

Qualifications Form for ESA Permit - Example

1. Contact Information

Name (first, middle, last): Jane D. Doe

Title: Biologist

Affiliation: NMFS Southeast Fisheries Science Center

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Business phone number: 555-867-5309

2. Table 1. Relevant Education

Degree	Major/Field of Study	Institution and Location	Year Received
M.S.	Marine Biology	University of Florida	2004
B.S.	Biology	Duke University	2002

3. Relevant Experience

A. Table 2. Relevant Professional History

Job Title	Role	Affiliation	Location	Dates
Biologist	Fisheries Biologist	NMFS Southeast Fisheries Science Center	Miami, Florida, USA	5/11- Present
Adjunct faculty	Professor	University of California, Davis	Davis, California, USA	1/15- 5/17

B. Summary of Experience

Option 1- TABLE

Table 3. Summary of Experience (example for fish and sea turtle experience).

Procedures	Experience Metrics: Estimated Number of Animals, Hours/Months/Years, Species, and Age Class	Most Recent Year Performed	Level of Experience
Tagging (PIT, Dart) fish	Successfully tagged >100 Atlantic sturgeon and >50 shortnose sturgeon, juvenile/adult	2016	3
Gastric lavage fish	Successfully lavaged >20 Atlantic sturgeon and >15 shortnose sturgeon, juvenile/adult	2015	2
Anesthesia (MS-222 and electronarcosis) fish	Successfully used anesthesia during field operations >75 Atlantic sturgeon and >50 shortnose sturgeon, juvenile/adult	2014	3
Blood sampling for fish	Successfully collected blood from >20 Atlantic sturgeon and >20 shortnose sturgeon, juvenile/adult	2013	4
Fin ray sampling fish	Successfully sampled the first fin ray and the second fin ray (~15 Atlantic sturgeon and ~10 shortnose sturgeon)	2013	3
Biopsy sampling for turtles	Biopsy sampled 60 leatherback, green, and hawksbill sea turtles combined over 4 years	2017	3
Epoxy based transmitter attachments for turtles	Tagged 3 hawksbill, 8 loggerhead, and 4 Kemp's ridley sea turtles in one field season	2012	3
Medial ridge tag attachments for turtles	Tagged 10 leatherback sea turtles over 3 field seasons	2008	4
Tangle Netting for turtles	Captured 25 juvenile sea turtles by tangle net over 2 years	2014	3

Option 2- BIOSKETCH

Example Biosketch 1 (fish):

John Doe has more than 7 years field experience and 15 years laboratory experience in sturgeon research including:

Capture of all life stages using gill nets, trawls, and trammel nets.

Tagging: 7 seven years experience in tagging sturgeon, including 3 years external tagging for approximately 100 sturgeon (satellite); and 4 years internal tagging for approximately 30 sturgeon (PIT, dart). Trained by Jane Doe in 2012 on methods for internal tagging, including suturing.

Anesthesia: Used MS-222 in the field and laboratory for the past 7 years for more than 100 sturgeon. Trained by Jane Doe in electronarcosis in 2014 and have used it successfully in the field since 2015.

Blood sampling: Successfully collected blood samples from approximately 75 Atlantic sturgeon in the laboratory and field. Trained by Jerry Doe in 2002.

Example Biosketch 2 (fish):

Mr. Fin has more than 7 years experience in sturgeon research. He has successfully used multiple sampling techniques in a laboratory setting since 2002 and in the field since 2010. Mr. Fin has 7 years experience tagging sturgeon, including PIT/Dart (7 years), internal tagging (5 years) and external tagging (3 years) which resulted in more than 150 fish being successfully tagged (100 internal [acoustic] and 50 external [satellite]). Dr. Smith trained him in all tagging techniques. He has used both methods of anesthesia successfully in both the lab and field for more than 100 animals and was trained by Dr. Apple on the use of electronarcosis in 2013. Mr. Fin has successfully collected blood from >200 sturgeon and was trained by Dr. Smith in 2002. In 2005, Mr. Fin was trained by Dr. Apple on methods to sample fin rays for aging. Mr. Fin has successfully sampled >20 fin rays since 2008. Mr. Fin has successfully conducted all the above mentioned procedures unsupervised. Since 2015, Mr. Fin has trained one graduate student in these methods.

Example Biosketch 3 (turtle):

Dr. Jane Doe has more than 20 years of experience in sea turtle research including:

Entanglement Nets: 6 years of experience capturing over 60 loggerhead sea turtles by tangle net.

Flipper Tagging: 10 years of experience applying flipper tags to approximately 100 nesting loggerheads on Florida beaches.

PIT Tagging: 20+ years of experience applying PIT tags to over 250 juvenile, subadult and adult sea turtles.

Biopsy Sampling: 15+ years of experience in biopsy sampling for over 500 juvenile, subadult, and adult sea turtles, including 2 years of experience in remote sampling using a biopsy pole.

Gastric Lavage: 3 years of experience performing gastric lavage on approximately 15 juvenile green sea turtles.

Blood Sampling: 5 years of experience collecting blood from more than 100 adult green sea turtles.

Telemetry attachments: 10 years of experience attaching satellite tags by epoxy or resin to more than 50 hardshell sea turtles (loggerhead and Kemp's ridley), 2 years of experience in attaching satellite tags directly to the medial ridge of 10 leatherback sea turtles, and 2 weeks of experience performing leatherback pygal attachments for pop-up archival tags for 6 animals.

Example Biosketch 4 (turtle):

Mr. Smith has 25 years of experience in sea turtle in-water field research. He also has performed saturation flipper tagging on nesting beaches in the Atlantic and Pacific Oceans of hundreds of hardshell and 50 leatherback sea turtles including measuring, weighing, and photographing animals since 2000. In 2002, he remotely suction-cup tagged 5 leatherbacks in the Pacific. From 2005-2008, he independently conducted captures of over 100 loggerhead, green and Kemp's ridley sea turtles by hand, rodeo, hoop net, trawl, and tangle net. He then biopsy sampled, flipper tagged, PIT tagged, weighed, measured, and collected blood from all captured turtles. He has over a decade of experience navigating research vessels and small boats to approach hundreds of sea turtles and in 2010, operated an autonomous underwater vehicle to track tagged turtles. He has experience applying telemetry tag attachments to over 40 juvenile, subadult, and adult sea turtles by suction cup, epoxy, and resin.

4. **Relevant Training, Certificates, or Licenses**

- UAS Certifications/Training: I have been an FAA Pilot in Command since 2010 (License No. 12345). I was trained by John Smith in 2009. Since 2009, I have over logged over 100 flights, totaling over 25 hours of flight time, including 50 flights for sea turtles.
- Biopsy Sampling: I was trained by Dr. X in 2005 including instruction and target practice.
- Coast Guard Captain's license, expires February 2019
- PADI Open Water Diver Certified (2012)
- CPR/AED Certification (2010, 2012)
- Water Safety Instructor (WSI) Certification (2010-2016)
- Boating safety course (NOAA), April 2016
- Wilderness First Responder (exp: Jan 2019)
- Leave No Trace Trainer (since June 2000)

5. **Relevant Peer-reviewed Publication History** (2 pages maximum)

Doe, J. and J. Smith. 2016. Unmanned aircraft systems for sea turtles. *Turtle Science*. 10(1): 1-5.

6. **Relevant Reports and Presentations** (1 page maximum)

Report: Doe, J. 2015. Implementing biopsy sampling in the Southeast, 2010-2015. Final report to NOAA SERO, award number 1234.

Invited speaker: "Unmanned aircraft systems for turtles". NOAA Northeast Fisheries Science Center, Woods Hole, MA, October, 2016.

Poster presentation: Doe, J. Unmanned aircraft systems for turtles. Biennial Conference on the Biology of Marine Turtles, Tampa, FL, December, 2011.

Book chapter: Doe, J. 2010. Biopsy sampling. Pages 1-10 in *Encyclopedia of Marine Turtles*, Second Edition. Edited by J. Smith. Academic Press, San Diego, CA.