

# Submitting Your Auxiliary Marker Data to the North American Bird Banding Program

### How to use this guide:

Explore how to submit your auxiliary marker data to the BBL/BBO using the Bander Portal Data Submission tool. Each "marking" scenario below includes: an example photo of a type of auxiliary marked bird, list of the codes to be used, and a screenshot of what the completed banding/recapture templates should look like. Blank data entry templates can be found on the Bander Portal and the full list of auxiliary marker codes can be found <a href="https://example.com/here/bander-portal-photo">here</a>.

Helpful Hint: Not sure which marker code to use or want to make sure you are using the right one? These codes are listed on each auxiliary marking segment on your permit. U.S. permit holders can view and print a current copy of your permit by logging into the Bander Portal and accessing the Permit tab, Print Permit link. If the marking authorization is incorrect, please contact the permits office at bbl\_permits@usgs.gov (U.S.) or bbo@ec.gc.ca (Canada).

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#### Marker Bird Status Codes Quick Guide:

For examples listed below, Bird Status Codes are presumed to be 3 - wild bird that was caught and released in the same day. Please review <u>bird status codes and extra info codes</u> for a complete list of all status codes. Here's a basic list of bird statuses to get you started:

- Bird status for data entry = Bird Status combined with Bird Status Extra Info Code, e.g.: bird status 3 (normal wild bird) + extra info code 00 (federal metal band only) = 300
- A bird with *one marker type* is usually the bird status extra info code matching the marker code = 301, 302, 375, 380, etc.
- A bird with two or more marker types = 325
- A bird that is *blood sampled* and receives *one or more auxiliary markers* = 319
- Swabs, oiled, spotlighted plus auxiliary markers have their own bird status extra info codes. Refer to look-up table in template or Bander Portal.

### A Note On Recaptures:

The recapture template has marker details "at capture" and "at release" options for auxiliary marker information. "At capture" marker information refers to all markers already on the bird when it is captured. "At release" marker information refers all markers placed on the bird during that recapture and/or remaining on that bird when released. The bird status will be that of the bird at release (for example: a bird captured with a transmitter that is then removed - the bird status returns to 300 or a bird captured with only a metal band and a radio transmitter added - the bird status changes to 381).

IMPORTANT! Submitting recapture data is required if a bird status changes upon recapture.

While all other recapture data is optional, you must submit all recaptures with status changes to the North American Bird Banding Program (BBL/BBO).

Additionally, if you recapture a banded bird that was not originally banded under your permit, please do not handle this bird in any manner which may bias the data that has already been collected on it. As outlined in the permit conditions listed on the back of U.S. permit, this includes anything that may alter the bird's survival potential, behavior, or other normal characteristics. More specifically, this includes adding or removing bands or auxiliary markers from previously banded birds or changing the status of birds banded by foreign schemes.

# Plastic Colored Leg Bands



Semipalmated Plover. Bird banded under federal permit. Photo courtesy of David Bell.

Bird with plastic colored leg bands and a federal metal band.

#### Possible codes:

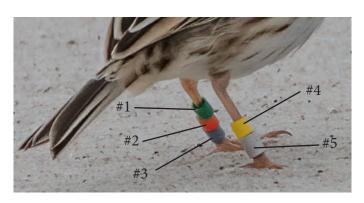
Code	Description
00	Federal Metal Band
01A	Plastic Color Leg Band

#### Helpful Hint(s):

- Please include the federal metal band in the auxiliary marker section when it is a part of a color combination.
- Use "silver" to denote the federal band.

K	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG
Bird	Marker	Marker	Marke	Marke r code		Placed	l Markei	Marker	Marker	Marker code		Placed on Leg
Status	Type 1	Code 1	color 1	L color 1	l Bird 1	on Leg	1 Type 2	Code 2	color 2	color 2	Bird 2	2
301	00		silver		L	LA	01A		white		L	LB
	•						•					
	AH	Al	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS
	Marker	Marker		Marker code	Side of	Placed	Marker	Marker		Marker code	Side of	Placed
		Code 3		color 3			Type 4					on Leg 4
				color 5								
	01A		blue	L	.   [	.B	01A		red		R	LB

How the NABBP would like color combinations ordered in the template (top to bottom, left to right):



- "Place on leg" refers to whether the band is placed above the joint (LA) or below the joint (LB).
- In the template, for the "marker color" and "marker code color" sections you can write out the color (not case-sensitive) or use the color codes found in the template's lookup tables.

# **Coded Anodized Colored Leg Bands**



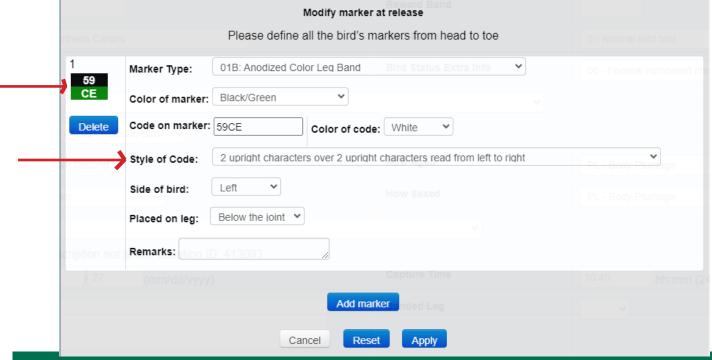
K	V	W	X	Υ	Z	AA
				Marker		
Bird	Marker	Marker	Marker	code	Side of	Placed
Status	Type 1	Code 1	color 1	color 1	Bird 1	on Leg 1
301	01B	59CF	black/green	silver	1	LB

Bird with a coded anodized leg band and federal metal band.

#### Possible codes:

Code	Description
01B	Anodized Color Leg Band

- When field readable bands are present, the federal band does not need to be included in the marker portion of the template.
  - Only enter the actual code for "marker code". Does not need "/", "over", "on", or a space, as that indicates position (or style) not code.
  - To add Style of Code, you will need to upload your template to the Portal, and navigate to the "Modify auxiliary marker at release" link. Then you can select the description that best fits. The example marker in the top left will display your selection (see photo below).



# **Coded Plastic Colored Leg Bands**



American Oystercatcher, Bird banded under federal permit. Photo courtesy of Hannah Floyd

Bird showing two plastic color leg bands with a triangle style code and a federal metal band.

#### Possible codes:

Code	Description
01A	Plastic Color Leg Band

### **Helpful Hint(s)**:

- Please do not include things like "/," "over,"
   "on," or a space in the "marker code" field.
- Be sure to enter all the bands on the bird in the template. One for each leg.

K	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG
				Marker						Marker		Placed
Bird	Marker	Marker	Marker	code	Side of	Placed	Marker	Marker	Marker	code	Side of	on Leg
Status	Type 1	Code 1	color 1	color 1	Bird 1	on Leg 1	Type 2	Code 2	color 2	color 2	Bird 2	2
301	01A	J22	orange	black	L	LA	01A	J22	orange	black	R	LA

 Only enter the field-readable code in the "marker code" field. DO NOT include the dots or lines that seperate the codes. This information can be added to the remarks field.

# Coded Plastic Colored Leg Bands Continued...



Common Loon. Bird banded under federal permit. Photo courtesy of Walter Piper.

Bird showing a plastic leg bands with patterns and federal metal band.

#### Possible codes:

Code	Description
01A	Plastic Color Leg Band

#### Helpful Hint(s):

If symbols or patterns are used as a code on colored bands:

- Enter special character as is (%\$#@/>\*).
- For a stripe only enter "Stripe" as the marker code.
- For a dot only enter "Dot" as the marker code.

K	V	W	X	Υ	Z	AA	AB	AC	AD	AE	AF	AG
				Marker						Marker		Placed
Bird	Marker	Marker	Marker	code	Side of	Placed	Marker	Marker	Marker	code	Side of	on Leg
Status	Type 1	Code 1	color 1	color 1	Bird 1	on Leg 1	Type 2	Code 2	color 2	color 2	Bird 2	2
301	00		silver		L	LB	01A		orange		L	LB

AH	Al	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS
			Marker						Marker		Placed
Marker	Marker	Marker	code	Side of	Placed	Marker	Marker	Marker	code	Side of	on Leg
Type 3	Code 3	color 3	color 3	Bird 3	on Leg 3	Type 4	Code 4	color 4	color 4	Bird 4	4
01A	stripe	red	white	R	LB	01A	dot	green	white	R	LB

### Quick guide to submitting multi-colored leg bands:

Sometimes a single-colored leg band may have multiple colors.

- If using a two-colored band, please refer to the color guide <a href="here">here</a>. (Note: this information can also be found in the lookup tables in the Bander Portal and template). The first color listed will be the top color, the second color will be the bottom color. Note, if your color pair is not listed on the guide, please use "miscellaneous" or code "17," and include the color in the remarks field.
- In cases where 3 or more colors are used on a single colored leg band use the option "multi-color" or code "99," and include the color in the remarks field.

# Painted Aluminum Colored Leg Bands



Gray Hawk. Bird banded under federal permit. Photo courtesy of Michael Stewart.

Bird showing an aluminum colored leg band and federal metal band.

#### Possible codes:

Code	Description
01C	Painted alum. Color Leg Band

- When field readable bands are present, the federal band does not need to be included in the marker portion of the template.
- Only enter the actual code for "marker code." Does not need "/," "over," "on," or a space, as that indicates position (or style) not code.

K	V	W	Х	Υ	Z	AA
				Marker		
Bird	Marker	Marker	Marker	code	Side of	Placed
Status	Type 1	Code 1	color 1	color 1	Bird 1	on Leg 1
301	01C	25	red	black	L	LB

# Tape Over Aluminum Colored Leg Bands



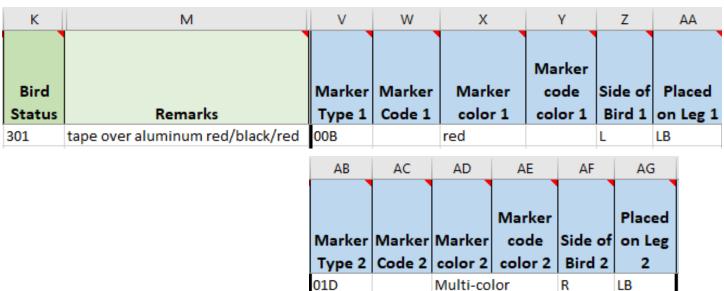
Bird showing a tape over a aluminum colored leg band and a anodized federal metal band.

#### Possible codes:

Code	Description
01D	Tape over alum. Color Leg Band

### Helpful Hint(s):

Only one metal band per leg is allowed.



### Quick guide to submitting multi-colored leg bands:

Sometimes a single-colored leg band may have multiple colors.

- If using a two-colored band, please refer to the color guide <a href="here">here</a>. (Note: this information can also be found in the lookup tables in the Bander Portal and template). The first color listed will be the top color, the second color will be the bottom color. Note, if your color pair is not listed on the guide, please use "miscellaneous" or code "17," and include the color in the remarks field.
- In cases where 3 or more colors are used on a single colored leg band use the option "multi-color" or code "99," and include the color in the remarks field.

# **Colored Federal Bands**



Purple Martin. Bird banded/marked under federal permit. Photo courtesy of Antonio Quezon.

Bird with an anodized leg band and a painted federal metal band.

#### Possible codes:

Code	Description
00	Federal Metal Band
00B	Federal Metal Band (Anodized)
00C	Federal Metal Band (Painted)
00D	Tape over Federal Metal Band
01B	Anodized Colored Leg Band

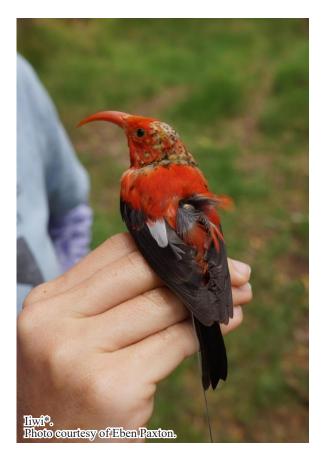
### Helpful Hint(s):

 Colored USGS federal metal bands are considered a bird status of 301. Think of it as an additional identifier to the standard federal metal band.

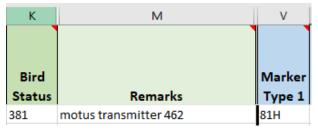
K	V	W	X	Υ	Z	AA	AB	AC	AD	AE	AF	AG
				Marker						Marker		Placed
Bird	Marker	Marker	Marker	code	Side of	Placed	Marker	Marker	Marker	code	Side of	on Leg
Status	Type 1	Code 1	color 1	color 1	Bird 1	on Leg 1	Type 2	Code 2	color 2	color 2	Bird 2	2
301	00C		yellow		L	LB	01B	MD1234	purple	white	R	LB

- If the state abbreviation are included in the marker code, please be sure to include them in the Marker Code section.
- If you used cerakote to color federal bands please mention this in the remarks section.

## **Radio Transmitters**







<sup>\*</sup>Birds banded/marked under federal permit.

Bird with a radio transmitter (includes VHF transmitters, MOTUS tags, transmitters with remote download or base station transfer, Beeper tags). Do not need to recapture the bird; data are transmitted locally.

#### Possible codes:

Code	Description
81A	Radio Transmitter (tail mount)
81B	Radio Transmitter (back pack)
81C	Radio Transmitter (leg attachment*)
81D	Radio Transmitter (surgical implant)
81E	Radio Transmitter (subcutaneous)
81F	Radio Transmitter (neck attachment*)
81G	Radio Transmitter (other)
81H	Radio Transmitter (leg-loop harness)
81J	Radio Transmitter (glue to skin or feathers)
81K	Radio Transmitter (prong and suture)

- Please include transmitter type and code in the remarks field. Do NOT put transmitter codes and colors in the auxiliary marker data fields. Marker color and code are for field-readable codes only. Note only the color and code of the marker your transmitter might be attached to (see page 14).
- \*Leg and neck attachment methods should be paired with a colored leg band/neck collar (status 325). See page 14 for examples.
- Make sure to select the proper harness attachment technique. Backpack harnesses are looped around the wings and sit on the upper back. Leg-loop harnesses loop around the upper legs and sit on the lower back.
- Novel or experimental attachment techniques that do not have a code option, should have the attachment method of "Other". If you have been assigned this attachment type, it will be listed on your permit authorizations.

# Satellite/Cell GPS Transmitters



K	М	V
Bird		Marker
Status	Remarks	Type 1
380	satellite transmitter 1234	80B



Bird		Marker
Status	Remarks	Type 1
380	sunbird tag leg-loop, 9999	80H

<sup>\*</sup>Birds banded/marked under federal permit.

Bird with a satellite/cell transmitter (includes Argos satellite transmitters, GSM-GPS transmitters, Cell network transmitters, PTTs). Do not need to recapture the bird, data are transmitted via satellite or cellular network.

#### Possible codes:

Code	Description
80A	Satellite/Cell GPS Transmitter (tail mount)
80B	Satellite/Cell GPS Transmitter (back pack)
80C	Satellite/Cell GPS Transmitter (leg attachment*)
80D	Satellite/Cell GPS Transmitter (surgical implant)
80E	Satellite/Cell GPS Transmitter (subcutaneous)
80F	Satellite/Cell GPS Transmitter (neck attachment*)
80G	Satellite/Cell GPS Transmitter (other)
80H	Satellite/Cell GPS Transmitter (leg-loop harness)
80J	Satellite/Cell GPS Transmitter (glue to skin or feathers)
80K	Satellite/Cell GPS Transmitter (prong and suture)

- Please include transmitter type and code in the remarks field.
  Do NOT put transmitter codes and colors in the auxiliary
  marker data fields. Marker color and code are for fieldreadable codes only. Note only the color and code of the
  marker your transmitter might be attached to (see page 14).
- \*Leg and neck attachment methods should be paired with a colored leg band/neck collar (status 325). See page 14 for examples.
- Make sure to select the proper harness attachment technique. Backpack harnesses are looped around the wings and sit on the upper back. Leg-loop harnesses loop around the upper legs and sit on the lower back.
- Novel or experimental attachment techniques that do not have a code option, should have the attachment method of "Other". If you have been assigned this attachment type, it will be listed on your permit authorizations.

# Data Loggers/Geolocators



K L M

Bird Marker
Status Remarks Type 1

390 Pinpoint GPS tag, 17789 90H



K	L	M
Bird		Marker
Status	Remarks	Type 1
390	geolocator (leg-loop harness), 123	90H

<sup>\*</sup>Birds banded/marked under federal permit.

Bird with a datalogger (includes geolocator, archival GPS tags, biologgers, and TDRs). Need to capture the bird again to collect the data from the device.

#### Possible codes:

Code	Description
90A	Data Logger/Geolocator (tail mount)
90B	Data Logger/Geolocator (back pack)
90C	Data Logger/Geolocator (leg attachment*)
90D	Data Logger/Geolocator (surgical implant)
90E	Data Logger/Geolocator (subcutaneous)
90F	Data Logger/Geolocator (neck attachment*)
90G	Data Logger/Geolocator (other)
90H	Data Logger/Geolocator (leg-loop harness)
90J	Data Logger/Geolocator (glue to skin or feathers)
90K	Data Logger/Geolocator (prong and suture)

### Type 1 Helpful Hint(s):

- Please include transmitter type and code in the remarks field. Do NOT put transmitter codes and colors in the auxiliary marker data fields. Marker color and code are for field-readable codes only. Note only the color and code of the marker your transmitter might be attached to (see page 14).
- \*Leg and neck attachment methods should be paired with a colored leg band/neck collar (status 325). See page 14 for examples.
- Make sure to select the proper harness attachment technique. Backpack harnesses are looped around the wings and sit on the upper back. Leg-loop harnesses loop around the upper legs and sit on the lower back.
- Novel or experimental attachment techniques that do not have a code option, should have the attachment method of "Other". If you have been assigned this attachment type, it will be listed on your permit authorizations.

# PIT/RFID Tags



Birds with PIT/RFID tags.

#### Possible codes:

Code	Description
75A	PIT tag (tail mount)
75B	PIT tag (back pack)
75C	PIT tag (leg attachment*)
75D	PIT tag (surgical implant)
75E	PIT tag (subcutaneous)
75F	PIT tag (neck attachment*)
75G	PIT tag (other)
75H	PIT tag (leg-loop harness)
75J	PIT tag (glue to skin or feathers)
75K	PIT tag (prong and suture)

K	V	W	Х	Υ	Z	AA	AB
				Marker			
Dinal	Marker	Maultan	Marker		cida at	Placed	Mankan
Bird	Iviarker	iviarker	iviarker	code	Side of	riaced	iviarker
		Code 1	color 1			on Leg 1	l I

- Please include transmitter type and code in the remarks field. Do NOT put transmitter codes and colors in the auxiliary marker data fields. Marker color and code are for field-readable codes only. Note only the color and code of the marker your transmitter might be attached to (see page 14).
- \*Leg and neck attachment methods should be paired with a colored leg band/ neck collar (status 325). See page 14 for examples.
- Make sure to select the proper harness attachment technique. Backpack
  harnesses are looped around the wings and sit on the upper back. Leg-loop
  harnesses loop around the upper legs and sit on the lower back.
- Novel or experimental attachment techniques that do not have a code option, should have the attachment method of "Other". If you have been assigned this attachment type, it will be listed on your permit authorizations.

# Transmitters with Leg/Neck Attachment Method



Transmitter attached to a plastic colored leg band.

#### Possible codes:

Code	Description
01A	Plastic Color Leg Band
75C	PIT tag (leg attachment)
80C	Satellite/Cell/GPS Transmitter (leg attachment)
81C	Radio Transmitter (leg attachment)
90C	Data Logger/Geolocator (leg attachment)

#### **Helpful Hint(s)**:

• Transmitters attached to a colored leg band are considered two seperate markers (bird status extra info code of 25).

K	L	М	N	0	P	Q	R	S	Т	U	V	W	X
					Marker		`				Marker		
Bird		Marker	Marker	Marker	code	Side of	Placed	Marker	Marker	Marker	code	Side of	Placed
Status	Remarks	Type 1	Code 1	color 1	color 1	Bird 1	on Leg 1	Type 2	Code 2	color 2	color 2	Bird 2	on Leg 2
	geolocator attached to yellow												
325	band, with "please return to XXX"	01A		yellow		L	LB	90C					



Bird with a satellite transmitter neck collar.

#### Possible codes:

Code	Description
02	Neck Collar
80F	Satellite/Cell/GPS Transmitter (neck attachment)
81F	Radio Transmitter (neck attachment)
90F	Data Logger/Geolocator (neck attachment)

#### Helpful Hint(s):

• Neck collar transmitters are considered two separate markers, despite the increasing integration between the two (bird status extra info code of 25).

K	М	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG
					Marker						Marker		Placed
Bird		Marker	Marker	Marker	code	Side of	Placed	Marker	Marker	Marker	code	Side of	on Leg
Status	Remarks	Type 1	Code 1	color 1	color 1	Bird 1	on Leg 1	Type 2	Code 2	color 2	color 2	Bird 2	2
325	satellite transmiter code 1234567	02		brown				80F					

# **Neck Collars**



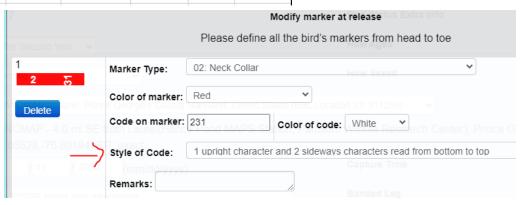
ı	K	V	W	X	Υ	Z	AA
					Marker		
	Bird	Marker	Marker	Marker	code	Side of	Placed
			Code 1		color 1	Bird 1	on Leg 1
ľ	302	02	231	red	white		

Bird with a neck collar.

#### Possible codes:

Code	Description
02	Neck Collar

- Please enter the characters in the order pictured (see bottom photo) for neck collars that have vertical and horizontal orientation.
- You may also select the Style of Code, once you upload your data to the Bander Portal, by navigating to the "Modify auxiliary marker at release" link and selecting the best fit (see photo below).



How the NABBP would like these codes ordered in the template:



# **Patagial/Wing Tags**



Bird with patagial or wing tags.

### Possible codes:

Code	Description
39A	Patagial/Wing Tag

- If the bird has a wing tag on both sides, you will need to include two seperate marker entries, indicating left (L) and right (R).
- In addition, descriptions of the font type in the remarks can be helpful (e.g. handwritten or machine made).

K	V	W	X	Υ	Z	AA	AB	AC	AD	AE	AF	AG
				Marker						Marker		Placed
Bird	Mark	Marker	Marker	code	Side of	Placed	Marker	Marker	Marker	code	Side of	on Leg
Statu	s Туре	1 Code 1	color 1	color 1	Bird 1	on Leg 1	Type 2	Code 2	color 2	color 2	Bird 2	2
339	39A	E15	green	white	L		39A	E15	green	white	R	

# Leg Flags



Bird with a leg flag and federal metal band.

#### Possible codes:

Code	Description
69	Leg Flag

- Be sure to include both the color of the marker AND the color of the code. There are many similar codes and colors and it is important to distinguish whether a code is white or black (for example) to be able to identify an individual.
- In cases where the leg flag is not coded and color band(s) are included, it is helpful to include federal metal band in the auxiliary marker fields.

K	V	W	Х	Y	Z	AA
				Marker		
Bird	Marker	Marker	Marker	code	Side of	Placed
Status	Type 1	Code 1	color 1	color 1	Bird 1	on Leg 1
369	69	EEH	green	white	L	LA

# Web/Toe Tags



Birds with web tags or toe tags.

#### Possible codes:

Code	Description
59	Web/ Toe Tag

### **Helpful Hint(s)**:

before they are large enough for leg bands. If the bird is captured later for banding, the web tag will need to be included in both the "at capture" and "at release" auxiliary marker fields. You will need to add the "at capture" fields after uploading the template to the Bander Portal. After selecting the necessary record, click the "Copy marker from marker at release" link on the modify banding screen (see photo below).

K	V	W	X Y		Z	AA
				Marker		
Bird	Marker	Marker	Marker	code	Side of	Placed
						Placed on Leg 1

#### Auxilliary Marker(s)

Aux. Marker at Capture To modify marker at capture click here

Copy marker from marker at release

Aux. Marker at Release

Web/Toe Tag: MD2089 Silver on

To modify marker at release click here

Copy marker from marker at capture

# Dye



Bird with wing dye, plastic color leg bands, and a federal metal band.

#### Possible codes:

Code	Description
08A	Breast Dye/Paint
08B	Tail Dye/Paint
08C	Wing Dye/Paint
08D	Head/Neck Dye/Paint
08E	Multiple Areas Dye/Paint
08F	Tail Streamer Temporary Marker
08G	Imped feather Temporary Marker
08H	Glued Temporary Marker
08I	Misc. Temporary Marker

K	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG
				Mark	ær					Marker	•	Placed
Bird	Marker	Marker	Marke	r cod	e Side o	of Place	d Mark	er Marke	Marke	r code	Side o	on Leg
Status	Type 1	Code 1	color :	1 colo	r 1 Bird	1 on Leg	1 Type	2 Code	2 color 2	color 2	Bird 2	2 2
325	00		silver		L	LB	01a		dark blu	ie	R	LB
	•		'	'	1		•	1	'	1	'	
	AH	Al	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS
				Marker						Marker		
	Marker	Marker	Marker	code	Side of	Placed	Marker	Marker	Marker	code	Side of	Placed
	Type 3	Code 3	color 3	color 3	Bird 3	on Leg 3	Type 4	Code 4	color 4	color 4	Bird 4	on Leg 4
	01a		dark gree	n	R	LB	08C		blue/gree	n I	2	

### **Helpful Hint(s)**:

 Check out your permit authorizations on the Bander Portal, under the Permits tab, Athorizations link. There you will be able to see the species, dye placement, and colors assigned to you.