FINAL VERSION: Key of answer codes and clarifications

This key presents answer codes and clarifications for the FINAL VERSION of the recovery planning "instrument". You will need to reference this key as you enter data into the spreadsheets. The key also presents/reiterates the general standards you must maintain when reviewing recovery plans and entering data. READ THE ENTIRE KEY CAREFULLY BEFORE YOU BEGIN REVIEWING RECOVERY PLANS.

First, a few words on the instrument. It is an Excel 5.0/95 workbook file containing 13 individual worksheets, which we will refer to as "Forms." If you do not have Excel 5.0/95 (or higher) on your computer, you should find a computer at your school and print it there. These forms are an important component of the data submission phase, so do not rearrange the sheets of your Excel file. In addition, do not modify the structure of the forms. Most of these forms are simply the matrices you've encountered in the old versions of the instrument, but several of the large matrices have been split into more manageable units.

Although at first glance the FINAL instrument appears larger than prior versions, this is simply an artifact of the structural changes we made, such as splitting matricies into two or three pieces and subsequently renumbering every item. The various content revisions we made actually reduced the size of the instrument.

Also worth noting is the trio of metadata questions repeated at the head of each Form. Be sure to fill these out! These fields will not only help you to keep track of your hardcopy printouts, but will also give us an easy means of flagging mismatched datasheets.

GENERAL STANDARDS FOR REVIEWING RECOVERY PLANS

Sources of information

You are reminded that the ONLY sources of information for filling out the instrument are:

- the Recovery Plan, and
- the listing document for the species.

For a limited number of questions, one of three alternative sources is also available to you. These alternative sources include:

- the FWS annual budget reports to Congress,
- the FWS biennial status reports to Congress, and
- the designated FWS contact person.

DO NOT consult the alternative sources unless specifically directed to do so by a particular question.

Note: We are aware that listing documents, FWS reports to Congress, and FWS contacts have not yet been provided to you. We are working with FWS to get this done. In the meantime, you may be able to locate the listing documents in the Federal Register. The Federal Register should be available in any government documents library. You will need to search for a FINAL RULE to list your species as threatened or endangered. Be careful not to get a Proposed Rule by mistake.

Note: For the Kokia plan, we are NOT going to consult an FWS contact.

Answering questions

YOU MUST BASE YOUR ANSWERS SOLELY ON THE INFORMATION AVAILABLE TO YOU IN THE SOURCES OF INFORMATION DESCRIBED ABOVE. If information necessary to answer the question is not presented in the recovery plan or listing document, then you must code an appropriate non-answer (see below). DO NOT infer an answer. DO NOT guess an answer.

Here are some rules of thumb regarding how literally/figuratively you are to read and interpret information:

- DO use your common sense to determine whether the information you need to answer a question is presented in the available sources. We can't expect the terminology in the instrument to exactly match that used in each of the recovery plans. Use prudent judgment to determine whether a question and a recovery plan are talking about the same thing but just using different words.
- DO NOT construct or fabricate an answer to a question using supposition, inference, or other expectations of your own. If the available information does not enable you to answer a question, you'll have to go with a "non-answer" option. At UW, we talked about a "direct line" link between information and an answer. If there is a direct link from information to an answer, go with it. If you have to justify an answer through some circuitous path of logic, argument, and/or supposition, then you're reading too much into it. Basically, don't derive an answer that depends on anything external to the available sources. You should be able to defend each answer by pointing to something specific in the information sources.
- DO NOT over-evaluate the information to make it difficult or impossible to answer a question. This rule of thumb is similar to the one just described above in that you are warned against over-thinking the information such that you construct or fabricate alternative answers. Examine the available information and draw the most "direct" conclusion to answer the question. Don't get embroiled in games like "Well, if you think about X in this way, then you could argue the answer to be B; but if you think about in this other way, then you could argue the answer to be A."

Answer codes

When entering data, it must be recorded as a standard code. The specific answer codes available for each question in the instrument are listed in this key; the codes are NOT provided in the instrument itself. The given codes are your only options for answering the questions. You MUST limit your answer to one of the options provided (please remember that the "0" is a zero and not a capital letter "o"). If you are unable to answer a particular question for some reason, then one of the following three answer codes may be used:

-1 = Can't determine the answer.

This code can be used if information necessary to answer the question is not available among the information sources, or if the available information is ambiguous such that a clear answer can not be determined. DO NOT use this code as a cop-out. Make sure that you make a genuine effort to answer a question before you resort to this answer code.

-2 = Not applicable.

This code can be used if a particular question is simply not applicable for the species and recovery plan being evaluated. For example, if the question relates to animals specifically, and you are a working on a plant, you would use this option.

-3 = We don't know why we don't know the answer.

Ideally, this code should never be used. It reflects a failure on the part of the evaluator to make a determination regarding the question.

You must answer EVERY question in the instrument. In other words, blank cells are not acceptable! If, for any reason, you feel that your answer to a particular question requires clarification, explanation, justification, etc., please record your comments in a text file to accompany your data set for the species. Be sure that the text file identifies you, the species and the recovery plan, and that each comment you make is referenced to the answer at issue by the appropriate row and column identifiers.

Organization of categories

In most of the matrices, specific categories are organized under more general headings. These headings are intended to provide some sense of organizational hierarchy and should help you determine if and when particular categories are relevant to your recovery plan and species. This will be especially pertinent if you have a specific issue that needs to be placed into an "other" category.

Multispecies plans

If you are assigned a species in a multispecies plan, you are to complete a questionnaire only for the assigned species. This is identified at the top of your copy of the recovery plan. You will fill out only one set of forms for each species. Each species to be evaluated will be recorded in its own set of forms. If more than one species are to be done from the same multispecies plan, you should receive a separate copy for each species with the species identified at the top.

Revised plans

If you are assigned a species that has a revised recovery plan, you must fill a total of 2 (two) instruments: One for the origional plan and one for the most recent revision. Please keep track which revision you are working on.

ANSWER CODES AND CLARIFICATIONS

FORM 1
Descriptive statistics about recovery plans

(Numbers 1-3 serve as reference metadata)	
1	Plan Code
2	Species Code
3	Student Code

4 Plan Code (as assigned)

5 Number of species in plan. Include both listed and non-listed species.
Clarification: Tally the number of species listed or cited in the title of the recovery plan.

6 Is this plan a single species plan, a multiple species plan, or identified as an ecosystem-based plan?
1 = Single species plan
2 = Multiple species plan
3 = Ecosystem-based plan

7 Total # of pages, including appendices

8 Total # of tasks in recovery outline
Clarification: The total number of tasks in a recovery plan will be defined by (and counted from) the tasks listed in the Implementation Schedule. If there is no Implementation Schedule, you want to count the tasks that are "deepest" into each branch of a step-down narrative.

9 Date recovery plan approved [YYYY]
10 Date recovery plan approved [MM] **e.g.**, January is 01.
11 Date recovery plan approved [DD] **e.g.**, the second of the month is 02.
Clarification: Parse the date into three separate fields, as indicated in the brackets above. If month and/or day is not specified, enter "0" into the appropriate field(s).

12 Has the original plan been revised?
0 = No
1 = Yes, once
2 = Yes, twice,
et cetera.

13 Date of 1st revision [YYYY]
14 Date of 2nd revision [YYYY]
15 Date of 3rd revision [YYYY]
16 Date of 4th revision [YYYY]
Clarification: For these dates, enter only the four-digit year.

17 Is this plan a revision of the species' recovery plan?
0 = No
1 = Yes, revision #1,
2 = Yes, revision #2,
et cetera.

18 What motivated revision of the recovery plan?
1 = New threats to species,
2 = New information about species' biology,
3 = Change in species' status,

4 = Scheduled revision,
5 = Political or administrative priority,
6 = Consolidation with other species' recovery plans

19 Who primarily drafted the plan?
1 = Recovery team,
2 = Private consultant,
3 = Academic scientist,
4 = USFWS/NMFS staff,
5 = Other individual/group
Clarification: This question aims to identify who put the recovery plan together. Base your selection of the appropriate answer code on the stated affiliation of the individual(s). A recovery team should be identified as such, but will certainly be comprised of >1 individual (i.e., a sole preparer is not a "team").

How many individuals from each category below actively participated in plan development (e.g. were a member of a recovery team)? Simply being consulted or submitting comments does not constitute participation under this question.

20 a. USFWS/NMFS employees
21 b. Other federal employees
22 c. State/local resource agency employees
23 d. Other state/local government employees
24 e. Tribal groups
25 f. Consultants
26 g. Private individuals
27 h. Business/industry representatives
28 i. Academic scientists
29 j. Environmental/conservation organization representatives
30 k. Other individuals not listed above
Clarification: Note that the FWS should always be a participant in developing a recovery plan.

31 What was the affiliation of the team leader or individual who drafted the plan?
0 = No leader/lead author,
1 = USFWS/NMFS,
2 = Other Federal agency,
3 = State resource agency,
4 = Other State agency,
5 = Local government agency,
6 = Tribal groups,
7 = Business/industry,
8 = Environmental/conservation organization,
9 = Consultants,
10 = Academia,
11 = Private citizenry,
12 = Multiple responses apply

32 Number of species experts involved in drafting the recovery plan?
Clarification: For this question, a "species expert" is defined as someone who is either explicitly identified as such in the recovery plan, or who is cited in the recovery plan or listing document as the author of one or more publications about the species.

33 Does the plan include an index of public comments?
0 = No,
1 = Yes

How many people/organizations from each category below submitted comments?

34 a. USFWS/NMFS employees
35 b. Other federal employees
36 c. State/local resource agency employees
37 d. Other state/local government employees
38 e. Tribal groups
39 f. Consultants
40 g. Private individuals
41 h. Business/industry representatives
42 i. Academic scientists
43 j. Environmental organization representatives
44 k. Other people/organizations not listed above

Clarification: This question is intended to cover any and all comments submitted regarding a recovery plan. We will not discriminate among solicited, unsolicited, and peer-reviewed comments.

FORM 2
Descriptive statistics about species

(Numbers 45-47 serve as reference metadata)
45 Plan Code
46 Species Code
47 Student Code

48 Genus name [e.g., "Pinus"]
49 Species name [e.g., "contorta"]
50 Taxonomic subdivision [e.g., "ssp. bolanderi"]
51 Taxonomic authority for lowest subdivision [e.g., "(Parl) Critchf."]
52 Common name [e.g., "Bolander pine"]

Clarification: Parse species name data into fields as indicated above. The example used in brackets is the Bolander pine, or *Pinus contorta* spp. *bolanderi* (Parl) Critchf.

53 Taxonomic level:
1 = Species,
2 = Subspecies/variety,
3 = Population

54 ESA listing status:
1 = Threatened,
2 = Endangered,
3 = Unlisted

55 Date of the species' ESA listing [YYYY]
56 Date of the species' ESA listing [MM] e.g., January is 01.
57 Date of the species' ESA listing [DD] e.g., the second of the month is 02.

Clarification: Parse the date into three separate fields, as indicated in the brackets above. If month and/or day is not specified, enter "0" into the appropriate field(s).

58 Has Critical Habitat been designated?
0 = No,
1 =Yes

Clarification: Information regarding the designation of critical habitat should be presented in the recovery plan section on conservation efforts or listing history. If not, you'll have to get that info from the FWS contact.

59 Date of Critical Habitat designation: [YYYY]

60 Date of Critical Habitat designation: [MM] e.g., January is 01.]

61 Date of Critical Habitat designation: [DD] e.g., the second of the month is 02.
Clarification: Parse the date into three separate fields, as indicated in the brackets above. If month and/or day is not specified, enter "0" into the appropriate field(s).

62 USFWS recovery priority for species [1 - 18, +/- C]
Clarification: This question asks for the recovery priority assigned to the species. Possible priorities range from 1 to 18, and may or may not have a C appended (e.g. 2, 5C, 7, 17C, etc.). The recovery priority for a species is assigned by FWS at the time of listing. If it is not in the listing document, you must get the priority from the FWS contact.

63 Does the plan refer to this species as a keystone species?
0 = No,
1 = Yes

64 Does the plan refer to this species as an umbrella species?
0 = No,
1 = Yes

65 Does the plan refer to this species as an indicator species?
0 = No,
1 = Yes

66 Species' taxon:
1 = Mammal,
2 = Bird,
3 = Reptile,
4 = Amphibian,
5 = Fish,
6 = Insect,
7 = Crustacean,
8 = Mollusk,
9 = Other inverts,
10 = Lichen,
11 = Non-vascular plant,
12 = Fern/fern ally,
13 = Gymnosperm,
14 = Angiosperm,
15 = Fungus

67 What is the species' principal ecological role?
1 = Primary producer,
2 = Herbivore,
3 = Predator,
4 = Omnivore,
5 = Parasite/pathogen,
6 = Detritivore,
7 = Decomposer

68 What is the species' home range radius?
0 = Sessile organism (e.g., plant)
1 = <1 meter,

2 = <10 meters,
3 = <100 meters,
et cetera, incrementing by powers of 10.

Clarification: Consider home range from the perspective of the individual over its lifetime. Choose the smallest value that applies. For example, if the species' home range radius is ~5 kilometers, the proper response code is 5 (corresponding to <10,000 meters).

69 How large was the historic range of the species?

1 = <1 sq. km,
2 = <100 sq. km,
3 = <10,000 sq. km,
4 = <50,000 sq. km,
5 = <1,000,000 sq. km,
6 = >1,000,000 sq. km

Clarification: A species' "range" is defined as the area within the minimum convex polygon that contains all individuals of the species. "Historic range" is defined according to its treatment in the recovery plan. If the recovery plan does not discuss a historic range, enter "-1". Note that the options represent increases in areal orders of magnitude (e.g. 1 x 1 km, 10 x 10 km, etc.). The 50,000 sq. km option is included because that value is a recognized standard for endemism according to Mike Scott (Idaho).

70 Within the historic range of the species, how were populations distributed?

1 = Dispersed throughout range,
2 = Somewhat aggregated across range,
3 = Tightly clumped within range,
4 = Only one population exists

Clarification: "Historic range" is defined according to its treatment in the recovery plan. If the recovery plan does not discuss a historic range, enter "-1".

71 How large was the range of the species at the time the plan was developed?

1 = <1 sq. km,
2 = <100 sq. km,
3 = <10,000 sq. km,
4 = <50,000 sq. km,
5 = <1,000,000 sq. km,
6 = >1,000,000 sq. km

Clarification: A species' "range" is defined as the area within the minimum convex polygon that contains all individuals of the species.

72 Within the range of the species at the time the plan was developed, how were populations distributed?

1 = Dispersed throughout range,
2 = Somewhat aggregated across range,
3 = Tightly clumped within range,
4 = Only one population exists

73 What is the principal ecotype in which the species occurs?

Forest
1 = Tropical rain forest
2 = Tropical deciduous forest
3 = Temperate rain forest
4 = Temperate evergreen forest
5 = Temperate deciduous forest
6 = Boreal forest
Woodland

7 = Evergreen woodland
8 = Deciduous woodland
9 = Mixed evergreen-deciduous woodland
Shrubland
10 = Evergreen shrubland
11 = Deciduous shrubland
12 = Mixed evergreen-deciduous shrubland
Dwarf-shrubland
13 = Evergreen dwarf-shrubland
14 = Deciduous dwarf-shrubland
15 = Mixed evergreen-deciduous shrubland
Herbaceous
16 = Temperate grassland
17 = Tundra
18 = Non-vascular terrestrial
Aquatic
19 = Swamp or marsh
20 = Lacustrine
21 = Riverine
22 = Estuarine
23 = Marine – coral reef/algal bed
24 = Marine – upwelling zone
25 = Marine – continental shelf
26 = Marine – open ocean
27 = Multiple

74 Is the species a habitat specialist or generalist?
1 = Habitat specialist
2 = Habitat generalist
Clarification: For the purposes of this question, we will define a "habitat specialist" as any species that is dependent on 1 or 2 particular habitats.

75 What is the successional stage of the species' principal habitat?
1=Early successional,
2=Mid successional,
3=Late successional

76 In what geographic region does the species occur?
1 = Alaska
2 = Hawaii
3 = Pacific Northwest
4 = Pacific Southwest
5 = Great Basin and Rockies
6 = Northern Great Plains
7 = Southern Great Plains
8 = Northeast
9 = Southeast
10 = Canada
11 = Mexico
12 = Central America
13 = South America
14 = Caribbean Islands
15 = Europe
16 = Asia

17 = Africa
18 = Australia
19 = Pacific Islands
20 = Marine – Atlantic
21 = Marine – Pacific
22 = Marine – Indian
23 = Marine – Arctic
24 = Multiple

77 Does the species occur in more than one country?
0 = No,
1 = Yes

78 Does the species occur in more than one state?
0 = No,
1 = Yes

79 USFWS/NMFS region responsible for coordinating recovery of species? [Text response]

Clarification: Indicate which organization the region pertains to and the region itself. e.g., USFWS region 5 or NMFS Southwest region.

80 What proportion of the species' primary habitat occurs on Federal vs. non-Federal land?
1 = Non-Federal land only,
2 = Less than half Federal land,
3 = More than half Federal land,
4 = All Federal land
Clarification: The options for this question are restricted to Federal/non-Federal land because those are meaningful distinctions for ESA protections and management. Further discrimination among State and private land would require a more complicated series of questions.

81 How much of the species' current range is actively managed to reduce threats?
1 = None,
2 = Some, but less than half,
3 = At least half, but not all,
4 = All

82 According to FWS reports to Congress, what is the most recent reported trend in species status?
1 = No change in status,
2 = Status is improving,
3 = Status is declining,
4 = Trend is unknown,

83 Does the recovery plan identify specific habitat areas that FWS considers important for recovery?
0 = No,
1 = Yes

84 Is there a recovery task to identify or re-evaluate such habitat?
0 = No,
1 = Yes

85 Does the recovery plan discuss actions that would constitute "take" of the species prohibited under section 9 of the Endangered Species Act?
0 = No,
1 = Yes

FORM 3 and FORM 4

(Numbers 86-88 serve as reference metadata for FORM 3)
86 Plan Code
87 Species Code
88 Student Code

(Numbers 127-129 serve as reference metadata for FORM 4)
127 Plan Code
128 Species Code
129 Student Code

Both FORM 3 and FORM 4 address a list of categories of biological information that might be used in developing or implementing a recovery plan. The list is intended to present a sufficient diversity of categories so that specific types of information in a recovery plan can be easily categorized. Obviously, not all categories will be relevant or applicable for any one species or plan. Use the default (negative) responses when appropriate.

In FORM 3, for each category you will answer a series of questions that ask about the biological information **content** of the recovery plan. These questions are identified by column letters A through F. In FORM 4, for each category you will answer a series of questions about **tasks** designed to collect the different types of biological information. These questions are identified by column letters G through K.

Note that this list of information categories appears verbatim on both FORM 3 and FORM 4, but with different numbers. Although this may seem unwieldy, splitting the series of column questions into two separate forms makes it easier to view and fill out the matrix. In the list below, the first column (89-126) corresponds to FORM 3 numbering, and the second column (130-167) corresponds to FORM 4 numbering.

Categories of biological information

HABITAT

89 130 General habitat affiliations
90 131 Amount/quality of general habitat
91 132 Amount/quality of feeding habitat
92 133 Amount/quality of breeding habitat
93 134 Amount/quality of migration habitat
94 135 Trends in habitat quality
95 136 Trends in habitat quantity
Clarification: By “trends” we mean any temporal changes in a quantity/quality.
96 137 Historic range
97 138 Current range
98 139 Habitat fragmentation/isolation
99 140 Other habitat information not captured in above categories

POPULATION BIOLOGY

100 141 Population size
101 142 Number of subpopulations
102 143 Trends in population size
Clarification: By “trends” we mean any temporal changes in the population.
103 144 Population trends by habitat types
104 145 Demographic (e.g., birth and death) rates
Clarification: “Demographic rates” include things like birth rates, death rates, immigration and emigration rates.
105 146 PVA/models
106 147 Other population biology information not captured in above categories

LIFE HISTORY

107 148 Life span
108 149 Mode of reproduction (e.g.,sexual, asexual,self-compatible,obligate outcrosser)
109 150 Clutch/litter size/seed production
110 151 Age of sexual maturity
111 152 Age/stage specific mortality rates
112 153 Age/stage specific fecundity rates
113 154 Other life history information not captured in above categories

GENETICS

114 155 Basic genetics
115 156 Genetic variation within populations
116 157 Genetic variation among populations
117 158 Gene flow between populations
118 159 Other genetics information not captured in above categories

BEHAVIOR

119 160 Dispersal behavior
120 161 Breeding behavior
121 162 Foraging behavior
122 163 Other behavior information not captured in above categories

GENERAL ECOLOGY

123 164 Direct interactions with other species
124 165 Indirect interactions with other species
125 166 Succession, predictable disturbance regimes
Clarification: Predictable disturbances are those, like successional changes, that are certain to occur at some time, e.g. fire in chaparral or floods in floodplains.
126 167 Other types of information not captured elsewhere in this matrix

Questions asked about each category of biological information

A Was information on this topic/issue presented in the recovery plan?
1 = Yes,
2 = No, because RP stated that such information did not exist,
3 = No, RP didn't mention such information
Clarification: Everyone is reminded that the plan must present relevant information that fits in a category. DO NOT infer the presentation of such information.

B/C Identify the two principal types of information presented: [Column B: primary, Column C: secondary]
1 = Maps/GIS data,
2 = Qualitative data,
3 = Quantitative data with no or limited analysis,
4 = Quantitative data with relevant statistical analyses,
5 = Quantitative data used with modeling of processes,
6 = Multiple,
7 = Other

D/E Identify the two principal sources of the information presented: [Column D: primary, Column E: secondary]
0 = Unattributed,
1 = Peer-reviewed literature,
2 = Grey literature,
3 = Professional opinion/unpublished data,

4 = Book,
5 = Multiple sources

F Does the Introduction or Recovery Objectives section of this plan indicate that some/more information of this type would be beneficial for recovery efforts?
0 = No,
1 = Yes

G How many recovery tasks specifically call for collection of some/more information on this topic/issue?
0 = None,
1 = One,
2 = Two,
et cetera.

Clarification: Several groups voiced concern that tasks might be counted more than once in the instrument because they apply to more than one category in more than one matrix. This very well may happen since some tasks are intended to accomplish multiple things, but it is not problematic. We are not trying to make a task by task accounting of task categorization. Instead, we want to construct a systematic and comprehensive picture of all the various things that recovery tasks are intended to accomplish. In this sense, any double counting would be indicative of "double duty" being done by recovery tasks.

H What is the highest implementation priority assigned to these tasks? [Priority 1 is highest.]
1 = Priority 1,
2 = Priority 2,
3 = Priority 3

I What is the estimated total cost to implement these tasks, in $000's? [If there are multiple tasks, sum their costs.]

Clarifications: When tallying costs for recovery tasks, use the values presented in the Total Cost column of the implementation schedule. Also be sure that the value recorded is in units of $000s (thousands of dollars). DO NOT use FY breakdowns or other subtotals.

Several groups voiced concern that projected cost estimates might be counted more than once, and thus inflate the totals, because specific tasks may apply to more than one category in more than one matrix or to more than one species. Some groups proposed schemes to divide cost estimates among categories or among species. We will NOT do that. Although some "double counting" may occur, it is not problematic. As with the counting of tasks in G/X/FF/OO/YY, we are not trying to make a dollar by dollar accounting of how estimated recovery costs are allocated. Remember that the estimated costs presented in recovery plans are not budgets, but simply crude estimates of how much various actions might cost. As such, we can only use them as a rough index of how money might be distributed among tasks. If we start trying to partition the costs among species and categories and matrices, we just interject a layer of subjective noise into the data that further limits its usefulness.

Therefore, DO NOT partition, divide, or otherwise modify the cost values presented in the recovery plan. If you need to tally the cost of multiple tasks, simply add them up. DO NOT worry about double counting. As with counting tasks, any double counting of cost estimates will provide beneficial indication of "double duty" by proposed spending. Furthermore, useful comparisons of these data will be within matrices, not among matrices.

J To what extent have any of these tasks been completed? [Consult FWS contact]
0 = Not started,
1 = Underway,
2 = Completed

K Who has primarily implemented the task(s)? [Consult FWS contact]
1 = USFWS/NMFS,

2 = Other Fed agency,
3 = State resource agency,
4 = Other State agency,
5 = Local government agency,
6 = Tribal groups,
7 = Business/industry,
8 = Environmental/conservation organization,
9 = Consultants,
10 = Academia,
11 = Private citizenry,
12 = Multiple

Clarification: More than one entity will often be involved in implementing recovery tasks. Thus, you will have to ask the FWS contact to judge which category of parties is the principal player in implementation to date.

Summary question regarding information used in recovery plans

168 Information presented in the recovery plan suggests that the biology of the species is understood to what extent?
1 = Excellently understood,
2 = Well understood,
3 = Moderately understood, but some key info missing,
4 = Poorly understood,
5 = Not understood at all

169 Information presented in the recovery plan suggests that the status of the species is understood to what extent?
1 = Excellently understood,
2 = Well understood,
3 = Moderately understood, but some key info missing,
4 = Poorly understood,
5 = Not understood at all

FORM 5 and FORM 6
Factors threatening species, Parts I & II

(Numbers 170-172 serve as reference metadata for FORM 5)
170 Plan Code
171 Species Code
172 Student Code

(Numbers 232-234 serve as reference metadata for FORM 6)
232 Plan Code
233 Species Code
234 Student Code

Both FORM 5 and FORM 6 present a list of categories of factors that may contribute to the threatened or endangered status of a species in a recovery plan. The list is intended to present a sufficient diversity of categories so that specific factors in a recovery plan can be easily categorized. Obviously, not all categories will be relevant or applicable for any one species or plan. Use the default (negative) responses when appropriate.

In FORM 5, for each category you will answer a series of assorted questions that ask about the factors that may threaten or endanger the species. These questions are identified by column letters L through

W. In FORM 6, for each category you will answer a series of questions about **tasks** designed to address these factors. These questions are identified by column letters X through DD.

Note that this list of factors appears verbatim on both FORM 5 and FORM 6, but with different numbers. Although this may seem unwieldy, splitting the series of column questions into two separate forms makes it easier to view and fill out the matrix. In the list below, the first column (173-231) corresponds to FORM 5 numbering, and the second column (235-293) corresponds to FORM 6 numbering.

Categories of factors that may be threatening/endangering species

CONSTRUCTION

173	235	Commercial
174	236	Urban/suburban
175	237	Rural
176	238	Public utilities
177	239	Roads
178	240	Other construction activities not captured in the above categories

AGRICULTURE

179	241	Dryland herbaceous
180	242	Irrigated herbaceous
181	243	Dryland woody plants
182	244	Irrigated woody plants
183	245	Tree farming (for pulp or lumber)
184	246	Aquaculture
185	247	Other agriculture activities not captured in the above categories

RESOURCE USE

186	248	Timber extraction (logging)
187	249	Ore extraction (mining)
188	250	Oil/Gas
189	251	Grazing
190	252	Fishing/hunting
191	253	Specimen collection

Clarification: "Specimen collection" is meant to include activities such as butterfly collecting or poaching.

192	254	Other resource uses not captured in the above categories

WATER DIVERSION

193	255	Dams
194	256	Irrigation
195	257	Flood control
196	258	Groundwater extraction
197	259	Wetland fill
198	260	Dredging
199	261	Other water diversions not captured in the above categories

POLLUTION

200	262	Water -- point source
201	263	Water -- non point source
202	264	Air -- point source
203	265	Air -- non point source
204	266	Atmospheric deposition
205	267	Solid waste
206	268	Toxic substances (e.g. pesticides)

207 269 Acid precipitation
208 270 Other pollution not captured in the above categories

EXOTIC/ALIEN SPECIES
209 271 Competition
210 272 Predation
211 273 Parasitism
212 274 Pathogens
213 275 Disease vector
214 276 Habitat modification
215 277 Other exotic/alien species factors not captured in the above categories

SPECIES INTERACTIONS [other than exotics spp.]
216 278 Competition with focal species
217 279 Predation on focal species
218 280 Parasitism of focal species
219 281 Prey of focal species
220 282 Pathogens of focal species
221 283 Other species interactions not captured in the above categories

HABITAT DYNAMICS
222 284 Successional change
223 285 Modified disturbance - fire regimes
224 286 Modified disturbance - hydrodynamic regimes
225 287 Modified disturbance - agricultural regimes
226 288 Other habitat dynamics not captured in the above categories

OTHER FACTORS
227 289 Inbreeding depression/genetic "bottlenecking"
228 290 Climate change
229 291 Weather extremes (e.g. drought, flood)
230 292 Catastrophies/stochastic events
231 293 Other not captured elsewhere in this matrix

Questions asked about each category of biological information

L Is this factor cited in the listing decision as affecting the species?
0 = No,
1 = Yes

M Is this factor cited in the recovery plan as affecting the species?
0 = No,
1 = Yes

N Briefly describe the particular nature or character of this factor. [This will not be standardized data, but may be useful for guiding subsequent investigations.]

O If this factor is cited in one document but not the other, why?
1 = Change in species status,
2 = Factor no longer a threat,
3 = New factor threatening species,
4 = New information about factors threatening species

P How substantial a threat does the recovery plan identify this factor to be?

0 = Not a threat
1 = Minor threat,
2 = Major threat

Clarification: Limit your consideration of this question to the general issue of major vs. minor threats as identified in the recovery plan. DO NOT infer major vs. minor from other characteristics of the factors. These are considered explicitly in subsequent questions.

Q Are the effects of this factor historic, current, or anticipated?

1 = Historic
2 = Current
3 = Anticipated
4 = Multiple responses apply

Clarification: "Historic" in this question means "in the past." If the factor also affects the species in the present (i.e., is "Current") then you must answer "4".

R How frequently does this factor affect the species?

0 = Never,
1 = Once,
2 = Repeatedly,
3 = Continuously

S When this factor affects the species, what is the extent of this effect?

1 = Light,
2 = Moderate,
3 = Intense

T Over what temporal scale does this factor affect the species?

1 = For less than one generation,
2 = For more than one generation,
3 = Forever

Clarification: "Forever" means that the factor has an ongoing, never-ending effect on the species. In other words, the effect lasts "forever". This option differs from "For more than one generation" in that the latter implies that the factor has a long-lasting effect that will eventually terminate.

U Does this factor have direct or indirect effects on species?

1 = Indirect effect,
2 = Direct effect,
3 = Both

V/W Identify the two principal sources of information used to substantiate the effect of the factor on the species: [Column V: primary, Column W: secondary]

0 = Unattributed,
1 = Peer-reviewed literature,
2 = Grey literature,
3 = Professional opinion/unpublished data,
4 = Book,
5 = Multiple sources

X How many recovery tasks specifically address this factor?

0 = None,
1 = One,
2 = Two,
et cetera.

Clarification: See clarification for G.

Y What is the highest implementation priority assigned to tasks that address this factor? [Priority 1 is highest.]
1 = Priority 1,
2 = Priority 2,
3 = Priority 3

Z What is the estimated total cost to implement these tasks, in $000's? [If there are multiple tasks, sum their costs.]
Clarifications: See clarifications for I.

AA To what extent have any of these tasks been completed? [Consult FWS contact]
0 = Not started,
1 = Underway,
2 = Completed

BB Who is primarily implementing these task(s)? [Consult FWS contact]
1 = USFWS/NMFS,
2 = Other Federal agency,
3 = State resource agency,
4 = Other State agency,
5 = Local government agency,
6 = Tribal groups,
7 = Business/industry,
8 = Environmental/conservation organization,
9 = Consultants,
10 = Academia,
11 = Private citizenry,
12 = Multiple
Clarification: See clarification for K.

CC For how many tasks does the recovery plan state that >1 species (listed or unlisted) will benefit by implementation?
0 = None,
1 = One,
2 = Two,
et cetera.

GG For how many tasks is there evidence that actions are constrained by effects on other listed species?
0 = None,
1 = One,
2 = Two, etc.

The factors examined above may affect the species in a number of ways. From the list of general threats below, rank the relative importance of the 3 principal categories of threats regarding their contribution to endangered/threatened status of the species. Base rankings only on information in the recovery plan and/or listing document. Give the most important threat a rank of "1". Ties are OK if ordered ranks 1, 2, 3 cannot be determined. For the 8 items you choose not to rank, enter a "0".

294 Habitat destruction
295 Habitat degradation
296 Habitat fragmentation
297 Natural mortality
298 Human-caused mortality
299 Effects of exotic/alien species
300 Effects of environmental pollutants
301 Altered disturbance regimes

302 Agriculture
303 Resource use/extraction
304 Other effects on species
Clarification: This question does ask the evaluator to make some interpretive judgments. To do this, use the available information as recorded in the matrix of questions above.

FORM 7
Management actions

(Numbers 305-307 serve as reference metadata for FORM 7)
305 Plan Code
306 Species Code
307 Student Code

The following section presents a list of categories of management actions that may be proposed in a recovery plan. The list is intended to present a sufficient diversity of categories so that specific management actions in a recovery plan can be easily categorized. Obviously, not all categories will be relevant or applicable for any one species or plan. Use the default (negative) responses when appropriate.

In FORM 7, for each category you will answer a series of questions that ask about potential management actions. These questions are identified by column letters EE through NN.

Categories of potential management actions

POPULATION MANAGEMENT
308 Augment food supplies
309 Reintroduce populations to previously occupied habitats
310 Introduce populations to new habitat
311 Translocate individuals
312 Breed individuals in captivity
313 Regulate hunting/harvest
314 Control predators of the species
315 Control disease of the species
316 Control invasion of other species that affect the species
317 Reduce competition with the species
318 Other population management actions not captured above

HABITAT MANAGEMENT
319 Restore/enhance/maintain habitat quality
320 Secure habitat (e.g. purchase, easement, MOU, etc.)
321 Maintain/mimic natural disturbance regimes
322 Reduce human disturbance of habitat
323 Restore/enhance/maintain breeding habitat
324 Secure breeding habitat (e.g. purchase, easement, MOU, etc.)
325 Restore/enhance/maintain feeding habitat
326 Secure feeding habitat (e.g. purchase, easement, MOU, etc.)
327 Restore/enhance/maintain sheltering habitat
328 Secure sheltering habitat (e.g. purchase, easement, MOU, etc.)
329 Restore/enhance/maintain habitat for dispersal corridors/routes
330 Secure habitat for dispersal corridors/routes (e.g. purchase, easement, MOU, etc.)
331 Other habitat management actions not captured above

MANAGEMENT/INCENTIVE PROGRAMS

332 USDA Conservation Reserve Program [started 1985]
333 USDA Wetlands Reserve Program [started 1982]
334 USDA Stewardship Incentive Program [started ?]
335 USDA Forest Legacy Program [started ?]
336 USDA Environmental Quality Improvement Program [started ?]
337 FWS Habitat Conservation Plans
338 National Wildlife Refuge designation
339 State incentive programs
340 State management programs
341 Mitigation banks
342 Safe Harbor programs
343 Other management/incentive programs not captured above

Questions asked about each category of potential management actions

EE Briefly describe the particular management action(s) proposed. [This will not be standardized data, but may be useful for subsequent investigations.]

FF How many tasks in the recovery plan specifically call for this type of management action/program?
0 = None,
1 = One task,
2 = Two tasks,
et cetera.
Clarification: See clarification for G.

GG What is the highest implementation priority assigned to tasks that call for this management action/program? [Priority 1 is highest.]
1 = Priority 1,
2 = Priority 2,
3 = Priority 3

HH What is the estimated total cost to implement these tasks, in $000's? [If there are multiple tasks, sum their costs.]
Clarifications: See clarifications for I.

II Does the recovery plan indicate that the outcome of any of the proposed actions is uncertain?
0 = No,
1 = Yes.
Clarification: Answer "0" if the plan does not indicate that any outcomes are uncertain. Only use the "-1" code if other information in the plan gives ambiguous reason to believe that the answer could be "1" (yes).

JJ If so, what specific measures does the plan describe to address such uncertainty?
0 = None described,
1 = Alternative actions proposed in response to new information (e.g. monitoring results) or unforeseen changes,
2 = Experiments planned to determine most effective methods before implementation,
3 = Both

KK To what extent have any of these tasks been completed? [Consult FWS contact]
0 = Not started,
1 = Underway,
2 = Completed

LL Who is primarily implementing the task(s)? [Consult FWS contact]
1 = USFWS/NMFS,
2 = Other Fed agency,
3 = State resource agency,
4 = Other State agency,
5 = Local government agency,
6 = Tribal groups,
7 = Business/industry,
8 = Environmental/conservation organization,
9 = Consultants,
10 = Academia,
11 = Private citizenry,
12 = Multiple
Clarification: See clarification for K.

MM For how many tasks does the recovery plan state that >1 species (listed or unlisted) will benefit by implenetation?
0 = None,
1 = One,
2 = Two,
et cetera.

NN For how many tasks does the recovery plan state that specific actions are constrained because of their effects on other species (listed or unlisted)?
0 = None,
1 = One,
2 = Two,
et cetera.

FORM 8
Monitoring actions

(Numbers 344-345 serve as reference metadata for FORM 8)
344 Plan Code
345 Species Code
346 Student Code

The following section presents a list of categories of monitoring subjects that may be proposed in a recovery plan. The list is intended to present a sufficient diversity of categories so that specific monitoring subjects in a recovery plan can be easily categorized. Obviously, not all categories will be relevant or applicable for any one species or plan. Use the default (negative) responses when appropriate.

In FORM 8, for each category you will answer a series of questions that ask about potential monitoring subjects. These questions are identified by column letters OO through XX.

Categories of monitoring subjects

MONITORING FOCAL SPECIES
347 Presence/absence
348 Number of individuals
349 Trends in population size
350 Number of populations
351 Trends in number of populations

352 Extinction/persistence of populations
353 Reproductive rates
354 Mortality rates
355 Age/stage structure
356 Genetic parameters
357 Movement patterns
358 Health/physiological condition (e.g. endocrine levels, stress, weight, etc.)
359 Other focal species monitoring not captured in the above categories

MONITORING ASSOCIATED SPECIES
360 Prey species
361 Predator species
362 Competitor species
363 Parasites/pathogens
364 Exotic species
365 Other associated species monitoring not captured in the above categories

MONITORING HABITAT
366 Habitat quantity
367 Trends in habitat quantity
368 Habitat quality
369 Trends in habitat quality
370 Other habitat monitoring not captured in the above categories

Questions asked about each category of potential monitoring actions

OO How many recovery tasks specifically call for monitoring of this subject?
0 = Not monitored,
1 = One task,
2 = Two tasks,
et cetera.
Clarification: See clarification for G.

PP What is the highest implementation priority assigned to these tasks? [Priority 1 is highest.]
1 = Priority 1,
2 = Priority 2,
3 = Priority 3

QQ What is the estimated total cost to implement these tasks, in $000's? [If there are multiple tasks, sum their costs.]
Clarifications: See clarifications for I.

RR Are the data to be collected qualitative or quantitative?
1 = Qualitative,
2 = Quantitative,
3 = Both

SS How will the data be used/analyzed?
1 = Compiled without specific analyses,
2 = Compiled with descriptive analyses of past and current status,
3 = Compiled and incorporated into a model for predictive analyses

TT How did biological information [either species-specific information, or general principles] influence what is to be monitored?
0 = Relationship between biological information and monitoring subject unclear,

1 = Relationship somewhat clear,
2 = Relationship very clear

UU How did biological information [either species-specific information, or general principles] influence how monitoring is done [i.e. protocols]?
0 = Relationship between biological information and monitoring subject unclear,
1 = Relationship somewhat clear,
2 = Relationship very clear,
3 = Plan states that protocols are to be developed

VV Does the plan describe specific changes in tasks or objectives in response to monitoring results?
0 = No,
1 = Yes

WW To what extent have any of these tasks been completed? [Consult FWS contact]
0 = Not started,
1 = Underway,
2 = Completed

XX Who is primarily implementing the task(s)? [Consult FWS contact]
1 = USFWS/NMFS,
2 = Other Fed agency,
3 = State resource agency,
4 = Other State agency,
5 = Local government agency,
6 = Tribal groups,
7 = Business/industry,
8 = Environmental/conservation organization,
9 = Consultants,
10 = Academia,
11 = Private citizenry,
12 = Multiple
Clarification: See clarification for K.

FORM 9
Public relations

(Numbers 371-373 serve as reference metadata for FORM 9)
371 Plan Code
372 Species Code
373 Student Code

Questions regarding public relations actions proposed by recovery plan

The following section presents a list of categories of public relations actions that may be proposed in a recovery plan. The list is intended to present a sufficient diversity of categories so that specific public relations actions in a recovery plan can be easily categorized. Obviously, not all categories will be relevant or applicable for any one species or plan. Use the default (negative) responses when appropriate.

In FORM 9, for each category you will answer a series of questions about potential public relations actions. These questions are identified by column letters YY through DDD.

Categories of public relations actions

374 Increasing public awareness of species status

375 Developing public support for species conservation
376 Encouraging public participation in recovery efforts
377 Enforcing legal protections for species

Questions asked about each category of public relations actions

YY How many tasks specifically call for this type of action?
0 = None,
1 = One task,
2 = Two tasks,
et cetera.
Clarification: See clarification for G.

ZZ What is the highest implementation priority given to these tasks? [Priority 1 is highest.]
1 = Priority 1,
2 = Priority 2,
3 = Priority 3

AAA What is the estimated total cost to implement these tasks, in $000's? [If there are multiple tasks, sum their costs.]
Clarifications: See clarifications for I.

BBB Are specific programs or activities proposed, or are they to be developed?
1 = To be developed,
2 = Specific programs or activities proposed,
3 = Both

CCC To what extent have any of these tasks been completed? [Consult FWS contact]
0 = Not started,
1 = Underway,
2 = Completed

DDD Who is primarily implementing the task(s)? [Consult FWS contact]
1 = USFWS/NMFS,
2 = Other Fed agency,
3 = State resource agency,
4 = Other State agency,
5 = Local government agency,
6 = Tribal groups,
7 = Business/industry,
8 = Environmental/conservation organization,
9 = Consultants,
10 = Academia,
11 = Private citizenry,
12 = Multiple
Clarification: See clarification for K.

FORM 10
Plan administration & implementation

(Numbers 378-380 serve as reference metadata for FORM 10)
378 Plan Code
379 Species Code
380 Student Code

381 Does the plan propose that an individual or committee be designated to coordinate implementation of the recovery plan?
0 = No,
1 = Individual,
2 = Committee/team/group

382 Does the plan propose to establish a centralized database for information on the status of the species?
0 = No,
1 = Yes

383 Does the plan propose to establish a system by which to monitor implementation of recovery tasks?
0 = No,
1 = Yes

For how many tasks does the recovery plan's Implementation Schedule identify the following groups to be "Responsible parties"? Bear in mind that designation as a "Responsible party" is in no way a binding commitment to implement any part of a recovery plan.

384 a. USFWS/NMFS
385 b. Other federal agencies
386 c. State/local resource agencies
387 d. Other state/local government agencies
388 e. Tribal groups
389 f. Consultants
390 g. Private individuals
391 h. Business/industry
392 i. Academic scientists
393 j. Environmental/conservation organizations
394 k. Other people/organizations not listed above

395 According to the recovery plan's executive summary, how many years is recovery expected to take if the recovery plan is implemented as scheduled?

396 According to the recovery plan, what is the total estimated/projected cost for implementing Priority 1 recovery tasks (in $000's)? [Sum cost estimates as presented in the recovery plan.]

397 According to the recovery plan, what is the total estimated/projected cost for implementing Priority 2 recovery tasks (in $000's)? [Sum cost estimates as presented in the recovery plan.]

398 According to the recovery plan, what is the total estimated/projected cost for implementing Priority 3 recovery tasks (in $000's)? [Sum cost estimates as presented in the recovery plan.]

399 According to FWS reports to Congress, how much money has been spent on recovery actions for this species, to date? (in $000's) [The source of information for this cell must be restricted to FWS Congressional reports to ensure consistency. This quantity will only provide an index of recovery spending since only directly budgeted funds are included in the reports.]

400 If the recovery plan is fully implemented, will the species still require any active management?
0 = No,
1 = Yes

401 Does the plan explicitly specify a need for future review and, if necessary, revision of the plan? [The standard disclaimer page of the recovery plan should **not** be used to answer this question.]
0 = No,
1 = Yes

FORM 11, FORM 12, and FORM 13

Recovery criteria, Parts I, II & III

(Numbers 402-404 serve as reference metadata for FORM 11)
402 Plan Code
403 Species Code
404 Student Code

(Numbers 421-423 serve as reference metadata for FORM 12)
421 Plan Code
422 Species Code
423 Student Code

(Numbers 440-129 serve as reference metadata for FORM 13)
440 Plan Code
441 Species Code
442 Student Code

FORM 11, FORM 12 and FORM 13 all present a list of metrics by which species' recovery might be measured in a plan. The list is intended to present a sufficient diversity of categories so that specific types of information in a recovery plan can be easily categorized. Obviously, not all categories will be relevant or applicable for any one species or plan. Use the default (negative) responses when appropriate.

In FORM 11, for each metric you will answer a series of questions that ask for basic information about recovery metrics potentially used in the plan. These questions are identified by column letters EEE through NNN. In FORM 12, for each metric you will answer a series of more in-depth questions about these recovery criteria. These questions are identified by column letters OOO through VVV. In FORM 13, for each metric you will answer a series of questions about tasks designed to address recovery metrics/criteria. These questions are identified by column letters WWW through ABC.

Note that the list of recovery metrics appears verbatim on all three forms, but with different numbers on each. Although this may seem unwieldy, splitting the series of column questions into three separate forms will make it easier to view and fill out the matrix. In the list below, the first column (405-420) corresponds to FORM 11 numbering, the second column (424-439) corresponds to FORM 12 numbering, and the third column (443-458) corresponds to FORM 13 numbering.

Recovery metrics

405	424	443	Total pop size (# ind)
406	425	444	# of subpopulations
407	426	445	# of individuals in each subpopulation
408	427	446	Trends in total population size (# of individuals)
409	428	447	Trends in # of subpopulations
410	429	448	Trends in # of individuals in each subpopulation
411	430	449	Total range
412	431	450	Quantity of habitat
413	432	451	Quality of habitat
414	433	452	Existence/significance of threat
415	434	453	Age structure of population
416	435	454	Implementation of post-delisting management programs
417	436	455	Securement of water rights
418	437	456	Productivity/net recruitment rates
419	438	457	Securement of habitat (i.e., legal protection)
420	439	458	Other metrics not captured above

Questions regarding measurement of recovery criteria

EEE How will achievement of the target value be measured/determined?
1 = Census,
2 = Single estimate,
3 = Multiple estimates,
4 = Running averages,
5 = Compliance check,
6 = Other

FFF Is the metric of the recovery criterion qualitative or quantitative?
1 = Qualitative,
2 = Quantitative,
3 = Both

GGG Over what duration must the target value be maintained to meet the recovery criterion? (# of years)

HHH How much variation in the target value can be tolerated and still satisfy the recovery criterion? (+- % error)

III On what basis was the metric for the recovery criterion selected?
1 = Expert opinion,
2 = Qualitative data,
3 = Quantitative data with limited or no analysis,
4 = Quantitative data with relevant statistical analysis,
5 = Quantitative data with modeling of processes or effects,
6 = Professional judgment [non-expert]

JJJ/KKK Identify the two principal sources of information used to select the metric for the recovery criterion: [Column JJJ: primary sources, Column KKK: secondary source]
0 = Unattributed,
1 = Peer-reviewed literature,
2 = Grey literature,
3 = Professional opinion/unpublished data,
4 = Book,
5 = Multiple sources

LLL On what basis was the target value for the recovery criterion selected?
1 = Expert opinion,
2 = Qualitative data,
3 = Quantitative data with limited or no analysis,
4 = Quantitative data with relevant statistical analysis,
5 = Quantitative data with modeling of processes or effects,
6 = Professional judgment [non-expert]

MMM/NNN Identify the two principal sources of information used to determine the target value for the recovery criterion: [Column MMM: primary sources, Column NNN: secondary source]
0 = Unattributed,
1 = Peer-reviewed literature,
2 = Grey literature,
3 = Professional opinion/unpublished data,
4 = Book,
5 = Multiple sources

OOO Does assessment of the metric require spatially replicated measurements?
0 = No,
1 = Yes

PPP Does assessment of the metric require temporally replicated measurements?
0 = No,
1 = Yes.

QQQ Does the recovery plan state or discuss how environmental variability influenced how the target value for the recovery criterion was set?
0 = No,
1 = Yes

RRR Does the recovery plan state or discuss how environmental variability influenced how much variance would be tolerated in the target value for the recovery criterion?
0 = No,
1 = Yes

SSS How did biological information influence selection of the recovery criterion?
0 = Relationship between biological information and recovery criterion selection unclear,
1 = Relationship somewhat clear,
2 = Relationship very clear

TTT How did biological information influence determination of the target value for the recovery criterion?
0 = Relationship between biological information and determination of the target value unclear,
1 = Relationship somewhat clear,
2 = Relationship very clear

UUU How does the target value for the recovery criterion compare to the value of that metric at the time of listing?
0 = No difference,
1 = Less than value at time of listing,
2 = Greater than value at time of listing

VVV How does the target value of the recovery metric compare to the value at the time of plan development?
0 = No difference,
1 = Less than value at time of plan development,
2 = Greater than value at time of plan development

WWW Does the recovery plan describe tasks that will monitor/measure the metric selected for the recovery criterion?
0 = No,
1 = Yes
Clarification: See clarification for G.

XXX What is the highest implementation priority assigned to tasks that call for monitoring the recovery criterion metric? [Priority 1 is highest.]
1 = Priority 1,
2 = Priority 2,
3 = Priority 3

YYY What is the estimated total cost to implement these tasks, in $000's? [If there are multiple tasks, sum their costs.]
Clarifications: See clarifications for I.

ZZZ To what extent have any of these tasks been completed? [Consult FWS contact]
0 = Not started,
1 = Underway,
2 = Completed

ABC Who is primarily implementing the task(s)? [Consult FWS contact]

1 = USFWS/NMFS,
2 = Other Fed agency,
3 = State resource agency,
4 = Other State agency,
5 = Local government agency,
6 = Tribal groups,
7 = Business/industry,
8 = Environmental/conservation organization,
9 = Consultants,
10 = Academia,
11 = Private citizenry,
12 = Multiple

Clarification: See clarification for K.