



AUSTRALIAN NATIONAL SPORTFISHING ASSOCIATION LTD

AUSTAG MANUAL





AUSTAG MANUAL	
Reference No: AM/ST01	Issue: 7
Pages: 4	Date issued/revised: 19 March 2006
Approved by: R&D Director	Prepared by: Austag Coordinator

Introduction:

This Manual provides Work Instructions that cover all aspects of collecting data on tagged fish and on fishing trips in the ANSA Sportfish Tagging Program known as Austag. Where Austag is used in this Manual it applies to subsidiary programs in each state that are Suntag, Newtag, Victag, Tastag, Saftag, Westag and Toptag.

Master Austag Manual:

The master copy of this Manual and individual Work Instructions are stored as part on the documentation for Infofish 2006 at <http://database.info-fish.net/>. Access to Infofish 2006 requires the authorisation of Infofish Services and access is limited depending upon the level of entry subscribed to the user. All users provided with authorised access have access to the documentation.

Definitions:

Austag	ANSA National Sportfish Tagging Program
Suntag	ANSA Queensland Sportfish Tagging Program
Newtag	ANSA New South Wales Sportfish Tagging Program
Victag	ANSA Victoria Sportfish Tagging Program
Tastag	ANSA Tasmania Sportfish Tagging Program
Saftag	ANSA South Australia Sportfish Tagging Program
Westag	ANSA Western Australia Sportfish Tagging Program
Toptag	ANSA Northern Territory Sportfish Tagging Program

Structure of the Austag Manual:

The Austag Manual is based on following the life cycle of a tag from purchase and distribution to fishing trip, fish tagging and finally to recapture (figure 1). At each stage of the life cycle of a tag there is a Work Instruction that identifies the procedure to follow at that point.

Format of Work Instructions:

Each Work Instruction addresses its requirements based on the following headings:

Associated Documents	Replaced Documents
Aim	Scope
Responsibilities	Procedure
Records	Resources

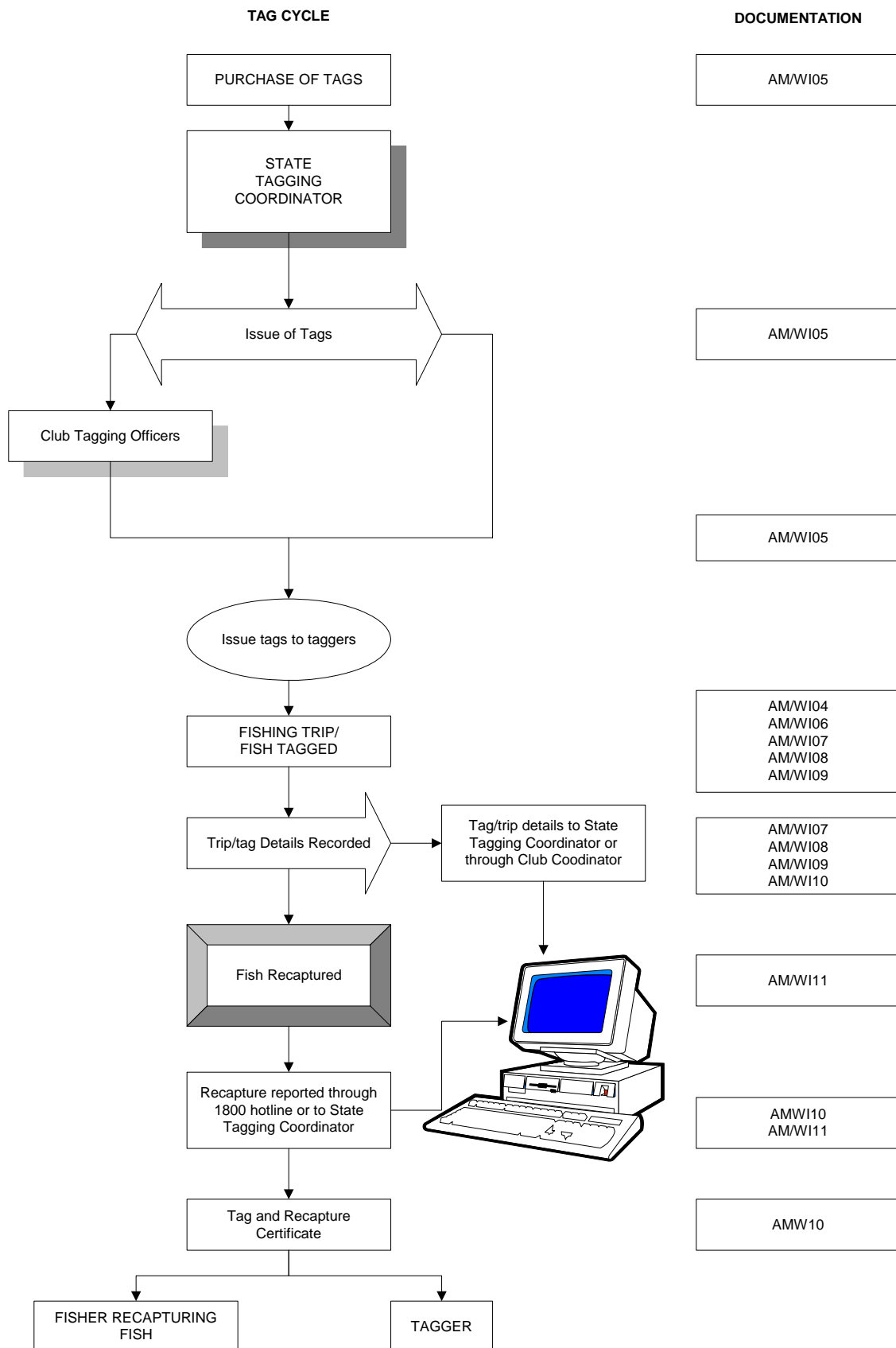


Figure 1: Life cycle of a tag and the Works Instructions that apply at each stage



Work Instructions forming Part of the Austag Manual:

The following Work Instructions are components of the Austag Manual:

AM/WI01	Austag Management
AM/WI02	Austag Service Standards
AM/WI03	Tagging Projects
AM/WI04	Tagging Equipment and Tags
AM/WI05	Tag Purchase and Distribution
AM/WI06	How to Tag Fish
AM/WI07	Collecting Fishing Trip and Tag Data
AM/WI08	Locations and Tag Maps
AM/WI09	Collecting Scientific Data
AM/WI10	Recaptured Tagged Fish
AM/WI11	Fishing Trip and Tagging Database
AM/WI12	Austag Awards



AUSTAG MANAGEMENT	
Work Instruction No: AM/WI01	Issue: 4
Pages: 4	Date issued/revised: 19 March 2006
Approved by: R&D Director	Prepared by: Austag Coordinator

Associated Documents:

Austag Service Standards
Fishing Trip and Tagging Database

Replaced Documents:

Austag Management (1 July 2003)

Aim:

The aim of this Work Instruction is to provide information on the management structure and responsibilities in Austag.

Scope:

This Work Instruction is applicable to all persons involved in Austag.

Responsibilities:

Austag Coordinator

The role of Austag Coordinator is:

- Management of the national Austag program
- Maintenance of national standards for the conduct of Austag programs
- Provide assistance and support to State program when requested.

State Tagging Coordinators

The role of the State Tagging Coordinators is:

- Management of their State Tagging program in compliance with the Quality Management System
- Ensure that Austag Work Instructions are available to all Club Tagging Coordinators and taggers
- Funding and budget
- Purchase and primary distribution of tags
- Liaison with Austag Coordinator and other State Tagging Coordinators
- Liaison with State Fisheries agencies and researchers
- Maintenance of the State Tagging database
- Statewide promotion of Austag and their State program
- Distribute Tag and Recapture certificates for recaptures of tagged fish



- Provide data to internal and external customers
- Provide reports to the relevant State Executive and for the Austag report
- Process Tagging Achievement and Tagging Excellence Awards.

Club Tagging Officers

The role of the Club Tagging Officers is:

- Liaison with the State Tagging Coordinator
- Collect and forward club fishing trip and tagging records and forward to State Tagging Coordinator in accordance with the service standard
- Issue club tags and maintain a register of tags issued
- Report to the Club and Club Executive on its tagging activities
- Training of Club taggers in correct tagging procedures
- Distribute Club Tag and Recapture certificates
- Local promotion of tagging
- Developing proposals for club or regional tagging projects.

Taggers

The role of the Taggers is:

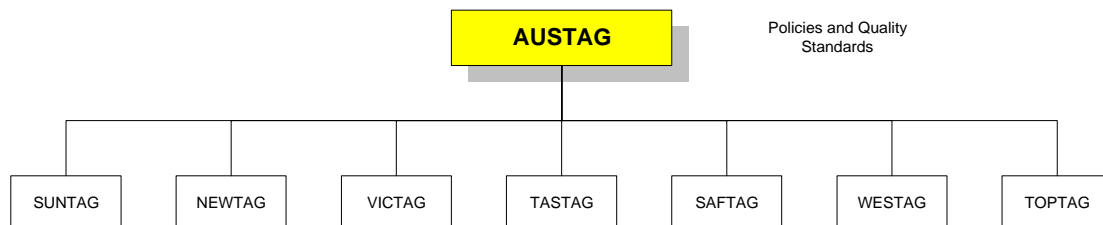
- Ensure fish tagged are on the Tagging Species list or part of approved projects
- Have knowledge of correct tagging procedures and use of different tags
- Maintain accurate records of fish tagged and recaptures
- Submit details of each fishing trip undertaken
- Submit records of trips and fish tagged in accordance with the service standard
- Correctly identify species of fish that are tagged.

Austag/State Programs

Figure 1 outlines the relationship and broad responsibilities of Austag and the State Tagging programs.

Where standard forms are in use in Austag programs these may be modified to reflect the individual state tagging programs and the Austag logo may be replaced by the relevant state logo.

Refer to the Austag Manual Introduction document (AM/ST01) for a summary of which Work Instructions are applicable at the various levels of Austag.



Database and State program management in cooperation with State Fisheries agencies

Figure 1: Relationship between Austag and the State Tagging programs



Records:

Specific records to be maintained are contained in the relevant Work Instructions.

Resources:

The resources include all the people that are involved in the Austag program.



AUSTAG SERVICE STANDARDS	
Work Instruction No: AM/WI02	Issue: 5
Page: 2	Date issued/revised: 19 March 2006
Approved by: R&D Director	Prepared by: Austag Coordinator

Associated Documents:

AM/WI07 Collecting Fishing Trip and Tag data
AM/WI11 Fishing Trip and Tagging Database
AMWI01 Austag Management

Replaced Documents:

WI/T10 Austag Service Standards (1 July 2002)

Aim:

This Work Instruction provides the services standards to be applied in Austag programs.

Scope:

This Work Instruction applies to the internal operations of the collection of data and the provision of feedback to persons involved in the program. Service standards to customers are negotiated on a project by project basis.

Responsibility:

The Austag Coordinator is responsible for setting the service standards. ANSA State Tagging Coordinators are responsible for application of these standards in their programs. Club Tagging Coordinator and taggers are required to be aware of the standards that apply to data collection.

Procedure:

Standards for Data Collection

Data provided electronically on fishing trips or tagged fish is to be forwarded by fishers or Club Tagging Coordinators to the relevant State Tagging Coordinator within 14 days of a fishing trip or a fish being tagged.

Data received electronically on fishing trips or tagged fish is to be entered into the State database within 7 days of receipt.

This provides for a maximum of 21 days from the time of a fishing trip or a fish being tagged for entry to the State database.



Data received other than electronically on fishing trips and tagged is to be forwarded by taggers or Club Tagging Coordinators to the relevant State Tagging Coordinator within 30 days of a fishing trip or a fish being tagged.

Data on fishing trips or tagged fish received other than electronically is to be entered into the State database within 10 days of receipt.

This provides for a maximum of 40 days from the time a fish is tagged and entered into the State database.

It is quite common for fish to be recaptured within 40 days of being tagged so it is important that there is a minimum time delay in the data being entered in the State Tagging database.

Standards for Feedback on Recaptured Tagged Fish

For recaptures of tagged fish reported by the general public through the 1800 toll free hotline feedback on the tagging details should be provided in real time over the telephone. This requires the telephone to be located next to the computer containing the database and the 1800 to be personally answered where possible.

For recaptures of tagged fish reported by the general public by any means written feedback in the form of a letter and recapture certificate is forwarded within 14 days where tag and recapture details are available. Standard letters and certificates are available to provide this feedback.

Tag and recapture certificates are provided to both the person that recaptured the fish and also to the person that tagged the fish and include the full history of the fish.

Standards for Supply of Data to Customers

Service standards for customers are negotiated on a project by project basis. The "Standard Conditions for the Provision of Austag Data for Non-Commercial Purposes" document is to be used to formalise agreements for the supply of Austag data. A copy of this document can be obtained from the Austag Coordinator.

Data supplied to customers is to include a metadata file that conforms to with the ANZLIC guidelines for metadata descriptions. A copy of the standard metafile document can be obtained from the Austag Coordinator.

Records:

Copies of all agreements for supply of data to customers are to be maintained as part of the project records for the particular project.

Resources:

Standard Conditions for the Provision of Austag Data for Non-Commercial Purposes QF 0023/1
Pro forma for Metadata file QF 0017/1



TAGGING PROJECTS	
Work Instruction No: AM/WI03	Issue: 6
Pages: 4	Date issued/revised: 19 March 2006
Approved by: R&D Director	Prepared by: Austag Coordinator

Associated Documents:

AM/WI06 How to Tag Fish
AM/WI07 Collecting Fishing Trip and Tagging data
AM/WI12 Austag Awards

Replaced Documents:

WI/T04 Tagging Projects (29 June 2003)

Aim:

This Work Instruction is to direct tagging effort towards the objectives of specific projects under Austag.

Scope:

This Work Instruction identifies Austag tagging projects or tagging species lists and where they can be obtained. It also outlines the format for proposals for new projects.

Responsibility:

Taggers are responsible for obtaining a list of projects or tagging species that is current in their fishing area. The State Tagging Coordinator is responsible for maintaining a register of Tagging Projects or Tagging Species list in that State and to undertake a review of that list every 2 years or when projects are completed.

Procedure:

Tag Project Proposals

Tagging project proposals should be submitted on form QF 0021/2 as shown in *figure 1* (as a sample) for regional, state or national projects. Regional and state projects can be submitted by Clubs and should be submitted to the State Tagging Coordinator for approval in conjunction with the relevant Fisheries agency. National project proposals are to be submitted to the Austag Coordinator for approval. New project proposals can be submitted at any time.



Current Tagging Projects or Tagging Species Lists

Copies of the current Tagging Projects or Tagging Species List can be obtained from the relevant State Tagging Coordinator. A list of tagging points for species applicable to Austag Awards (AM/WI12) is also available. Each list should include the currency date of the list.

Records:

Standard form QF 0021/2 as shown in *figure 1* is available for the submission of project proposals. State or local versions of the project form are acceptable provided all data required is able to be collected.

State Tagging Coordinators maintain a record of the details of all projects and a summary project or tagging species list. A sample summary of tagging projects for Austag is contained in *figure 2*.

Resources:

Tagging Project or Tagging Species Lists and Tagging Project form QF 0021/2.



FISHING TRIP AND TAGGING MANUAL

Australian National Sportfishing Association Ltd



Australian National Sportfishing Association
AUSTAG PROJECT
PROJECT NO: AUS/2001/101

Project Title:	National Mulloway tagging
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Contact Person:	Bill Sawynok Austag
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Clubs involved	All clubs in nominated States
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Objective 1:	Collect tag and recapture data on a national level
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Objective 2:	Obtain data on movement
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Objective 3:	Obtain data on growth
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Objective 4:	Obtain regional size frequency data
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Methodology:	Tag data will be collected through Austag Trip/Tag sheets (QF 0002/1 WI / T03) Data will be stored in the Austag databases Reporting will be at a national level
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Timeframe:	2001/2002 – 2003/2004
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Locations:	Queensland, New South Wales, Victoria, South Australia, Western Australia
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Species:	Mulloway
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Funding:	Funded through State tagging programs
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Supported by:	Austag
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Researchers:	
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Community Groups:	
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Project Status:	Current
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AUSTAG PO Box 9793 Frenchville Q 4701	Enquiries to: Bill Sawynok Telephone: 07-4928-6133 Fax: 07-4926-3335 Email: infofish@zbc.com.net
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This project form is part of the ANSA Quality Management System and is to be used for projects being undertaken as part of Austag. For more information see Work Instruction QF 0002/1 WI/T04.

This form is part of the Suntag Manual and the current version is available from www.info-fish.net.

Last updated: 29 June 2003

QF0021/2 15 June 2003

Figure 1: Sample of Austag Tagging Project form QF 0021/2 completed



SUNTAG TAGGING PROJECTS

LONG TERM DATA COLLECTION

PROJECT	ID	TIMEFRAME	PRIORITY
ANSA Qld Fishing Trip data collection	QLD/2001/001	1996/97 -	1
Long term tag data collection on estuary species - Barramundi/Bream-Yellowfin/ Bream-Pikey/Estuary Cod-Gold Spot/Estuary Cod-Black Spot/Javelin- Barred/ Javelin-Speckled/Mangrove Jack/Sea Perch-Fingermark/Threadfin-Blue/ Threadfin-King/Trevally-Giant/Dusky Flathead	QLD/2001/002	2001/02 -	1
Long term tag data collection on reef species - Emperor-Red/Emperor-Spangled/ Snapper/Sweetlip-Grass/Trout-Bar Cheek Coral/Trout-Coral/Perch-Pearl/ Sea Perch-Large Mouth/Sea Perch-Small Mouth/Teraglin	QLD/2001/003	2001/02 -	1
Trip/tag data collection in Impoundments - Lake Moogerah/Lake Somerset/Lake Boondooma/Lake Barambah - Bass-Australian/Perch Golden	QLD/2001/004 QLD/2003/016	2001/02 - 2003/04-2005/06	1
Long Term Monitoring Program tagging	QLD/2002/014	2001/02-	1

RESEARCH PROJECTS OR EXTERNALLY FUNDED

PROJECT	ID	TIMEFRAME	PRIORITY
Mud Crabs in Barron River	QLD/2001/101	1998/99-	1
Murray Cod in Qld section of Murray/Darling basin	QLD/2001/105	1997/98-2003/04	1
Bull Shark tagging in Brisbane River	QLD/2001/107	2000/01-2003/04	1
Townsville tagging	QLD/2001/108	2000/01-2003/04	1
Calliope/Boyne Rivers tagging	QLD/2001/111	1997/98-2003/04	1
East Coast Mackerel tagging - Cooktown to Gold Coast - Mackerel-Narrow Bar/ Mackerel-School, Mackerel-Spotted, Mackerel-Grey	QLD/2001/112	2001/02-2003/04	1
Survival from Hooking and Tagging	QLD/2002/114	2002/03-2004/05	1
Stingrays in Moreton Bay	QLD/2002/115	2002/03-2003/04	1
Tagging in No Take Areas of Moreton Bay	QLD/2002/116	2002/03-2003/04	1
Use by Barramundi of Critical Nursery Areas in Central Queensland	QLD/2003/117	1998/99-2003/04	1
Dawson River Fish Tagging	QLD/2003/118	1998/99-2003/04	1
Fitzroy Basin Stocked Barramundi movement	QLD/2002/015	2001/02-2003/04	1

CLUB PROJECTS

PROJECT	ID	TIMEFRAME	PRIORITY
Mary River Cod in Lake McDonald (restricted)	QLD/2001/104	1997/98-2003/04	2
Wild Stock Bass Tagging - Noosa River to Coomera River	QLD/2001/106	1997/98-2003/04	2
Gold Coast Trevally - Bigeye Trevally/Giant Trevally	QLD/2001/109	199/987-2003/04	2
Gulf of Carpentaria and Cape York - Barramundi (all locations), Javelin-Barred (Weipa and Karumba), Mangrove Jack, Sea Perch-Fingermark, King Threadfin (Weipa)	QLD/2001/110	2001/02-2003/04	2
Upper Brisbane River Fish Movement - Bass-Australian, Perch-Golden, Tarpon	QLD/2001/113	1997/98-2003/04	2
National Mulloway tagging	AUS/2001/001	2001/02-2003/04	2

Last date updated: 29 June 2003

Figure 2: Example of Summary of Suntag Tagging Projects (check for latest update)



TAG PURCHASE AND DISTRIBUTION	
Work Instruction No: AM/WI05	Issue: 7
Pages: 4	Date issued/revised: 19 March 2006
Approved by: R&D Director	Prepared by: Austag Coordinator

Associated Documents:

AM/Wi04	Tagging Equipment and Tags
AM/WI05	Collecting Fishing Trip and Tag Data
AM/WI11	Fishing Trip and Tag Database
AM/WI01	Austag Management

Replaced Documents:

WI/T07	Tag Purchase and Distribution (29 June 2003)
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Aim:

This Work Instruction is to ensure there is an audit trail in place to track the purchase, issuing and usage of tags.

Scope:

This Work Instruction applies to State Tagging and Club Tagging Coordinators.

Responsibility:

ANSA State Tagging Coordinators are responsible for the purchase of tags and maintaining a register of distribution of tags to clubs and individuals where applicable. Club Tagging Coordinators are responsible for maintaining a register of distribution of tags within their club.

Procedure:

Purchase of Tags

There is only one supplier in Australia for the purchase of tags suitable for use in Austag. The approved supplier is:

Hallprint Pty Ltd
15 Crozier Road
VICTOR HARBOUR SA 5211
Ph: 08-8552-3149
Fax: 08-8552-2874
Email: davidhall@hallprint.com.au

Recommended tag types for use in Austag are small dart tags PDT and t-bar anchor tags TBA2 (refer to WI/T01).



State Tagging Coordinators are responsible for arranging the purchase of tags for their programs.

When tags are received from the supplier details of the numbers are entered into the Infofish 2006 or Infotag 2000 database through the Tag Series section. Infofish 2006 is the standard Austag database (WI/T09).

State Tag Register

A Tag Register is to be maintained by the State Tagging Coordinator as part of the Austag program. This is done through the standard Tag Issues section in the Infofish 2006 database.

Club Tag Register

Club Tagging Coordinators are required to maintain a similar register of tags issued to their members. This can be done through the Infofish 2006 database where access has been provided or through a manual tag register form QF 0015/1 as shown in *figure 1*.



CLUB: MUCKADILLA SPORTFISHING CLUB

TAG NO 1	TAG NO 2	TAG TYPE	NUMBER OF TAGS	ISSUED TO	DATE ISSUED
Z10051	Z10100	D	50	FRED SMITH	1/1/00
K25101	K25125	A	25	JOE BLOGGS	2/2/00
K86926	K86935	D	10	JOHN BROWN	5/3/00
J56901	J56950	A	50	FRED SMITH	5/5/00

TAG NO 1: First tag number in series issued
 TAG NO 2: Last tag number in series issued
 TAG TYPE: Tag type D = Dart A = Anchor
 NUMBER OF TAGS: Number of tags issued to tagger
 ISSUED TO: Tagger tags issued to
 DATE ISSUED: Date tags issued

Figure 1: Sample Manual Tag Register to Track Issuing of Tags by Club Tagging Coordinators

Tag Audit Reports

Tag audit reports showing details of tags issued to Clubs/individuals are available to Club Tagging Officers/Taggers that are authorised to access Infofish 2006. A sample report is contained in *figure 2*.



Records:

Details of tags issued by the State Tagging Coordinator are recorded in the Infofish 2006 database. Details of tags issued by Club Tagging Coordinators are recorded in the Infofish 2006 database where available or through a manual Tag Register where computer facilities are not available.

Resources:

Tags, Tag Register form QF 0015/1, Infofish 2006 database.

CLUB TAG AUDIT SAMPLE ONLY

First Tag:	Last Tag:	Number of Tags Issued:	Tag Type:	Club:	Issued To:	Issued By:	Date of Issue:	Number of Tags Used:
J85701	J85750	50	A	MUCKADILLA	BROWN J	WS	20-Mar-00	50
J85751	J85800	50	A	MUCKADILLA	BROWN J	WS	20-Mar-00	18
J85801	J85850	50	A	MUCKADILLA	BROWN J	WS	20-Mar-00	33
J75251	J75300	50	D	MUCKADILLA	BROWN J	WS	20-Mar-00	49
J75301	J75350	50	D	MUCKADILLA	BROWN J	WS	20-Mar-00	25
J75351	J75400	50	D	MUCKADILLA	BROWN J	WS	20-Mar-00	0
J84851	J84900	50	A	MUCKADILLA	BROWN J	WS	23-May-00	16
J85051	J85100	50	A	MUCKADILLA	BROWN J	WS	23-May-00	3
J85001	J85050	50	A	MUCKADILLA	BROWN J	WS	23-May-00	44
J85101	J85150	50	A	MUCKADILLA	BROWN J	WS	23-May-00	48
J84951	J85000	50	A	MUCKADILLA	BROWN J	WS	23-May-00	5
J84901	J84950	50	A	MUCKADILLA	BROWN J	WS	23-May-00	13
J57101	J57150	50	A	MUCKADILLA	BROWN J	WS	23-May-00	0
J57151	J57200	50	A	MUCKADILLA	BROWN J	WS	23-May-00	0
J57201	J57250	50	A	MUCKADILLA	BROWN J	WS	23-May-00	45
J57251	J57300	50	A	MUCKADILLA	BROWN J	WS	23-May-00	50
J57301	J57350	50	A	MUCKADILLA	BROWN J	WS	23-May-00	0
J57951	J58000	50	A	MUCKADILLA	BROWN J	WS	23-May-00	0
J58801	J58850	50	A	MUCKADILLA	BROWN J	WS	23-May-00	0

Figure 2: Sample of Audit of Tags Issued and Used by a Club



HOW TO TAG FISH	
Work Instruction No: AM/WI06	Issue: 8
Pages: 5	Date issued/revised: 19 March 2006
Approved by: R&D Director	Prepared by: Austag Coordinator

Associated Documents:

AM/WI05	Tagging Equipment and Tags
AM/WI07	Collecting Fishing Trip and Tag data
RF COP	ANSA Code of Practice on Releasing Fish

Replaced Documents:

WI/T02	How to Tag Fish (30 December 2003)
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Aim:

The aim of this Work Instruction is to outline how to ensure fish that are to be tagged are released in the healthiest state possible, how to correctly tag fish and the data that needs to be recorded in the field.

Scope:

This Work Instruction provides details on how to handle and tag fish, the correct application of tags and the data that needs to be recorded in the field.

Responsibility:

Taggers are responsible for the tagging of fish.

Procedure:

Catching, Handling and Releasing Fish to be Tagged

Fish intended for tagging should be handled in accordance with the ANSA Code of Practice on Releasing fish. Refer to RF COP for the Code of Practice.

Tagging Technique – Dart tags

Refer to AM/WI04 for selecting the most appropriate tags for the fish to be tagged.

For dart tags the tag should be inserted in the applicator before fishing commences to minimise the time taken to tag a fish. With the tag in the applicator insert the needle into the side of the fish in the area shown for the location of tags in *figure 1*. With fish with large scales it may be necessary to remove a scale to allow the needle to penetrate the skin. The needle should be pushed into the flesh at an angle of about 45° and through the dorsal rays of the fish spine. The needle should be twisted slightly to ensure the barb locks in behind a dorsal ray. Remove the needle and give the tag a light tug to ensure it has been secured.



Figure 1: Tags can be placed at any point between the two locations indicated

Tagging Technique – Gun tags

For gun or anchor tags place the tag clip in the hollow at the top of the tag gun before commencing fishing to minimise the time taken to tag a fish. Insert the needle into the side of the fish in the area shown for the location of tags in figure 1. Once the needle has been inserted the trigger of the gun is squeezed which fires the tag into the fish as shown in *figure 2*. The gun should then be rotated through around 180° to “set” the t-bar of the tag before removing it. The tag should be given a light tug to ensure it has been set.



Figure 2: Snapper being tagged with a gun tag

Measuring Fish

Refer to AM/WI04 for selecting the most appropriate measuring device to use.

Correctly measuring fish is important if the data is to be used to determine growth. The fish should be placed on the measuring device with the snout of the fish touching the “L” shaped butt as shown in *figure 4*. For fork tailed fish 2 measurements are required as shown in *figure 3*. These are:

- TL or Total Length (tip of snout to tip of the tail)
- LCF or Length Caudal Fork (tip of snout to inside fork of the tail)

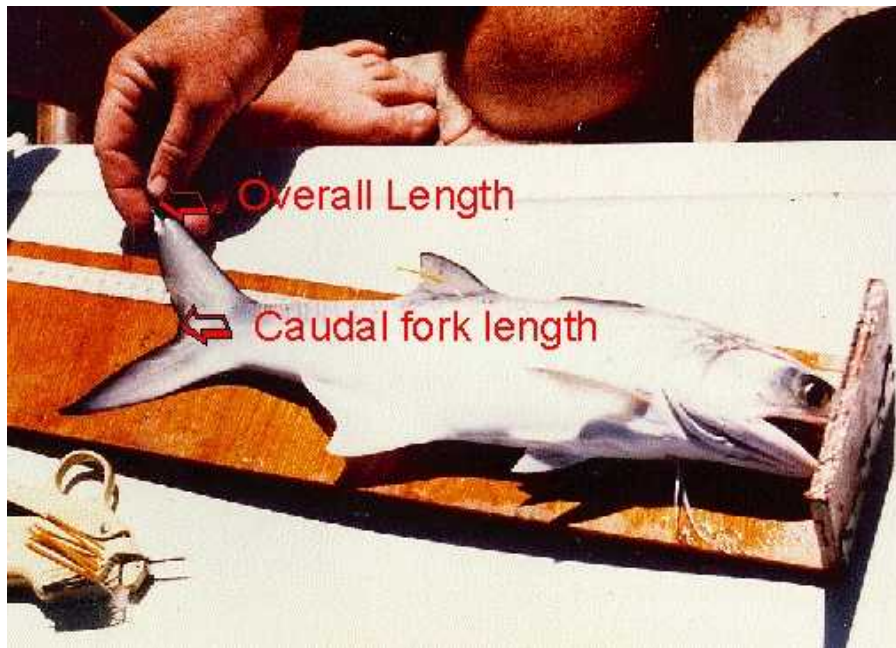


Figure 3: Lengths to be measured for fork tailed fish



Figure 4: Measuring a fish on a roll out measurer

Sizes of Fish for Tagging

Fish tagged in most projects should be a minimum of 200mm in length however for some projects fish can be tagged from a minimum of 150mm. Tagging of small fish with large tags is not recommended as this is likely to reduce their chances of survival on release. The following is provided as a guide on the minimum sizes of fish to be tagged using the different types of tags.

Dart tags – minimum size of 250mm

Standard gun tags – minimum size of 200mm

Small gun tags – minimum size of 150mm

Small gun tags are only provided to taggers working on specific projects that have considerable experience in tagging.

Dealing with Barotrauma

Reef fish bought up quickly from deep water often have their stomach pushed out through their mouth as a result of expansion of air in the swim bladder.

There are currently differing opinions among researchers and fishers as to the best method to deal with fish suffering from barotrauma.

One method is to “vent” the swim bladder. The most appropriate method of venting can depend on the fish species however for most species inserting a fine hollow needle in line with the top of the pectoral fin and down from the 4th dorsal spine will allow the swim bladder to deflate.

The other method is to use a weighted barbless hook attached to a line. This is used to return the fish quickly to the bottom and a pull on the line releases the barbless hook. The alternative methods are shown in *figure 5*.



Figure 5: Alternate methods for dealing with barotrauma

Records:

Field sheets should be used to record details of each fish tagged. Refer to WI/T03 for details of the data that needs to be recorded on tagged fish.

Field books are in Tagging Kits or can be purchased separately from Infotish Services as outlined in AM/WI04.

Resources:

Fish, tagging equipment, tags, measuring device, field recording sheet.



COLLECTING FISHING TRIP AND TAG DATA

Work Instruction No: AM/WI07	Issue: 11
Pages: 2	Date issued/revised: 19 March 2006
Approved by: R&D Director	Prepared by: Austag Coordinator

Associated Documents:

AM/WI06	How to Tag Fish
AM/WI03	Tagging Projects
AM/WI08	Locations and Tag Maps
AM/WI11	Fishing Trip and Tagging Database

Replaced Documents:

WI/T03	Recording Austag Data (21 November 2003)
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Aim:

This Work Instruction specifies the data to be recorded on fishing trips.

Scope:

This Work Instruction is applicable to all ANSA members and fishers that provide data on their fishing trips. It is not limited to those members involved in tagging.

Responsibility:

ANSA members, fishers or those collecting fishing trip data are responsible for the completion and submission of fishing trip data to the State Tagging Coordinator or Club Tagging Coordinator. Club Tagging Officers are responsible for forwarding to State Tagging Coordinators all fishing trips forward to them.

Procedure:

Data on fishing trips is collected through the Infofish 2006 e-trip form (STET27). This form is a Microsoft Excel spreadsheet. The Infofish 2006 e-trip form contains a complete help system to assist fishers fill in the form. A paper version of the fishing trip form Infofish 2006 f-trip (STFT27) is available for fishers that do not have access to a PC.

Fishers should complete the Infofish 2006 e-trip or f-trip form after each fishing trip and forward by email/fax/mail to the State Tagging Coordinator or to their Club Tagging Coordinator, who in turn will forward to the State Tagging coordinator.

Data Collected on Fishing Trip

Data for Infofish 2006 is collected at three levels through Infofish 2006 e-trip or f-trip forms:



FISHING TRIP AND TAGGING MANUAL

Australian National Sportfishing Association Ltd



1. Data on fish tagged
2. Complete catch and effort data (fishing times and all fish caught)
3. Scientific data (location, barotrauma, injury, hooking, gear, other)

Data at level 1 is the minimum required for fishers tagging fish. All fishers are encouraged to provide Level 2 and level 3 data however providing this data is voluntary. The more data that fishers provide the more use can be made of it.

Records:

Data may be collected on field sheets and then later transferred to the Infofish 2006 e-trip or f-trip forms. Waterproof paper or plastic is recommended for field sheets. Field sheets should be able to collect all the data required.

Trip sheets should be forwarded to the State Tagging Coordinator as soon as possible after the fishing trip but no later than 30 days after the fishing trip.

Resources:

Infofish 2006 e-trip or f-trip forms
Field sheets
Pencil or pen



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LOCATIONS AND TAG MAPS	
Work Instruction No: AM/WI08	Issue: 4
Pages: 3	Date issued/revised: 19 March 2006
Approved by: R&D Director	Prepared by: Austag Coordinator

Associated Documents:

AM/WI07 Collecting Fishing Trip and Tag data

Replaced Documents:

WI/T05 Locations and Tag Maps (29 June 2003)

Aim:

This Work Instruction is to obtain information accurate to about 1km on the location where fish are tagged.

Scope:

This Work Instruction provides details of the use of map/grid or alternatives to record location details of where fish have been tagged.

Responsibility:

ANSA Austag Taggers are responsible for obtaining maps of the areas in which they undertake fishing/tag trips. The State Tagging Coordinator is responsible for maintaining a set of tag grid maps and making them available to Club Tagging Officers and Austag Taggers.

Procedure:

Tag Maps

A standard set of grid maps are available for most locations where tagging projects are being undertaken. These maps should preferably be based on 1:250,000 or 1:100,000 standard topographical maps. Each map has been superimposed with a standard square grid that is 1km² although some maps may have a non-standard grid size. *Figure 1* shows a sample map. These maps may be available in hard copy or digital format.



Resources:

Set of tag grid maps for each State.

Suntag grid maps for Queensland can be downloaded from www.info-fish.net.

Contact State Tagging Coordinators for availability of maps in the relevant states.



COLLECTING SCIENTIFIC DATA	
Work Instruction No: AM/WI09	Issue: 5
Pages: 3	Date issued/revise: 19 March 2006
Approved by: R&D Director	Prepared by: Austag Coordinator

Associated Documents:

AM/WI06 How to Tag Fish
AM/WI07 Collecting Fishing Trip and Tag data

Replaced Documents:

WI/T06 Specialised Tagging (29 June 2003)
WI/T13 Collection of Hooking Data (1 July 2003)

Aim:

This Work Instruction provides information on additional scientific data that can be collected as a part of a fishing trip.

Scope:

This Work Instruction is voluntary and only applies to those fishers prepared to provide the additional information or to those fishers and taggers working on specific research projects requiring that data.

Responsibility:

Fishers and taggers can collect the additional data voluntarily. Where this data is required for specific research projects the appropriate training through Fisheries agencies, researchers or other approved trainers is to be provided.

Procedure:

The additional scientific data is collected through the Infotrip 2006 e-trip or f-trip forms. The following categories of scientific data can be provided. A complete help file is available with the forms detailing what coding is required to be entered for each category of data.

Location

This allows GPS coordinates for the fishing location to be collected (see AM/WI08).

Barotrauma

This allows water depth, barotrauma condition and barotrauma treatment data to be collected. This data can be used to assess the effects of various barotrauma treatments on fish and provide data on survival of fish caught at various depths.

Injury

This allows data to be collected on various injuries to the fish. This data can be used to assist in assessing the extent of injuries to caught fish and survival rates of released fish.

Hooking

This allows data to be collected on the types and sizes of hooks used and hooking location. This data can be used to assess deep hooking rates and effects of hooks and hooking locations on survival.

Gear

This allows data to be collected on the types of fishing gear, bait or lure that was used. This data can be used to assess the effects of gear, bait or lure on the fish survival.

Other

This allows other data to be collected including data on double tagging, chemical marking, fish/crab sex and water temperature.

Many research projects that have a tagging component require the assessment of tag loss as this affects the overall recapture rate of tagged fish. This is achieved through the tagging of fish with 2 tags as shown in *figure 1*. In general terms the tag loss or shedding rate is determined from the ratio of double tagged fish recaptured with 2 tags as opposed to 1.



Figure 1: Double tagged mangrove jack

The age of a fish can be determined by examination of growth rings on a bone called an otolith located in the fish head. This process can be aided by having the



otolith chemically marked when a fish is tagged. This is accomplished by injecting the fish with a predetermined dose of a chemical marker eg oxytetracycline (OTC) that has the effect of marking the otolith with a band that is visible under ultraviolet light.

The dosage to be used depends on the size of the fish and is generally predetermined through laboratory experiments. Charts showing chemical marker dosage for different sizes of species are available for projects using this procedure. Injection is made through the use of a hypodermic syringe and the location where the fish is injected is determined by the researcher.

Tags that are used with tetracycline have “Keep Frame” on them as the head of this fish is required to recover the otoliths for examination.

The additional data to be recorded on fish that have been injected with a chemical marker is the dosage applied in millilitres.

Records:

Details of double tagged or tetracycline injected fish are recorded on the standard Fishing/Tag Trip sheet as outlined in WI/T03.

Resources:

Tags, tagging equipment, chemical marker and hypodermic syringe.



RECAPTURED TAGGED FISH	
Work Instruction No: AM/WI0	Issue: 5
Pages: 5	Date issued/revise: 19 March 2006
Approved by: R&D Director	Prepared by: Austag Coordinator

Associated Documents:

AM/WI07	Collecting Fishing Trip and Tag Data
AM/WI08	Locations and Tag Maps
AM/WI11	Fishing Trip and Tagging Database
AM/WI02	Austag Service Standards
AM/WI01	Austag Management

Replaced Documents:

WI/T08	Recaptured Tag Fish (29 June 2003)
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Aim:

This Work Instruction ensures that all information on the recapture of tagged fish is correctly collected, entered in the Infotag 2006 or Infotag 2000 database and appropriate feedback is provided.

Scope:

This Work Instruction applies to State Tagging Coordinators and covers the collection of data on recaptured fish, entry of data to the Infotag 2006 or Infotag 2000 database and the form of feedback to be provided on recaptured fish.

Responsibility:

ANSA State Tagging Coordinators are responsible for the collection of data on recaptured fish, entry of data to the database and providing feedback on recaptured fish.

Procedure:

Information Required on Recaptured Tagged Fish

The following information is required to be collected on tagged fish that have been recaptured:

- Tag number (or numbers if 2 tags in fish)
- Name, address and telephone number of person recapturing fish
- Whether recreational or commercial fisher or researcher
- Species
- Date recaptured
- Location recaptured with as much detail as possible (see AM/WI08)



- LOA Length Overall (tip of snout to furthest end of tail)
- LCF Length Caudal Fork (tip of snout to inside fork of tail)
- Weight (whole weight only and whether estimated/measured)
- Whether fish was kept or released and if released was tag removed
- Any comments on the fish/its condition eg ulcer around tag site
- If tag has "KEEP FRAME" on it was frame kept
- If tag included "REWARD" on it

A standard form QF 0020/1, which is the basis of the Recaptured Tagged Fish register, as shown in *figure 2* is provided on which to collect the details of recaptured fish. Local versions of the form are acceptable provided all data required is able to be collected.

Reporting of Recaptures

Tags in use in Austag programs have an 1800 toll free tag hotline number on them for the reporting of recaptures. The service for collecting recapture data should be maintained by the State Tagging Coordinator. The numbers for each State are:

Suntag toll free hotline	1800-077-001
Newtag toll free hotline	1800-079-009
Victag toll free hotline	1800-677-620
Tastag toll free hotline	1800-652-841
Saftag toll free hotline	1800-625-901
Westag toll free hotline	1800-682-002
Toptag toll free hotline	1800-653-365

When a call is received on the hotline the information required as above about a recaptured tagged fish is collected and recorded in the Recaptured Tagged Fish register and entered into the database.

Where an answering machine is used to collect data the caller should be requested to leave a name and telephone number only and the caller should be contacted later to obtain the necessary details. The use of an answering machine should be avoided as much as possible due to the reluctance of many callers to respond to a recorded message.

Not all recapture details are obtained through the toll free hotline number. Details of recaptured tagged fish can also be reported:

- By letter or fax
- By email
- By data recorded on the [Infofish 2006 template.xls](#)
- Through website www.info-fish.net
- Through fishing trip sheets from ANSA members
- Through Fisheries agencies or fisheries compliance services
- Through Sport Stores

All details of recaptures of tagged fish should be entered into the Recaptured Tagged Fish register irrespective of the method by which the data is received.



Feedback on Recaptures

Providing feedback is the most important element of the process on collecting data on recaptured tagged fish. Feedback should be provided to both the person that recaptured the tagged fish and also to the person that tagged the fish.

Where practical the 1800 toll free hotline should be located next to a computer that has access to the Infofish 2006 database. When a call is received reporting a recapture it is then possible to check that number and the tag details on the computer and provide that information to the caller. This is the optimum level of service that should be provided. This must be followed up with the fisher through a certificate containing all the details of the tagging and recapture of the fish with another certificate containing the same details going to the tagger of the fish. A sample certificate is in *figure 1*.

For members of the fishing public that catch a tagged fish the service standard for Austag is that written feedback is to be provided within 10 working days (see AM/WI02) where the tag and recapture details are available. Where the tag details are not available it is necessary to trace that information as quickly as possible so that the certificate can be forwarded.

Certificates to ANSA taggers can be forwarded direct to the individual or through the relevant Club.

Incentives for the Reporting Recaptures

Some Austag programs or specific projects provide a reward for the reporting of recaptured tagged fish. Rewards may take the form of t-shirts, caps, badges, drink coolers and sometimes cash. Wherever a reward is provided it should be sent out with the certificate to the fisher. Rewards are most often used where there is the need for the fish frame to be retained.

Keep Frame

In some tagging projects fish have been chemically marked to assist with ageing of the fish. In these cases the frame of the fish is required so that the otolith can be recovered (see WI/T06). These fish have "KEEP FRAME" included on the tag.

Such fish can be filleted as normal however the frame, including the head should be kept frozen until it is collected. When these fish are reported it is important that arrangements should be made with the relevant researcher to have the frames collected as soon as possible.



Figure 1: Austag Tag and Recapture Certificate provided to Fisher and Tagger

Records:

Details of recaptures of tagged fish are recorded by the State Tagging Coordinator in the Recaptured Tagged Fish register and then entered in the database. Once the details of recaptured tagged fish are entered into the database certificates can be printed along with a covering letter explaining the program and the recapture.

Resources:

1800 toll free hotline number, Recaptured Tagged Fish form QF 0020/1 and register, computer, access to Infish 2006 or Infotag 2000 and blank Austag Tag and Recapture certificates, standard covering letter to be forwarded with certificate.



TAG RETURN CHECK SHEET NO:

TAG NO	ANGLER		SPECIES	DATE	LOA/LCF		LOCATION	ADDRESS /COMMENTS			
K14028	JOHN DICKENS	R	S	BARRAMUNDI	14/3/95	990MM	E	FITZROY RIV/	12 THISTLE ST	K	F
	079-297-444	C	O				M	PIRATE PT	ROCKHAMPTON 4700	R	C
RR22391	CRAIG ABLETT	R	S	SQUIRE	22/3/95	290MM	E	BEHIND GREEN IS	98 IRONSIDE ST	K	F
	07-822-2222	C	O			255MM	M	MORETON BAY	THORNSIDE 4158	R	C
FH04815	ROY POINTON	R	S	FLATHEAD	29/7/94	675MM	E	KALINGA BANK	POST OFFICE	K	F
FH04816	NO PHONE	C	O				M		RUSSELL ISLAND 4184	R	C
K03071	PAUL REIS	R	S	DART	25/3/95	-	E	MOOLOOLABA BCH	234 HOLDEN ST	K	F
	07-288-5555	C	O				M		COLLINGWOOD PARK 4301	R	C
R=Recreational C=Commercial S=Scientific O=Other E=Estimated M=Measured K=Kept R=Released F=File C=Certificate CIRCLE DETAILS APPROPRIATE TO EACH RECAPTURE											

TAG NO: Tag number (or numbers if 2 tags)

ANGLER: Name and phone number of person who recaptured fish

CIRCLE DETAILS: Circle whether angler was R = recreational C = commercial S = scientific O = other

SPECIES: Common name for species so that it can be cross matched with tag details

DATE: Date fish recaptured

LOA/LCF: LOA Length Over All (tip of snout to furthest tip of tail) and LCF Length Caudal Fork (tip of snout to inside fork of tail)

CIRCLE DETAILS: Circle whether lengths were estimated or measured

LOCATION: Location where fish recaptured getting as much detail as possible

ADDRESS/COMMENT: Address of angler where certificate and recapture details can be sent

CIRCLE DETAILS: Circle whether K = kept of R = released F = filed in database and C = certificate issued

Figure 2: Sample Recapture Form QF 0020/1 used to collect data on Recaptured Tagged Fish



FISHING TRIP AND TAGGING MANUAL

Australian National Sportfishing Association Ltd



FISHING TRIP AND TAGGING DATABASE	
Work Instruction No: AM/WI 11	Issue: 5
Pages: 3	Date issued/revised: 19 March 2006
Approved by: R&D Director	Prepared by: Austag Coordinator

Associated Documents:

AM/WI07	Collecting Fishing Trip and Tag Data
AM/WI10	Recaptured Tagged Fish
AM/WI02	Austag Service Standards
AM/WI12	Austag Awards
AM/WI01	Austag Management

Replaced Documents:

WI/T09	Tag and Trip Database (1 July 2003)
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Aim:

This Work Instruction provides details of the Infofish 2006 database that is the standard database used to collect tag and fishing trip details in Austag.

Scope:

This Work Instruction applies to State Tagging, Club Tagging Coordinators and individual taggers who are collecting data for entry to the Infofish 2006 database.

Responsibility:

The Suntag Coordinator is responsible for maintaining data in Infofish 2006. Other ANSA State Tagging Coordinators are responsible for maintaining data in Infotag 2000.

Procedure:

Minimum Hardware/Software Requirements

The minimum requirements to access Infofish 2006 are:

- Windows based PC
- Windows 2000 or Windows XP
- Access to the Internet via ADSL

Authorised Access to Infofish 2006

Access to Infofish 2006 is limited to those users that have an approved login and password. To obtain a login contact Infofish Services at infofish@zbc.com.net.

Access is limited to read only access and also limited to specific sections of the database depending in the level of authorisation provided.

Virus Protection



Virus scanning software with current virus detection files should be in use on all PCs accessing Infofish 2006 to minimise the possibility of damage to the database from virus infection.

Data Collected in Infofish 2006

Four levels of data are collected through Infofish 2006:

- Data on tags issued and used (see AM/WI05)
- Data on tagged fish (see AM/WI07)
- Fishing trip catch and effort data (see AM/WI09)
- Scientific data (see AM/WI07)
- Recapture data for tagged fish (see AM/WI10)

Fish Trip Sheet

An electronic fishing trip sheet Infofish 2006 e-trip (see AM/WI07) is available to record all details of a fishing trip for entry to Infofish 2006. All data is collected on this form for upload to Infofish 2006.

Each Infofish 2006 e-trip is stored on hard disk and as a paper copy to provide a permanent record of each fishing trip. Paper records of Infofish 2006 trip sheets should be maintained in individual fisher files and archived after 3 years.

Fish Species Names

Fish species names recorded in Infofish 2006 are in accordance with Standard Fish in Australia located at http://www.marine.csiro.au/caabsearch/caab_search.fish_names_list.

Importing Data from Infotag Databases

Data from the superseded database Infotag 2000 will be transferred to the Infofish 2006 e-trip for entry to Infofish 2006.

Importing Data from Other Database Systems

While data is preferred to be collected through Infofish 2006 e-trip it can be collected in a range of database or spreadsheet programs. Provided the data conforms to the standards required by Austag it can be transferred to the Infofish 2006 e-trip for uploading to Infofish 2006.

Any club or individual proposing to collect data in a non standard database should check with the Austag Coordinator for the minimum requirements for data entry.

Infofish 2006 stores all data collected as part of Austag programs. A standard process is maintained for backup of the database.

State Tagging databases using Infotag 2000 will be maintained until they are transferred to Infofish 2006. This is the only site where a complete dataset of State



FISHING TRIP AND TAGGING MANUAL

Australian National Sportfishing Association Ltd



records is maintained although clubs and individuals may maintain a parallel set of data covering their own specific data.

Resources:

Infotag 2006 database, Infotag 2000



AUSTAG AWARDS	
Work Instruction No: AM/WI 12	Issue: 4
Pages: 2	Date issued/revised: 19 March 2006
Approved by: R&D Director	Prepared by: Austag Coordinator

Associated Documents:

AM/WI03 Tagging Projects

Replaced Documents:

WI/T11 Austag Awards (1 July 2003)

Aim:

This Work Instruction provides information on the requirements and processing of Austag awards.

Scope:

This Work Instruction is applicable to all projects being undertaken in Austag.

Responsibility:

ANSA State Tagging Coordinators are responsible for processing all awards. Club Tagging Coordinators, State Tagging Coordinators and National Recorder are responsible for processing Tagging Masters awards.

Procedure:

Available Awards

There are 3 current Austag awards that are available:

- Tagging Achievement Award
- Tagging Excellence award
- Frequent Tagger Award

Tagging Achievement Award

The national Tagging Achievement Award (TAA) award will commence on 1/7/2001 upon the termination of the Tagging Master award. The requirements for the award will be the same as for the Tagging Master with fish tagged after 1/1/93 being eligible.

This award is determined only once a year and requires no application. The State Tagging Coordinator will determine after 31 August each year the number of taggers that have achieved the award in the preceding financial year. That determination will be based on the total number of fish tagged from 1/1/93 to 30



June in the current year. Each State Tagging Coordinator will advise the Austag Coordinator of taggers that qualify by 30 September each year.

The award will be in the form of a National Tagging Achievement certificate.

Tagging Excellence Award

The national Tagging Excellence Award (TEA) is the same as the TAA however a total of 2,000 tagging points are required to qualify eg in Suntag for Barramundi a total of 670 fish are required to be tagged. This award commences on 1/7/2001. The process for determination of the award is the same as for the TAA.

The award will be in the form of a framed National Tagging Excellence Award certificate.

Frequent Tagger Award

This award recognises taggers that gain a minimum of 1,000 points. Each fish is worth 1 point regardless of the species. All species on the Tagging Species or Project list in a particular state are eligible. Points can be accumulated in different states. This award commenced on 1/11/2000 and fish tagged after 1/1/85 are eligible and points can be accumulated over any time period.

The form of the award is:

- Certificate of recognition as a Frequent Tagger
- Personal copy of the Austag Sportfish Tagging Report (or equivalent annual report)
- Personal service direct from the relevant State Tagging Coordinator for tags and tagging certificates
- Priority for the issue of tags
- Can obtain up to 200 tags at a time from the relevant State Tagging Coordinator
- Presentation package in recognition of reaching Frequent Tagger status.

No application for this award is required. The State Tagging Coordinator will check the tagging database quarterly to determine taggers that qualify. A letter will be sent to each tagger that attains that status.

Records:

Details of fish tagged in each of the Austag programs are maintained in each of the State tagging databases.

Resources:

Austag databases, inbuilt reports in the database are available to calculate the TAA and TEA.