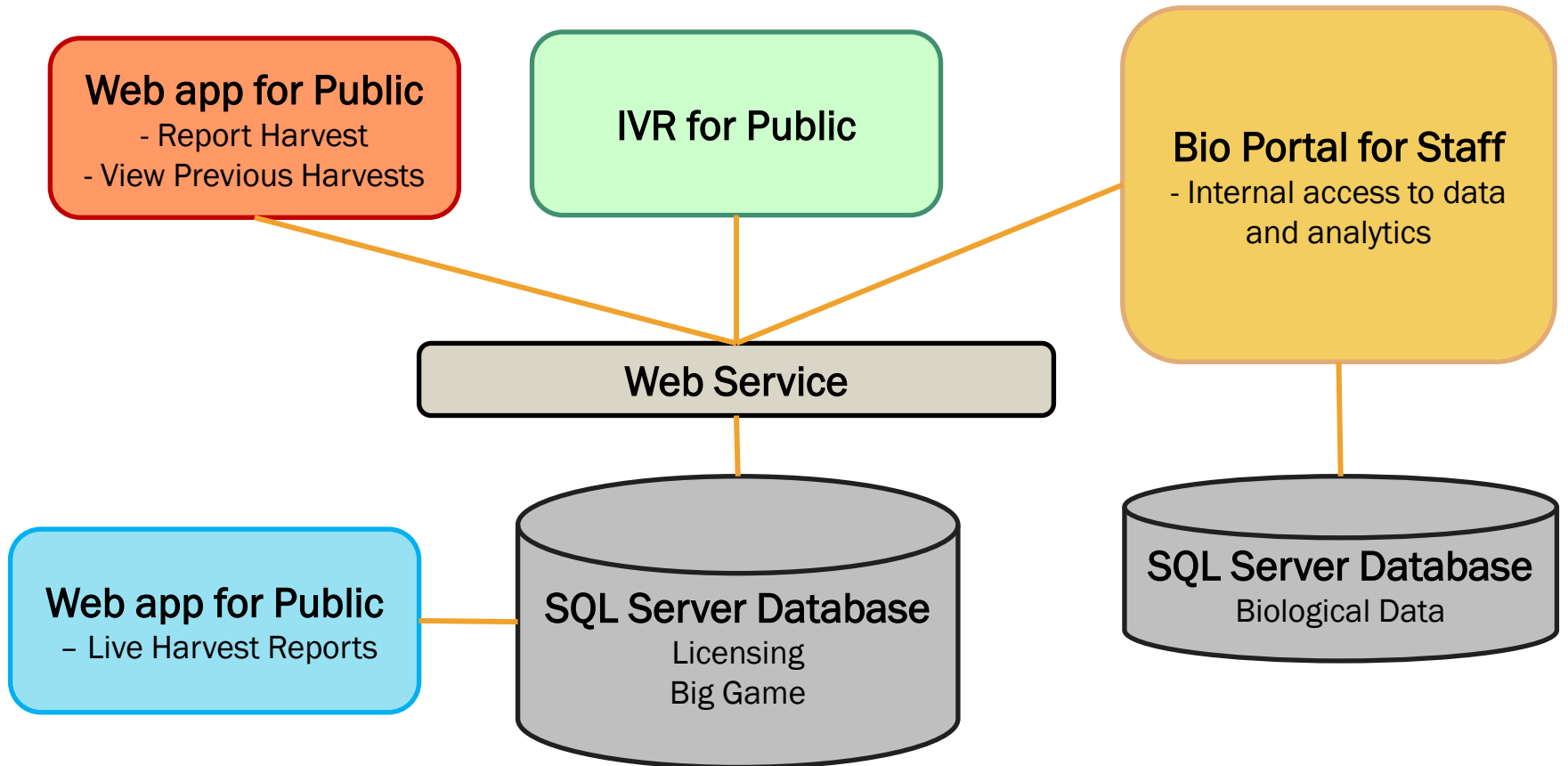
3. Wildlife Service Agent, who reports on behalf of the Hunter using #2 above.



Reporting Methods



System Components



System Components

- **IVR** (Interactive Voice Response) for Public reports – Vendor product, Genesys
- **Web application** for Public reporting / viewing past harvests – built in-house
- **Web application** for Public for seeing Live Harvest statistics – built in-house
- SQL Server **Database**
- **Web Service** (connects components to the Database) – built in-house
- Internal **application for staff for data and analysis** – built in-house



Big Game Harvest Reporting



Report a Big Game Harvest

You can also call 800-I-GOT-ONE (800-446-8663) to report your harvest.

If you do not have your Big Game Harvest Report Card or Harvest ID Numbers, call 888-248-6834 M-F, 8 a.m. - 5 p.m., or **email us**.



View My Past Harvests

Review a list of your previous harvests with authorization numbers. You can also print a personalized harvest certificate for display.



See Live Harvest Reports

View live county, regional or statewide harvest totals and trends for deer, bear or turkey.

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Report Harvest

Credentials



North Carolina Wildlife Resources Commission

Big Game Home Page

Big Game Harvest - Login

WRC Customer Number

[I don't know my number](#)

Last Name

Please enter without suffixes (such as Jr. or III).

- Report a Harvest
- View My Past Harvests

Submit

You can call 1-800-I-GOT-ONE (1-800-446-8663) to report your harvest if you are experiencing problems with the online system.

If you do not have your Big Game Harvest Report Card or need your Big Game Harvest ID Numbers, call 1-888-248-6834, M-F, 8 a.m. - 5 p.m.


For questions or issues:

biggameregistration@ncwildlife.org

Report Harvest

Details




North Carolina Wildlife Resources Commission

[Big Game Home Page](#) [Log out](#)

Big Game - Report a Harvest

[View My Past Harvests](#)

RYAN T MYERS

Please refer to your [Regulations Digest](#) for valid season dates for each region.

Harvest ID # or DMAP Tag

9-digit # above authorization line on tag
[Missing a Harvest ID Number?](#)

Antlerless Deer – Statewide

County

Game Land

Animal

Weapon

Harvested Today

Report Harvest

Confirm



North Carolina Wildlife Resources Commission

[Big Game Home Page](#)

[Log out](#)

Big Game - Report a Harvest

[View My Past Harvests](#)

RYAN T MYERS

Thank you for entering your kill online. Authorization
Number: **2638537**

Enter this number on your Big Game Report Card.

[Report Another Harvest](#)

You can call 1-800-I-GOT-ONE (1-800-446-8663) to report your harvest if you are experiencing problems with the online system.

If you do not have your Big Game Harvest Report Card or need your Big Game Harvest ID Numbers, call 1-888-248-6834, M-F, 8 a.m. - 5 p.m.

For questions or issues:
biggameregistration@ncwildlife.org.

Big Game Harvest Reporting

View My Past Harvests

Review a list of your previous harvests with authorization numbers. You can also print a personalized harvest certificate for display.



View My Past Harvests

Log Review



North Carolina Wildlife Resources Commission

Big Game Home Page

Log out

Big Game - View My Past Harvests

[Report a Harvest](#)

RYAN T MYERS

Listed below are your reported big game harvests since the fall of **2001**.

The highlight shows the portion of the authorization number that should be recorded on your Big Game Report Card. Age values are currently only available for Bear.

Auth. Number: **2638529**

Report Date: 10/16/2017 10:16:00 AM

County: Brunswick

Animal: Deer

Type: DOE

Weapon: Bow & Arrow

Location: Juniper Creek

Dogs: No

Age:

Certificate: [Print](#)

Auth. Number: **2638532**

View My Past Harvests

Certificate



NORTH CAROLINA WILDLIFE RESOURCES COMMISSION

Big Game Harvest Record

Congratulations on your big game harvest! And thank you for helping conserve our hunting heritage in North Carolina.

RYAN T MYERS

Bow & Arrow

Type (Archery/Black Powder/Gun)

1914938

WRC Number

Monday, October 16, 2017

Date

2638529

Authorization Number

Brunswick

County

Yes

Game Lands (Yes or No)

Hunt Details:

A great trip with Bob and Roger!

Gordon Myers, Executive Director

David Cobb, Ph.D., Chief of Wildlife Management



Big Game Harvest Reporting

See Live Harvest Reports

View live county, regional or statewide harvest totals and trends for deer, bear or turkey.



Live Harvest Reports

Query



Live Deer, Turkey & Bear Reported Totals

This page will generate real-time reported big game harvest counts for the current hunting season from the North Carolina Wildlife Resource electronic reporting system. Harvest counts are updated daily.

Please note that current season counts are subject to change until harvest records are finalized by the NCWRC after the end of the hunting season.

Select from the following options to generate your report:

Species:

Show Totals by:

State

Region

County

Include past 3-year comparisons

Generate Report

Clear


Live Harvest Reports

Results



Generate Report	Clear
As of Wednesday, November 15, 2017:	
Area: DEER SEASON - CENTRAL	
Total Deer - Current: 16,286	
Antlered Bucks - Current: 9,118	
Button Bucks - Current: 746	
Does - Current: 6,422	
Antlered Bucks / Sq. Miles - Current: 1.35	
Area: DEER SEASON - EASTERN	
Total Deer - Current: 39,938	
Antlered Bucks - Current: 24,854	
Button Bucks - Current: 1,841	
Does - Current: 13,243	
Antlered Bucks / Sq. Miles - Current: 1.18	
Area: DEER SEASON -	

Analysis and Reporting for Staff



Reported Big Game Harvest

Locate Hunters/Harvest

Hunting Season: All seasons
Search Hunters by: Hunter ID
Criteria to Search:

EXCEL HTML

Canned Reports

Hunting Season: 08/01/2017 to 07/31/2018
Report: Counts by County - All Kills

EXCEL HTML

Dynamic Reports

Date Range: 08/01/2017 07/31/2018
Animal Types: Deer Bear Boar Turkey
Data Display: Provide Raw Detail Group Data
Game Land Name Summary Detail

Available only after 9/1/2008

County / Species Region: All Counties
Alamance
Alexander
Alleghany
Anson
Ashe
Avery
Beaufort

Hold down CTRL key to select multiple counties

- Employee Search
- Employee Roster
- Engineering
- FAMRSNET
- Wildlife Education
- Budget Planning
- Finance
- Fisheries
- IT
- Coastal Birds
- Wildlife
- Wildlife Observations
- Wildlife Surveys
- Reported Big Game Harvest**
- Administration
- Calendar
- Wildlife Action Plan
- Permit Reporting
- Other Links
- Reports Library

Compliance Rates

To estimate compliance rates, we compare data collected through other annual statewide Hunter Harvest mail-based surveys.

DEER AND TURKEY

- 70-75% compliance

BEAR

- 80-85% compliance
- This is a 'prestige' species that Hunters want to see recorded



Core Lessons Learned



1. Define a very clear business process FIRST. Define your project vocabulary. Plan for how systems and people should behave when something goes wrong.



2. Study the Typical User in their environment and create a profile BEFORE designing the system. Is internet / cell service available? Is it wet outside? Are the surroundings loud? Are they older and depend on reading glasses? Are their fingers cold (making fine touches on a screen difficult)? Provide alternative reporting methods to different users – one size does not fit all.



3. Keep Customer Service and Enforcement teams in the loop. Demo often so that they fully understand the process and the applications involved so that they can support users.



4. Beyond just building / installing the systems, plan maintenance time for software and hardware, especially if you build it yourself. If you use Microsoft Office 365 products, be aware that new updates sometimes come down from the cloud **UNANNOUNCED**.

Core Lessons Learned, cont.



5. Annual setup takes time. Rules and Regs change and this drives configuration changes. Plan annual maintenance time for both Business and IT staff.

As an example, our typical schedule:

Month	Task
May	Season kick-off meeting. Discuss regulatory changes, new enhancements, high priority defects
July	Business team provides spreadsheet with configuration for the year. This includes all business rules that the system must be constrained by. Database team imports. (sometimes this takes multiple cycles)
August	All code updates are finished and pass technical testing (QA). Code moves into User Acceptance Testing (UAT). Business Team tests and approves.
August	New voice files for IVR are recorded and tested.
September	Code pushed live. IVR flipped on. Season launches.
September – April	On-going data cleaning, minor troubleshooting
April	IVR flipped off. Analysis and final reporting

One Final Suggestion

Check-in with the Organization of Fish and Wildlife Information Managers (OFWIM) for additional ideas

www.ofwim.org

The Organization of Fish and Wildlife Information Managers (OFWIM) is an international non-profit organization. OFWIM was formally established in 1993 and was granted non-profit status in 1995.

Mission: To promote the management and conservation of natural resources by facilitating technology and information exchange among managers of fish and wildlife information.

Vision: To be a bridge between natural resource and technical disciplines to promote partnering, collaboration, sharing of ideas, and best management practices in order to effectively apply technology to the information and data needs of natural resource management.

Thank You & Questions

