

Science, Service, Stewardship



Recreational Monitoring: Options for HMS fisheries

September 28, 2010

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Recreational Monitoring Issues – May 2010 HMS AP meeting recap

- Lengthy discussion of desire for real-time recreational monitoring for bluefin tuna driven by
 - Potential impact of Angling category overages on other categories
 - Limits of current recreational monitoring system (Large Pelagic Survey, catch cards, web/phone-in landings system) to (1) establish Angling retention limits or (2) make inseason adjustments
 - Low compliance rate with web/phone-in landings system
- Commitment for detailed discussion at next AP meeting



Recreational Monitoring – Current HMS System

- **Large Pelagic Survey**
 - Telephone survey for effort data
 - Dockside intercept for catch data
 - Anglers and captains must cooperate with survey if selected
- **Catch Cards**
 - North Carolina & Maryland only
 - Marinas/tackle shops serve as reporting stations
 - Landings tags attached before removal of fish from vessel
 - Catch data collected on landings of BFT, SWO, & BLF
 - Anglers in NC/MD must fill out catch card for each HMS landed



Recreational Monitoring – Current HMS System – con't

- **Automated Landings Reporting System**
 - Available 24/7 over phone or internet
 - Catch data collected on non-tournament landings of BFT, SWO, & BLF
 - Anglers must call in/report online within 24 hours of landing
- **Recreational Billfish Survey**
 - All billfish tournaments are selected to report
 - Catch and effort data collected

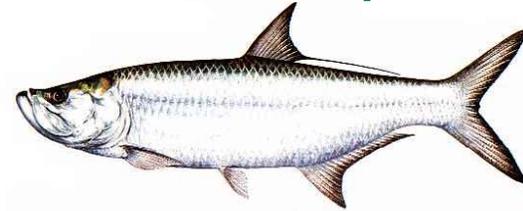


Recreational Monitoring Issues

- We researched several wildlife monitoring programs based on AP suggestions, focusing on key elements like
 - Attachment of tags to animal vs written reports
 - Cost to participants
 - Ease of compliance – mail in? check-in with warden?
 - Compliance levels & mechanisms
 - Availability of data in real-time
 - Scale of programs
- Detailed information provided in background materials



Florida Tarpon Tags

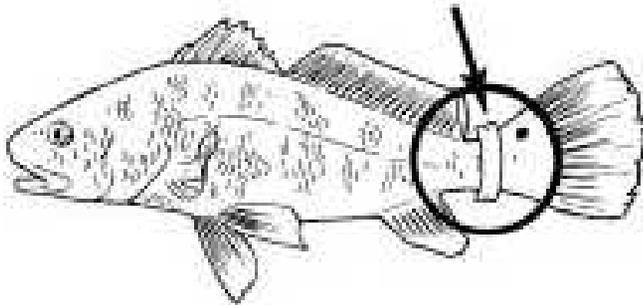


- State of FL implemented tag system to monitor harvest levels and collect data on fish landed
- Tags sold at county tax collector's offices; currently \$51.50/tag; anglers must also possess saltwater fishing license
- Limit 2 tags/person/year; professional guides can have multiple tags
- Tag holders must submit harvest report to state when tarpon landed; compliance is low
- Unused tags and unused cards must be returned each year
- 2,500 tags available annually; 1,250 available to individual anglers; 1,250 available to professional guides
- Usually administer < 500 tags/year



Texas Red Drum Trophy Tag

- Red Drum Tag allows the taking of one red drum per license year >28 inches.
- The tag is included free with saltwater fishing stamp endorsement.
- The tag must be properly completed and affixed to the fish.
- One Bonus Red Drum Tag may be purchased per license year (\$3).
- A red drum retained under the authority of a Red Drum Tag may be in addition to the daily bag and possession limit.





Texas Red Drum Trophy Tag

VALID FOR 1 RED DRUM OVER 28 INCHES
Total Length _____
Circle BAY or GULF _____

#1 RIO GRANDE TURKEY
Valid only in county with bag limit of 4 turkeys

#2 RIO GRANDE TURKEY
valid only in county with bag limit of 4 turkeys

#3 EASTERN OR RIO GRANDE TURKEY in EAST TEXAS co. with bag limit of 1 OR in co. with bag limit of 4

#4 RIO GRANDE TURKEY in county with bag limit of 1 turkey or 4 turkeys NOT VALID IN EAST TEXAS

#11 MULE DEER BUCK OR ANTLERLESS CUT OUT TAG DATE

Academy, Ltd #41
2024 N LOOP 1604 E
SAN ANTONIO TX 78232
Agent ID: 3150
Lifetime Combo Tags
98010852807
Price: \$0.00

OPERATION GAME THIEF
REPORT POACHING 24 HOURS
REWARD HOTLINE NUMBER:
1-800-782-GAME

FREE FISH I.D. GUIDES
SUBSCRIBE ONLINE
TPWMAGAZINE.COM

#10 MULE DEER ANTLERLESS ONLY CUT OUT TAG DATE

#9 WHITE-TAILED DEER BUCK OR ANTLERLESS CUT OUT TAG DATE

#8 WHITE-TAILED DEER BUCK OR ANTLERLESS CUT OUT TAG DATE

#7 WHITE-TAILED DEER BUCK OR ANTLERLESS CUT OUT TAG DATE

#6 WHITE-TAILED DEER ANTLERLESS ONLY CUT OUT TAG DATE

Ht: 5'9" Eye Color: BRO Sex: M
DOB: _____ DL# _____
Endorsements :
Archery
Saltwater
Freshwater
Upland GameBird
Migratory GmBrd
2 Item(s) Purchased
Total Cost: \$0.00

Hip Certified
Valid 03/27/10 Through 08/31/10
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- Enforcement is conducted by wardens in the field who look for presence of the tag on the animal.
- This tag program does not include a process to collect specific information about a tagged animal from the angler.



Texas Turkey Program

- Each non-resident or resident hunter must buy a license and stamp.
- Bag limits and seasons are set by Texas Parks & Wildlife
- Before moving turkey from place of kill, a body tag is attached
- Eastern turkeys must be checked in at a check station 24 hours after harvest

JAN	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	JUL
FEB	PRINT NAME OF PLACE WHERE KILLED IN INK (Ranch, wild to area, etc.)	AUG
MAR	<i>Smith Ranch</i>	SEP
APR	COUNTY <i>BROOKS</i>	OCT
MAY		NOV
JUN	16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	DEC

Photo: Texas Parks and Wildlife



Kentucky Elk Program

- Based on the quota hunt program using a lottery.
- Elk hunting areas are broken up into units.
- The permit needs to be purchased along with other licenses
- Harvested elk must be tagged
- Harvest log must be checked in
- Confirmation numbers provided

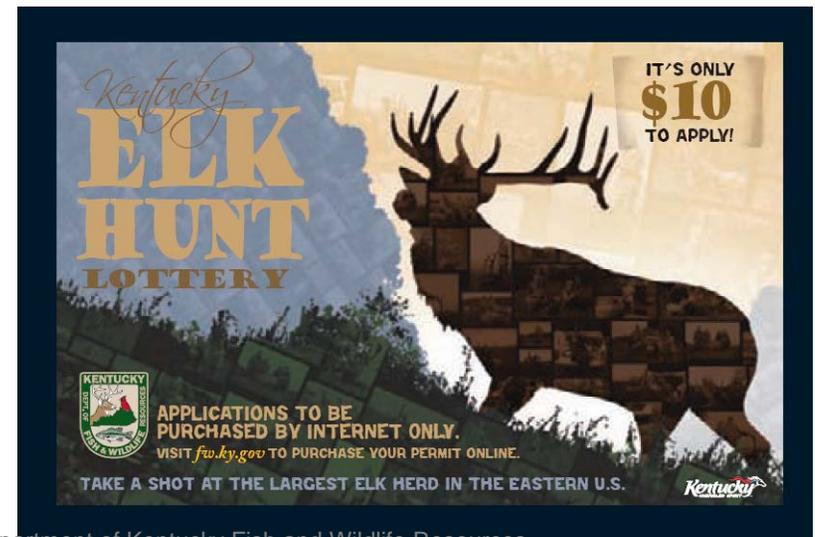


Photo: Department of Kentucky Fish and Wildlife Resources



Waterfowl Programs

- Seasons, bag limits, and possession limits set by Federal Agency
- Population surveys and harvest information programs conducted by Federal Agency in cooperation with states
- Money is raised through Federal and state hunting stamps and licenses
- Some state/Federal public lands have permits for hunting locations
- Most enforcement done at the state level with some federal enforcement

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California Recreational Red Abalone Program

- Report card and shell tag system.
- Only available for recreational harvest; state licensed fishermen must purchase a report card with removable tags.
- Limit of 3 abalone per day, 24 per season per angler during the open season.
- Tags are immediately filled out and attached to each abalone after exiting the water or boarding a vessel. Tags must remain on the abalone until it is processed.
- Report cards are filled out and returned to the State following the season by Jan. 31.
- Abalone tags are mainly used for enforcement purposes, while the report card along with fishery independent dive surveys and creel surveys are used for monitoring and assessment of the resource.



Photos: CADFG

2009 CALIFORNIA ABALONE REPORT CARD FG 2915 (Rev. 003)
 FEE \$19.70
 (Card invalid after December 31, 2009)

NAME: _____ DATE ISSUED: _____
 STREET ADDRESS: _____
 CITY: _____ STATE: _____ ZIP: _____
 DRIVER'S LICENSE/ID NUMBER: _____ DATE OF BIRTH: _____ PHONE NUMBER: _____ E-MAIL ADDRESS: _____
 CA FISHING LICENSE NUMBER: _____ CARD NUMBER: _____

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
MONTH	DAY	TIME	LOCATION CODE	MONTH	DAY	TIME	LOCATION CODE	MONTH	DAY	TIME	LOCATION CODE	MONTH	DAY	TIME	LOCATION CODE	MONTH	DAY	TIME	LOCATION CODE	MONTH	DAY	TIME	LOCATION CODE

2009 **19** MONTH: _____ DAY: _____ TIME: _____ LOCATION: _____
 2009 **20** MONTH: _____ DAY: _____ TIME: _____ LOCATION: _____
 2009 **21** MONTH: _____ DAY: _____ TIME: _____ LOCATION: _____
 2009 **22** MONTH: _____ DAY: _____ TIME: _____ LOCATION: _____
 2009 **23** MONTH: _____ DAY: _____ TIME: _____ LOCATION: _____
 2009 **24** MONTH: _____ DAY: _____ TIME: _____ LOCATION: _____



Northern NE Deer/Moose Hunting/tagging programs

- Must hold a license to apply for a permit. Hunter education courses may be required.
- Applicants entered into a lottery at no charge (1 chance), additional chances may be purchased. Chances increase each subsequent year not selected. Some permits are auctioned off.
- Permits awarded for specific areas (Wildlife Management Areas (WMA)) and cannot be used outside of that area. 'Gear' and temporal restrictions may also apply.
- Permits can be swapped or transferred within certain parameters.
- Harvested animals must have a 'tag' which includes the hunters name, address, and license number.
- Animals must stay w/hunter until registered at the first open station. Reporting time frame and animal's condition rules apply. Game wardens need to be contacted if the hunter cannot meet these requirements.
- If harvest is low, additional permits may be issued for particular WMAs to meet/take the quotas established for those areas.
- Data is not compiled in real time.



Florida Statewide Alligator Program



- Alligator trapping licenses/area permits/CITES body tags awarded by lottery for specific management areas and management periods
- All participants in vessel must hold Alligator Trapper License or Alligator Trapper Agent's License
- Immediately after an alligator has been dispatched, it must have a CITES body tag affixed in a specific location; tag must remain with hide
- After designated hunt period, licensed trapper must submit completed harvest report form OR return unused body tags to managing agency within 14 days
- Processed meat must be labeled with trapper's name, license number, CITES tag number, and date harvested



Washington State Catch Record Card (CRC) Program

- The CRC program produces annual sport harvest estimates for sturgeon, steelhead, salmon, halibut, & Puget Sound Dungeness Crab.
- A CRC must be in an angler's possession to fish for these species; the first CRC is free with license purchase (\$5-\$24); additional CRCs are \$12/each
- Kept fish must be recorded on a CRC, & anglers must return the CRC annually, even if nothing is caught or the angler did not fish
- Estimates from catch record cards are available 6 months to 1 year after the end of the season
- Creel, telephone interviews and mail surveys are conducted when management requires more timely estimates; creel survey data are substituted for CRC data when available; a bias adjustment factor may be applied.



Summary Matrix of Programs

Summary of Various Wildlife Reporting Programs

	Tag or Permit Lottery	Affix Body Tag	Report to Station	Catch Card per Animal	Submit Annual Catch Report or Survey	Sale of Tags by Agency	Transferable Tags	Return of Unused Tags	Tag Limits (individual)	Overall Limit on # of Tags (Agency)	Mail/Phone or Online Report	Data Available in Real Time	Compliance Level
FL Tarpon Tags	No	Yes	No	Yes	Yes	\$51.50 per tag	Prof. gde only	Yes	2 per year (unless a pro guide)	2,500 year	Yes (mail in by July 31)	No	Unknown
TX Red Drum Trophy Tags	No	Yes	No	No	Fishery-dependent monitoring (not related to tag)	Free with permit (additional tag costs \$3.00)	No	No	1 per year (w/option to buy one more tag)	No (harvest based on stock assessment)	No	No	High
TX Turkey Program	No	Yes	Yes (Eastern turkeys)	No	No	\$32 – res. \$126 - \$322 (non-res.)	No	No	4 per year	Limit can vary by area or year	No	No	Unknown
KY Elk Program	Yes	Yes	No	Yes	No	\$30 (resident) \$365 (non-resident)	No	No	1/person in lottery. xtra tags sold	Limit can vary by area or year	Yes	No	Unknown
Waterfowl Programs	No	No	No	No	Yes	Yes (federal duck stamp - \$15) (state fee varies)	No	No	No	Access & location stamps can be limited	Annual harvest survey must be submitted	No	Unknown
CA Abalone Program	No	Yes	No	Record info on report card (280000)	Yes (seasonal report and creel survey)	\$19.95 for report card and tags (+ CA fishing license)	No	No	3 per day and 24 per season	No	Seasonal report must be submitted	No	Unknown
Northern NE Deer/Moose (ME, NH, MA, VT)	Yes (permit lottery)	Yes	Yes	Record info on tag	Yes	Additional lottery bids available by auction	Yes	No	Permits limited by area and time	Permits limited by area and time	No	No	High
FL Alligator	Yes (for license, area, and tags)	Yes	No	Yes	Yes (seasonal report)	Yes. Trapper - \$271.00 Helper - \$51.50	No	Yes	Tags limited by area and time	Tags and permits based upon biological surveys	Seasonal report must be submitted (mail or online)	No	High
WA Catch Record Cards (CRCs)	No	No	No	Record info on cards	Yes (for certain species)	1 st CRC free with license \$12 – addl. CRCs	N/A	Yes	No	No	Annual report must be submitted	No. 6 – 12 mo. lag	Unknown
HMS Catch Cards (NC/MD)	No	Yes	Yes	Yes NC 30 - 173 MD 573 - 2310	No	No	No	No	No	No	No	2 wks-MD Monthly - NC	High



Survey Sample versus Census Strengths and Weaknesses

Attribute	Survey	Census
Timeliness	Variable	Variable
Individual accountability	NO	YES
Impact of non-response/non-compliance on accuracy	Only impacts accuracy if non-respondents differ. Can often detect and adjust for biases.	Accuracy impacted directly and bias unidirectional. Census assumes 100% response/compliance. Accuracy cannot be assessed without other source of information.
Precision	Measureable (e.g. variances, PSE's)	Assumes 100% precision.



Survey Sample versus Census Strengths and Weaknesses (cont.)

Attribute	Survey	Census
Effort data	Collected	Incomplete
Detailed trip characteristics	Collected	Limited
Releases	Collected	Not collected
Multiple Species	Covered	Focused on select species
Rare versus common species	Produce better estimates for more commonly caught species.	Work better for rarely caught species. May not work as well for species landed in large numbers.



Timeliness of Preliminary LPS Landings Estimates

Current Availability

Landings Month	Date Preliminary Estimates Available
June	August 3rd
July	October 3rd
August	October 3rd
September	December 3rd
October	December 3rd



Options for Improving Timeliness of Preliminary LPS Landings Estimates

Option	Relative Cost or Difficulty
Reduce lag to one month for all months (e.g. July estimates available August 31)	Low
Reduce lag to 15-20 days for all months (e.g. July estimates available between Aug. 15-20)	Moderate
Produce bi-weekly estimates with a 15 day lag maintaining precision for particular cells/species (e.g. month/state cells with historical recreational bluefin tuna landings)	High
Produce bi-weekly estimates with a 15 day lag maintaining precision across all cells/species (e.g. July 1 st – 15 th estimates available August 1 st)	Higher



Process Considerations

- Budget cycles – FY11 complete, FY12 well underway, likely FY13 before new funds could be allocated
- Likely need to overlap for some period of time with LPS & HMS catch cards
- Need for regulatory changes – likely take 1-2 years for major structural changes



Comparison to HMS Fisheries

What are the key aspects of HMS fisheries that would need to be considered in any new/revised program?

What are the key aspects of other programs?

Are other programs appropriate models for HMS fisheries?

Would changes apply to all HMS recreational monitoring? Just some HMS? Which ones?

Is there interest in pursuing changes?