

IV. GR-05 AQUATIC HABITAT CHECKLIST-FLOWING SYSTEMS 15:35

Note Aquatic systems are often associated with wetland habitats. Please refer to Section V, Wetland Habitat Checklist.

1. What type(s) of flowing water system(s) is(are) present at the site? **River**
2. If known, what is the name of the waterbody? **Gila River**
3. For natural systems, are there any indicators of physical alteration (e.g., channeling, debris, etc.)?
yes no if yes, please describe indicators that were observed.
4. What is the general composition of the substrate? Check all that apply.
Sand (coarse) Cobble (2.5-10 in.) Gravel (0.1-2.5 in.)
5. What is the condition of the bank (e.g., height, slope, extent of vegetative cover)?
2-3' vertical banks to low beaches from sparsely vegetated to thick tamarisk vegetation (Picture GR05-2)
6. Is the system influenced by tides? **no**
7. Is the flow intermittent? **Unknown** If yes, please note the information that was used in making this determination.
8. Is there a discharge from the site to the waterbody? **Unknown** If yes, please describe the discharge and its path.
9. Is there a discharge from the waterbody? **Unknown** if yes, and the information is available, please identify what the waterbody discharges to and whether the discharge is on site or off site.
10. Identify any field measurements and observations of water quality that were made. For those parameters for which data were collected, provide the measurement and the units of measure in the appropriate space below:
100 Width (ft.)
_____ Depth (ft.)
_____ Velocity (specify units):
19.5 Temperature (depth of the water at which the reading was taken)
8.45 pH
11.75 Dissolved oxygen
0.04% Salinity
Turbid Turbidity (Secchi disk depth)
Visual Other (specify)
11. Describe observed color and area of coloration. **Muddy**
12. Is any aquatic vegetation present? **No** If yes, please identify the type of vegetation present, if know
13. Mark the flowing water system on the attached site map.
14. What observations were made at the waterbody regarding the presence and/or absence of benthic macroinvertebrates, fish, birds, mammals, etc.?
Black phoebe, swallows
Benthic inverts
No mammal sign



GR05-2

II. GR-06 TERRESTRIAL HABITAT CHECKLIST 17:08

IIA. WOODED

1. Are there any wooded areas at the site? **yes** If no, go to Section IIB: Shrub/Scrub
2. What percentage of area of the site is wooded? (**50%**; _____ acres). Indicate the wooded area on the site map which is attached to a copy of this checklist. Please identify what information was used to determine the wooded area of the site. **Visual estimate**
3. What is the dominant type of vegetation in the wooded area? (**Mixed**) Provide a photograph, if available.
Dominant plant, if known: **Cottonwood, willow, tamarisk (Pictures GR06-5, 6)**
4. What is the predominant size of the trees at the site? Use diameter at breast height. **> 12 in. (28.2)**
5. Specify type of understory present, if known. Provide a photograph, if available.
Cat's claw, tamarisk, mulefat (Picture GR06-7)

IIB. SHRUB/SCRUB

1. Is shrub/scrub vegetation present at the site? **yes** Section IIC: Open Field
2. What percentage of the site is covered by scrub/shrub vegetation? (**10%**; _____ acres). Indicate the areas of shrub/scrub on the site map. Please identify what information was used to determine this area.
Visual estimate
3. What is the dominant type of scrub/shrub vegetation, if known? Provide a photograph, if available.
Tamarisk (Picture GR06-2)
4. What is the approximate average height of the scrub/shrub vegetation? **> 5 ft.**
5. Based on site observations, how dense is the scrub/shrub vegetation? **Sparse**

IIC. OPEN FIELD

1. Are there open (bare, barren) field areas present at the site? **yes no** If yes, please indicate the type below:
Prairie/plains Savannah Old field other (specify)
2. What percentage of the site is open field? (_____% _____ acres). Indicate the open fields on the site map.
3. What is/are the dominant plant(s)? Provide a photograph, if available.
4. What is the approximate average height of the dominant plant?
5. Describe the vegetation cover: Dense Sparse Patchy

IID. MISCELLANEOUS

1. Are other types of terrestrial habitats present at the site, other than woods, scrub/shrub, and open field? **no** If yes, identify and describe them below:
2. Describe the terrestrial miscellaneous habitat(s) and identify these area(s) on the site map.
3. What observations, if any, were made at the site regarding the presence and/or absence of insects, fish, birds, mammals, etc.?
**Burrows, cows
wrentit**
4. Review the questions in Section I to determine if any additional habitat checklists should be completed for this site.



GR06-5



GR06-6



GR06-7



GR06-2

IV. GR-06 AQUATIC HABITAT CHECKLIST-FLOWING SYSTEMS 17:08

Note Aquatic systems are often associated with wetland habitats. Please refer to Section V, Wetland Habitat Checklist.

1. What type(s) of flowing water system(s) is(are) present at the site? **River**
2. If known, what is the name of the waterbody? **Gila River**
3. For natural systems, are there any indicators of physical alteration (e.g., channeling, debris, etc.)?
No
4. What is the general composition of the substrate? Check all that apply.
Silt (fine)
5. What is the condition of the bank (e.g., height, slope, extent of vegetative cover)?
Low sloping but over 4' at edges (Picture GR06-1)
6. Is the system influenced by tides? **No**
7. Is the flow intermittent? **Unknown** If yes, please note the information that was used in making this determination.
8. Is there a discharge from the site to the waterbody? **Unknown** If yes, please describe the discharge and its path.
9. Is there a discharge from the waterbody? **Unknown** if yes, and the information is available, please identify what the waterbody discharges to and whether the discharge is on site or off site.
10. Identify any field measurements and observations of water quality that were made. For those parameters for which data were collected, provide the measurement and the units of measure in the appropriate space below:
20_ ___ Width (ft.)
___ Depth (ft.)
___ Velocity (specify units):
20.6_ Temperature (depth of the water at which the reading was taken)
8.59_ pH
12.45_ Dissolved oxygen
0.04% Salinity
X Turbidity (clear, **slightly turbid**, turbid, opaque) (Secchi disk depth)
Visual Other (specify)
11. Describe observed color and area of coloration.
12. Is any aquatic vegetation present? **no**
13. Mark the flowing water system on the attached site map.
14. What observations were made at the waterbody regarding the presence and/or absence of benthic macroinvertebrates, fish, birds, mammals, etc.?
Swallows (cliff swallow). Marsh wren, turkey vulture (Picture GR06-4)
Cows



GR06-1



GR06-4

II. GR-07 TERRESTRIAL HABITAT CHECKLIST 14:57

IIA. WOODED

1. Are there any wooded areas at the site? **yes** If no, go to Section IIB: Shrub/Scrub
2. What percentage of area of the site is wooded? (**30%** _____ acres). Indicate the wooded area on the site map which is attached to a copy of this checklist. Please identify what information was used to determine the wooded area of the site. **Visual estimate**
3. What is the dominant type of vegetation in the wooded area? (**Mixed**) Provide a photograph, if available. **(Picture GR07-7)**
Dominant plant, if known:
Tamarisk with a few large willows (Pictures GR07-8, 9)
4. What is the predominant size of the trees at the site? Use diameter at breast height. **6-12 in.**
5. Specify type of understory present, if known. Provide a photograph, if available.
Tamarisk and dead tamarisk

IIB. SHRUB/SCRUB

1. Is shrub/scrub vegetation present at the site? **no** If no, go to Section IIC: Open Field
2. What percentage of the site is covered by scrub/shrub vegetation? (_____% _____ acres). Indicate the areas of shrub/scrub on the site map. Please identify what information was used to determine this area.
3. What is the dominant type of scrub/shrub vegetation, if known? Provide a photograph, if available.
4. What is the approximate average height of the scrub/shrub vegetation? 0-2 ft. 2-5 ft. > 5 ft.
5. Based on site observations, how dense is the scrub/shrub vegetation? **Sparse**

IIC. OPEN FIELD

1. Are there open (bare, barren) field areas present at the site? **no** If yes, please indicate the type below:
Prairie/plains Savannah Old field other (specify)
2. What percentage of the site is open field? (_____% _____ acres). Indicate the open fields on the site map.
3. What is/are the dominant plant(s)? Provide a photograph, if available.
4. What is the approximate average height of the dominant plant?
5. Describe the vegetation cover: Dense Sparse Patchy

IID. MISCELLANEOUS

1. Are other types of terrestrial habitats present at the site, other than woods, scrub/shrub, and open field? **no** If yes, identify and describe them below:
2. Describe the terrestrial miscellaneous habitat(s) and identify these area(s) on the site map.
3. What observations, if any, were made at the site regarding the presence and/or absence of insects, fish, birds, mammals, etc.?
Sparrows, warblers, wrens
Some burrows and gopher
4. Review the questions in Section I to determine if any additional habitat checklists should be completed for this site.



GR07-7



GR07-8



GR07-9

IV. GR-07 AQUATIC HABITAT CHECKLIST-FLOWING SYSTEMS 14:34

Note Aquatic systems are often associated with wetland habitats. Please refer to Section V, Wetland Habitat Checklist.

1. What type(s) of flowing water system(s) is(are) present at the site? **River**
2. If known, what is the name of the waterbody? **Gila River**
3. For natural systems, are there any indicators of physical alteration (e.g., channeling, debris, etc.)? **no**
4. What is the general composition of the substrate? Check all that apply.
Unknown possibly silt
5. What is the condition of the bank (e.g., height, slope, extent of vegetative cover)?
Vertical and then flat a short distance to first terraces mostly bare dirt and some grass. Short (10-12ft) shore and than a 10-12ft cliff (Pictures GR07- 3, 5).
Mulefat and some tamarisk
Popular fishing(?) spot. Typha up and down stream (Picture GR07-4)
6. Is the system influenced by tides? **yes no** What information was used to make this determination?
7. Is the flow intermittent? **Unknown** If yes, please note the information that was used in making this determination.
8. Is there a discharge from the site to the waterbody? **Unknown** If yes, please describe the discharge and its path.
9. Is there a discharge from the waterbody? **Unknown** if yes, and the information is available, please identify what the waterbody discharges to and whether the discharge is on site or off site.
10. Identify any field measurements and observations of water quality that were made. For those parameters for which data were collected, provide the measurement and the units of measure in the appropriate space below:
20_ Width (ft.)
2 Depth (ft.)
fast Velocity (specify units):
20.4 Temperature (depth of the water at which the reading was taken)
8.54 pH
10.56 Dissolved oxygen
0.04% Salinity
X_ Turbidity (**turbid**) (Secchi disk depth)
_____ Other (specify)
11. Describe observed color and area of coloration.
12. Is any aquatic vegetation present? **yes-typha (Pictures GR07- 1, 6)**
13. Mark the flowing water system on the attached site map.
14. What observations were made at the waterbody regarding the presence and/or absence of benthic macroinvertebrates, fish, birds, mammals, etc.?
Possible benthic inverts in typha
Red-winged blackbird, marsh wren, tree swallow
Mammal burrows, gophers



GR07-3



GR07-5



GR07-4



GR07-1



GR07-6

II. GR-08 TERRESTRIAL HABITAT CHECKLIST 11:33

IIA. WOODED

1. Are there any wooded areas at the site? **yes**
2. What percentage of area of the site is wooded? (**30%** _____ acres). Indicate the wooded area on the site map which is attached to a copy of this checklist. Please identify what information was used to determine the wooded area of the site. **Visual estimate**
3. What is the dominant type of vegetation in the wooded area? (Circle one: Evergreen/Deciduous/Mixed) Provide a photograph, if available. **(Photo GR08-3, 4, 5)**
Dominant plant, if known: **Willow, tamarisk, mesquite**
4. What is the predominant size of the trees at the site? Use diameter at breast height. **6-12 in.**
5. Specify type of understory present, if known. Provide a photograph, if available. **Grasses and duff**

GR08-7

IIB. SHRUB/SCRUB

1. Is shrub/scrub vegetation present at the site? **yes** If no, go to Section IIC: Open Field
2. What percentage of the site is covered by scrub/shrub vegetation? (**10%** _____ acres). Indicate the areas of shrub/scrub on the site map. Please identify what information was used to determine this area.
3. What is the dominant type of scrub/shrub vegetation, if known? Provide a photograph, if available. **tamarisk (photo GR08-4)**
4. What is the approximate average height of the scrub/shrub vegetation? **2-5 ft.**
5. Based on site observations, how dense is the scrub/shrub vegetation? **Sparse**

IIC. OPEN FIELD

1. Are there open (bare, barren) field areas present at the site? **no** If yes, please indicate the type below:
Prairie/plains Savannah Old field other (specify)
2. What percentage of the site is open field? (_____% _____ acres). Indicate the open fields on the site map.
3. What is/are the dominant plant(s)? Provide a photograph, if available.
4. What is the approximate average height of the dominant plant?
5. Describe the vegetation cover: Dense Sparse Patchy

IID. MISCELLANEOUS

1. Are other types of terrestrial habitats present at the site, other than woods, scrub/shrub, and open field? **no** If yes, identify and describe them below:
2. Describe the terrestrial miscellaneous habitat(s) and identify these area(s) on the site map.
3. What observations, if any, were made at the site regarding the presence and/or absence of insects, fish, birds, mammals, etc.?
**Grasses, ruderals,
Mammal burrows
Songbirds, marsh wrens, song sparrows**
4. Review the questions in Section I to determine if any additional habitat checklists should be completed for this site.



GR08-3



GR08-4



GR08-5



GR08-7

IV. GR-08 AQUATIC HABITAT CHECKLIST-FLOWING SYSTEMS 11:20

Note Aquatic systems are often associated with wetland habitats. Please refer to Section V, Wetland Habitat Checklist.

1. What type(s) of flowing water system(s) is(are) present at the site? **River**
2. If known, what is the name of the waterbody? **Gila River**
3. For natural systems, are there any indicators of physical alteration (e.g., channeling, debris, etc.)? **no**
4. What is the general composition of the substrate? Check all that apply.
Unknown possibly silt
5. What is the condition of the bank (e.g., height, slope, extent of vegetative cover)?
Vertical undecut and then flat to first terraces with grass cover (Photo GR08-1, 2)
6. Is the system influenced by tides? **no** What information was used to make this determination?
7. Is the flow intermittent? **Unknown** If yes, please note the information that was used in making this determination.
8. Is there a discharge from the site to the waterbody? **Unknown** If yes, please describe the discharge and its path.
9. Is there a discharge from the waterbody? **Unknown** if yes, and the information is available, please identify what the waterbody discharges to and whether the discharge is on site or off site.
10. Identify any field measurements and observations of water quality that were made. For those parameters for which data were collected, provide the measurement and the units of measure in the appropriate space below:
30_ Width (ft.)
3__ Depth (ft.)
fast Velocity (specify units):
19.2 Temperature (depth of the water at which the reading was taken)
8.44 pH
11.44 Dissolved oxygen
0.04% Salinity
X__ Turbidity (turbid) (Secchi disk depth)
_____ Other (specify)
11. Describe observed color and area of coloration.
12. Is any aquatic vegetation present? **no** If yes, please identify the type of vegetation present, if known.
13. Mark the flowing water system on the attached site map.
14. What observations were made at the waterbody regarding the presence and/or absence of benthic macroinvertebrates, fish, birds, mammals, etc.?
American goldfinch, vermilion flycatcher, marsh wren, tree swallow
Small mammals



GR08-1



GR08-2

II. GR-09 TERRESTRIAL HABITAT CHECKLIST 12:05

IIA. WOODED

1. Are there any wooded areas at the site? **yes**
2. What percentage of area of the site is wooded? (**80%** _____ acres). Indicate the wooded area on the site map which is attached to a copy of this checklist. Please identify what information was used to determine the wooded area of the site. **Visual estimate**
3. What is the dominant type of vegetation in the wooded area? (**Mixed**) Provide a photograph, if available. **GR09-3**
Dominant plant, if known: **Tamarisk with some willow**
4. What is the predominant size of the trees at the site? Use diameter at breast height.
Tamarisk 0-6 in. willow > 12 in.
5. Specify type of understory present, if known. Provide a photograph, if available. **Tamarisk/mulefat**
GR09-4

IIB. SHRUB/SCRUB

1. Is shrub/scrub vegetation present at the site? **yes**
2. What percentage of the site is covered by scrub/shrub vegetation? (**30%** _____ acres). Indicate the areas of shrub/scrub on the site map. Please identify what information was used to determine this area.
Visual estimate
3. What is the dominant type of scrub/shrub vegetation, if known? Provide a photograph, if available.
tamarisk/mulefat GR09-3
4. What is the approximate average height of the scrub/shrub vegetation? **> 5 ft.**
5. Based on site observations, how dense is the scrub/shrub vegetation? **Dense**

IIC. OPEN FIELD

1. Are there open (bare, barren) field areas present at the site? **yes no** If yes, please indicate the type below:
Prairie/plains Savannah Old field other (specify)
2. What percentage of the site is open field? (_____% _____ acres). Indicate the open fields on the site map.
3. What is/are the dominant plant(s)? Provide a photograph, if available.
4. What is the approximate average height of the dominant plant?
5. Describe the vegetation cover: **Dense Sparse Patchy**

IID. MISCELLANEOUS

1. Are other types of terrestrial habitats present at the site, other than woods, scrub/shrub, and open field? **no** If yes, identify and describe them below:
2. Describe the terrestrial miscellaneous habitat(s) and identify these area(s) on the site map.
3. What observations, if any, were made at the site regarding the presence and/or absence of insects, fish, birds, mammals, etc.?
Possible bobcat scat (photo), rodent burrows, fox carcass (mammal predator) GR09-1
Marsh wrens, finches, songbirds
4. Review the questions in Section I to determine if any additional habitat checklists should be completed for this site.



GR09-3



GR09-4



GR09-1

IV. GR-09 AQUATIC HABITAT CHECKLIST-FLOWING SYSTEMS 11:55

Note Aquatic systems are often associated with wetland habitats. Please refer to Section V, Wetland Habitat Checklist.

1. What type(s) of flowing water system(s) is(are) present at the site? **River**
2. If known, what is the name of the waterbody? **Gila River**
3. For natural systems, are there any indicators of physical alteration (e.g., channeling, debris, etc.)? **no**
4. What is the general composition of the substrate? Check all that apply.
Unknown, possibly silt
5. What is the condition of the bank (e.g., height, slope, extent of vegetative cover)?
flat with grass cover, tamarisk, and mulefat. Some cottonwood regeneration (Photo GR09-4). Some typha coming in with cottonwood. (Photo GR09-2)
6. Is the system influenced by tides? **No**
7. Is the flow intermittent? **Unknown** If yes, please note the information that was used in making this determination.
8. Is there a discharge from the site to the waterbody? **Unknown** If yes, please describe the discharge and its path.
9. Is there a discharge from the waterbody? **Unknown** if yes, and the information is available, please identify what the waterbody discharges to and whether the discharge is on site or off site.
10. Identify any field measurements and observations of water quality that were made. For those parameters for which data were collected, provide the measurement and the units of measure in the appropriate space below:
30 _ Width (ft.)
3 _ Depth (ft.)
fast Velocity (specify units):
18.6 Temperature (depth of the water at which the reading was taken)
8.28 pH
11.38 Dissolved oxygen
0.04% Salinity
 X Turbidity (turbid) (Secchi disk depth)
_____ Other (specify)
11. Describe observed color and area of coloration.
12. Is any aquatic vegetation present? **yes** If yes, please identify the type of vegetation present, if known.
Some fragmities upstream (Photo GR09-5)
13. Mark the flowing water system on the attached site map.
14. What observations were made at the waterbody regarding the presence and/or absence of benthic macroinvertebrates, fish, birds, mammals, etc.?
Great blue heron, American goldfinch, marsh wren, tree swallow, common black-hawk
Mammal burrows, horses



GR09-4



GR09-2



GR09-5