APPENDIX 3: DELETION TABLES

APPENDIX 3: DELETION TABLES

3.1 Aluminum

TABLE 3.1.1: Deletion process for the Santa Ana River aluminum site-specific database.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code
Platyhelminthes	Turbellaria	Tricladida	Planarlidae	*Girardiaia tigrina*	Flatworm	G
Annelida	Oligochaeta	Haplotaxida	Tubificidae	*Tubifex tubifex*	Worm	F
Mollusca	Gastropoda	Limnophila	Physidae	*Physa* sp.	Snail	G
Arthropoda	Branchiopoda	Diplostraca	Daphnidae	*Ceriodaphnia dubia*	Cladoceran	O*
Arthropoda	Branchiopoda	Diplostraca	Daphnidae	*Daphnia magna*	Cladoceran	O*
Arthropoda	Malacostraca	Isopoda	Asellidae	*Caecidotea aquaticus*	Isopod	F
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Crangonyx pseudogracilis*	Amphipod	F
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus pseudolimnaeus*	Amphipod	G
Arthropoda	Insecta	Plecoptera	Perlidae	*Acroneuria* sp.	Stonefly	O
Arthropoda	Insecta	Diptera	Chironomidae	*Tanytarsus dissimilis*	Midge	G
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus mykiss*	Rainbow trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus tschawytscha*	Chinook Salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salmo salar*	Atlantic salmon	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Hybognathus amarus*	Rio Grande silvery minnow	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Pimephales promelas*	Fathead minnow	S
Chordata	Actinopterygii	Perifomes	Centrarchidae	*Lepomis cyanellus*	Green sunfish	S
Chordata	Actinopterygii	Perifomes	Centrarchidae	*Micropterus dolomieui*	Smallmouth bass	G
Chordata	Actinopterygii	Perifomes	Percidae	*Perca flavescens*	Yellow perch	F
Chordata	Actinopterygii	Siluriformes	Ictaluridae	*Ictalurus punctatus*	Channel catfish	S

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TABLE 3.1.2: Deletion process for the Santa Cruz River near Nogales (NOG) and near Tucson (TUC) aluminum site-specific databases.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code NOG	Code TUC
Platyhelminthes	Turbellaria	Tricladida	Planarlidae	*Girardia tigrina*	Flatworm	D	D
Annelida	Oligochaeta	Haplotaxida	Tubificidae	*Tubifex tubifex*	Worm	F	F
Mollusca	Gastropoda	Limnophila	Physidae	*Physa* sp.	Snail	G	D
Arthropoda	Branchiopoda	Diplostraca	Daphnidae	*Ceriodaphnia dubia*	Cladoceran	F*	F*
Arthropoda	Branchiopoda	Diplostraca	Daphnidae	*Daphnia magna*	Cladoceran	G*	G*
Arthropoda	Malacostraca	Isopoda	Asellidae	*Caecidotea aquaticus*	Isopod	R	R
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Crangonyx pseudogracilis*	Amphipod	R	R
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus pseudolimnaeus*	Amphipod	R	R
Arthropoda	Insecta	Plecoptera	Perlidae	*Acroneuria* sp.	Stonefly	D	O
Arthropoda	Insecta	Diptera	Chironomidae	*Tanytarsus dissimilis*	Midge	G	F
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus mykiss*	Rainbow trout	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus tschawytscha*	Chinook Salmon	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salmo salar*	Atlantic salmon	D	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Hybognathus amarus*	Rio Grande silvery minnow	F	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Pimephales promelas*	Fathead minnow	F	D
Chordata	Actinopterygii	Perifomes	Centrarchidae	*Lepomis cyanellus*	Green sunfish	S	S
Chordata	Actinopterygii	Perifomes	Centrarchidae	*Micropterus dolomieui*	Smallmouth bass	D	D
Chordata	Actinopterygii	Perifomes	Percidae	*Perca flavescens*	Yellow perch	D	D
Chordata	Actinopterygii	Siluriformes	Ictaluridae	*Ictalurus punctatus*	Channel catfish	D	F

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R = non-resident species retained due to potential occurrence at the site
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TABLE 3.1.3: Deletion process for the Salt/Gila rivers aluminum site-specific database.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code
Platyhelminthes	Turbellaria	Tricladida	Planarlidae	*Girardia tigrina*	Flatworm	C
Annelida	Oligochaeta	Haplotaxida	Tubificidae	*Tubifex tubifex*	Worm	F
Mollusca	Gastropoda	Limnophila	Physidae	*Physa* sp.	Snail	G
Arthropoda	Branchiopoda	Diplostraca	Daphnidae	*Ceriodaphnia dubia*	Cladoceran	G*
Arthropoda	Branchiopoda	Diplostraca	Daphnidae	*Daphnia magna*	Cladoceran	F*
Arthropoda	Malacostraca	Isopoda	Asellidae	*Caecidotea aquaticus*	Isopod	D
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Crangonyx pseudogracilis*	Amphipod	O
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus pseudolimnaeus*	Amphipod	O
Arthropoda	Insecta	Plecoptera	Perlidae	*Acroneuria* sp.	Stonefly	R
Arthropoda	Insecta	Diptera	Chironomidae	*Tanytarsus dissimilis*	Midge	F
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus mykiss*	Rainbow trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus tschawytscha*	Chinook Salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salmo salar*	Atlantic salmon	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Hybognathus amarus*	Rio Grande silvery minnow	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Pimephales promelas*	Fathead minnow	S
Chordata	Actinopterygii	Perifomes	Centrarchidae	*Lepomis cyanellus*	Green sunfish	S
Chordata	Actinopterygii	Perifomes	Centrarchidae	*Micropterus dolomieui*	Smallmouth bass	G
Chordata	Actinopterygii	Perifomes	Percidae	*Perca flavescens*	Yellow perch	O
Chordata	Actinopterygii	Siluriformes	Ictaluridae	*Ictalurus punctatus*	Channel catfish	S

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TABLE 3.1.4: Deletion process for the Fountain Creek aluminum site-specific database.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code
Platyhelminthes	Turbellaria	Tricladida	Planarlidae	*Girardia tigrina*	Flatworm	S
Annelida	Oligochaeta	Haplotaxida	Tubificidae	*Tubifex tubifex*	Worm	S
Mollusca	Gastropoda	Limnophila	Physidae	*Physa* sp.	Snail	G
Arthropoda	Branchiopoda	Diplostraca	Daphnidae	*Ceriodaphnia dubia*	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Daphnidae	*Daphnia magna*	Cladoceran	D
Arthropoda	Malacostraca	Isopoda	Asellidae	*Caecidotea aquaticus*	Isopod	G
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Crangonyx pseudogracilis*	Amphipod	F
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus pseudolimnaeus*	Amphipod	G
Arthropoda	Insecta	Plecoptera	Perlidae	*Acroneuria* sp.	Stonefly	O
Arthropoda	Insecta	Diptera	Chironomidae	*Tanytarsus dissimilis*	Midge	G
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus mykiss*	Rainbow trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus tschawytscha*	Chinook Salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salmo salar*	Atlantic salmon	G
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Hybognathus amarus*	Rio Grande silvery minnow	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Pimephales promelas*	Fathead minnow	S
Chordata	Actinopterygii	Perifomes	Centrarchidae	*Lepomis cyanellus*	Green sunfish	S
Chordata	Actinopterygii	Perifomes	Centrarchidae	*Micropterus dolomieui*	Smallmouth bass	S
Chordata	Actinopterygii	Perifomes	Percidae	*Perca flavescens*	Yellow perch	F
Chordata	Actinopterygii	Siluriformes	Ictaluridae	*Ictalurus punctatus*	Channel catfish	S

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TABLE 3.1.5: Deletion process for the South Platte River aluminum site-specific database.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code
Platyhelminthes	Turbellaria	Tricladida	Planarlidae	*Girardia tigrina*	Flatworm	S
Annelida	Oligochaeta	Haplotaxida	Tubificidae	*Tubifex tubifex*	Worm	G
Mollusca	Gastropoda	Limnophila	Physidae	*Physa* sp.	Snail	G
Arthropoda	Branchiopoda	Diplostraca	Daphnidae	*Ceriodaphnia dubia*	Cladoceran	F*
Arthropoda	Branchiopoda	Diplostraca	Daphnidae	*Daphnia magna*	Cladoceran	G*
Arthropoda	Malacostraca	Isopoda	Asellidae	*Caecidotea aquaticus*	Isopod	G
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Crangonyx pseudogracilis*	Amphipod	F
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus pseudolimnaeus*	Amphipod	G
Arthropoda	Insecta	Plecoptera	Perlidae	*Acroneuria* sp.	Stonefly	O
Arthropoda	Insecta	Diptera	Chironomidae	*Tanytarsus dissimilis*	Midge	G
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus mykiss*	Rainbow trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus tschawytscha*	Chinook Salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salmo salar*	Atlantic salmon	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Hybognathus amarus*	Rio Grande silvery minnow	G
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Pimephales promelas*	Fathead minnow	S
Chordata	Actinopterygii	Perifomes	Centrarchidae	*Lepomis cyanellus*	Green sunfish	S
Chordata	Actinopterygii	Perifomes	Centrarchidae	*Micropterus dolomieui*	Smallmouth bass	S
Chordata	Actinopterygii	Perifomes	Percidae	*Perca flavescens*	Yellow perch	S
Chordata	Actinopterygii	Siluriformes	Ictaluridae	*Ictalurus punctatus*	Channel catfish	S

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TABLE 3.1.6: Deletion process for the derivation of the southwest (SW) and high plains (HP) arid stream region aluminum databases.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code SW	Code HP
Platyhelminthes	Turbellaria	Tricladida	Planarlidae	*Girardia tigrina*	Flatworm	G	S
Annelida	Oligochaeta	Haplotaxida	Tubificidae	*Tubifex tubifex*	Worm	F	S
Mollusca	Gastropoda	Limnophila	Physidae	*Physa* sp.	Snail	G	G
Arthropoda	Branchiopoda	Diplostraca	Daphnidae	*Ceriodaphnia dubia*	Cladoceran	G*	F*
Arthropoda	Branchiopoda	Diplostraca	Daphnidae	*Daphnia magna*	Cladoceran	G*	G*
Arthropoda	Malacostraca	Isopoda	Asellidae	*Caecidotea aquaticus*	Isopod	F	G
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Crangonyx pseudogracilis*	Amphipod	F	F
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus pseudolimnaeus*	Amphipod	G	G
Arthropoda	Insecta	Plecoptera	Perlidae	*Acroneuria* sp.	Stonefly	O	O
Arthropoda	Insecta	Diptera	Chironomidae	*Tanytarsus dissimilis*	Midge	G	G
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus mykiss*	Rainbow trout	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus tschawytscha*	Chinook Salmon	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salmo salar*	Atlantic salmon	D	G
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Hybognathus amarus*	Rio Grande silvery minnow	F	G
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Pimephales promelas*	Fathead minnow	S	S
Chordata	Actinopterygii	Perifomes	Centrarchidae	*Lepomis cyanellus*	Green sunfish	S	S
Chordata	Actinopterygii	Perifomes	Centrarchidae	*Micropterus dolomieui*	Smallmouth bass	G	S
Chordata	Actinopterygii	Perifomes	Percidae	*Perca flavescens*	Yellow perch	O	S
Chordata	Actinopterygii	Siluriformes	Ictaluridae	*Ictalurus punctatus*	Channel catfish	S	S

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3.2 Ammonia

TABLE 3.2.1: Deletion process for the Santa Ana River ammonia site-specific database.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code
Arthropoda	Insecta	Ephemeroptera	Baetidae	*Baetis rhodani*	Mayfly	G
Arthropoda	Insecta	Ephemeroptera	Baetidae	*Callibaetis skokianus*	Mayfly	G
Arthropoda	Insecta	Ephemeroptera	Baetidae	*Callibaetis* sp.	Mayfly	G
Arthropoda	Insecta	Ephemeroptera	Ephemerillidae	*Ephemerella grandis*	Mayfly	O
Arthropoda	Insecta	Odonata	Coenagrionidae	*Erythromma najas*	Damselfly	F
Arthropoda	Insecta	Odonata	Lestidae	*Lestes sponsa*	Dragonfly	O
Arthropoda	Insecta	Odonata	Libellulidae	*Sympetrum flaveolum*	Dragonfly	F
Arthropoda	Insecta	Plecoptera	Perlodidae	*Arcynopteryx parallela*	Stonefly	O
Arthropoda	Insecta	Coleoptera	Elmidae	*Stenelmis sexlineata*	Riffle beetle	F
Arthropoda	Insecta	Tricoptera	Limnephilidae	*Philarctus quaeris*	Caddisfly	O
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Ceriodaphnia acanthina*	Cladoceran	O
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Ceriodaphnia dubia*	Cladoceran	O
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia magna*	Cladoceran	O
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia pulicaria*	Cladoceran	O
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Simocephalus vetulus*	Cladoceran	O
Arthropoda	Malacostraca	Amphipoda	Cragonyctidae	*Crangonyx pseudogracillis*	Amphipod	D
Arthropoda	Malacostraca	Amphipoda	Cragonyctidae	*Crangonyx* sp.	Amphipod	D
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus pulex*	Amphipod	G
Arthropoda	Malacostraca	Amphipoda	Hyalellidae	*Hyalella azteca*	Amphipod	S
Arthropoda	Malacostraca	Decapoda	Cambaridae	*Orconectes immunis*	Calico crayfish	D
Arthropoda	Malacostraca	Decapoda	Cambaridae	*Orconectes naias*	Crayfish	D
Arthropoda	Malacostraca	Decapoda	Cambaridae	*Procambarus clarkii*	Red crayfish	S
Arthropoda	Malacostraca	Isopoda	Asellidae	*Asellus racovitzai*	Sowbug	F
Annelida	Oligochaeta	Haplotaxida	Tubificidae	*Tubifex tubifex*	Tube worm	F
Platyhelminthes	Turbellaria	Tricladida	Dendrocoelidae	*Dendrocoelom lacteum*	Flat worm	O
Mollusca	Bivalvia	Unionoida	Unionidae	*Actinonaias pectorosa*	Pheasantshell mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Fusconaia masoni*	Atlantic pigtoe mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Lampsilis cardium*	Plain pocketbook mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Lampsilis fasciola*	Wavy-rayed lampmussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Lampsilis siliquoidea*	Fatmucket mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Lasmigona subvirdis*	Green floater mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Medionidus conradicus*	Cumberland moccasinshell mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Pyganodon grandis*	Giant floater mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Utterbackia imbecellis*	Paper pondshell mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Villosa iris*	Rainbow mussel	D
Mollusca	Bivalvia	Veneroida	Pisidiidae	*Musculium transversum*	Fingernail clam	F
Mollusca	Gastropoda	Basommatophora	Planorbidae	*Helisoma trivolvis*	Snail	F
Mollusca	Gastropoda	Basommatophora	Physidae	*Physa gyrina*	Snail	G
Chordata	Actinopterygii	Acipenseriformes	Acipenseridae	*Acipenser brevirostrum*	Shortnose sturgeon	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Campostoma anomalum*	Central stoneroller	F

TABLE 3.2.1: Continued.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Cyprinus carpio*	Common carp	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Hybognathus amarus*	Rio Grande silvery minnow	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Notemigonus chrysoleucas*	Golden shiner	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Cyprinella lutrensis*	Red shiner	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Notropis spilopterus*	Spotfin shiner	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Notropis whipplei*	Steelcolor shiner	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Pimephales promelas*	Fathead minnow	S
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Catostomus commersoni*	White sucker	G
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Catostomus platyrynchus*	Mountain sucker	G
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Chasmistes brevirostris*	Shortnose sucker	D
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Deltistes luxatus*	Lost river sucker	D
Chordata	Actinopterygii	Siluriformes	Ictaluridae	*Ictalurus punctatus*	Channel catfish	S
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus aquabonita*	Golden trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus clarki*	Cutthroat trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus gorbuscha*	Pink salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus kisutch*	Coho salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus mykiss*	Rainbow trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus tshawytscha*	Chinook salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Prosopium williamsoni*	Mountain whitefish	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salmo trutta*	Brown trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salvelinus fontinalis*	Brook trout	D
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	*Gambusia affinis*	Mosquitofish	S
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	*Poecilia reticulata*	Guppy	G
Chordata	Actinopterygii	Cyprinodontiformes	Cyprinodontidae	*Cyprinodon* sp.	Pupfish	D
Chordata	Actinopterygii	Scorpaeniformes	Cottidae	*Cottus bairdi*	Mottled sculpin	G
Chordata	Actinopterygii	Perciformes	Moronidae	*Morone chrysops*	White bass	O
Chordata	Actinopterygii	Perciformes	Moronidae	*Morone americana*	White perch	O
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Lepomis cyanellus*	Green sunfish	S
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Lepomis gibbosus*	Pumpkinseed	D
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Lepomis machrochirus*	Bluegill	S
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Micropterus dolomieui*	Smallmouth bass	D
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Micropterus salmoides*	Largemouth bass	S
Chordata	Actinopterygii	Perciformes	Percidae	*Etheostoma spectabile*	Orangethroat darter	O
Chordata	Actinopterygii	Perciformes	Percidae	*Sander vitreus*	Walleye	O
Chordata	Amphibia	Anura	Ranidae	*Rana pipiens*	Northern leopard frog	D

S = retained because this species occurs at the site
G = retained because there is a species in this genus that occurs at the site, but not in the national data set
F = retained because there is a genus in this Family that occurs at the site, but not in the national data set
O = retained because this Order occurs at the site, and is not represented by a lower taxon
C = retained because this Class occurs at the site, and is not represented by a lower taxon
P = retained because this Phylum occurs at the site, and is not represented by a lower taxon
D = deleted because this species does not satisfy any of the requirements for retaining species
* = formally retained, but not used in the working database for reasons explained in the text

TABLE 3.2.2: Deletion process for the Santa Cruz River near Nogales (NOG) and near Tucson (TOC) ammonia site-specific databases.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code NOG	Code TUC
Arthropoda	Insecta	Ephemeroptera	Baetidae	*Baetis rhodani*	Mayfly	G	F
Arthropoda	Insecta	Ephemeroptera	Baetidae	*Callibaetis skokianus*	Mayfly	G	F
Arthropoda	Insecta	Ephemeroptera	Baetidae	*Callibaetis* sp.	Mayfly	G	F
Arthropoda	Insecta	Ephemeroptera	Ephemerillidae	*Ephemerella grandis*	Mayfly	O	D
Arthropoda	Insecta	Odonata	Coenagrionidae	*Erythromma najas*	Damselfly	F	F
Arthropoda	Insecta	Odonata	Lestidae	*Lestes sponsa*	Dragonfly	O	D
Arthropoda	Insecta	Odonata	Libellulidae	*Sympetrum flaveolum*	Dragonfly	F	D
Arthropoda	Insecta	Plecoptera	Perlodidae	*Arcynopteryx parallela*	Stonefly	D	O
Arthropoda	Insecta	Coleoptera	Elmidae	*Stenelmis sexlineata*	Riffle beetle	F	F
Arthropoda	Insecta	Tricoptera	Limnephilidae	*Philarctus quaeris*	Caddisfly	O	O
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Ceriodaphnia acanthina*	Cladoceran	F	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Ceriodaphnia dubia*	Cladoceran	F	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia magna*	Cladoceran	G	G
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia pulicaria*	Cladoceran	G	G
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Simocephalus vetulus*	Cladoceran	F	D
Arthropoda	Malacostraca	Amphipoda	Cragonyctidae	*Crangonyx pseudogracillis*	Amphipod	R	R
Arthropoda	Malacostraca	Amphipoda	Cragonyctidae	*Crangonyx* sp.	Amphipod	R	R
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus pulex*	Amphipod	R	R
Arthropoda	Malacostraca	Amphipoda	Hyalellidae	*Hyalella azteca*	Amphipod	R	R
Arthropoda	Malacostraca	Decapoda	Cambaridae	*Orconectes immunis*	Calico crayfish	R	R
Arthropoda	Malacostraca	Decapoda	Cambaridae	*Orconectes naias*	Crayfish	R	R
Arthropoda	Malacostraca	Decapoda	Cambaridae	*Procambarus clarkii*	Red crayfish	R	R
Arthropoda	Malacostraca	Isopoda	Asellidae	*Asellus racovitzai*	Sowbug	R	R
Annelida	Oligochaeta	Haplotaxida	Tubificidae	*Tubifex tubifex*	Tube worm	F	F
Platyhelminthes	Turbellaria	Tricladida	Dendrocoelidae	*Dendrocoelom lacteum*	Flat worm	D	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Actinonaias pectorosa*	Pheasantshell mussel	D	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Fusconaia masoni*	Atlantic pigtoe mussel	D	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Lampsilis cardium*	Plain pocketbook mussel	D	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Lampsilis fasciola*	Wavy-rayed lampmussel	D	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Lampsilis siliquoidea*	Fatmucket mussel	D	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Lasmigona subvirdis*	Green floater mussel	D	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Medionidus conradicus*	Cumberland moccasinshell mussel	D	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Pyganodon grandis*	Giant floater mussel	D	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Utterbackia imbecellis*	Paper pondshell mussel	D	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Villosa iris*	Rainbow mussel	D	D
Mollusca	Bivalvia	Veneroida	Pisidiidae	*Musculium transversum*	Fingernail clam	D	D
Mollusca	Gastropoda	Basommatophora	Planorbidae	*Helisoma trivolvis*	Snail	O	D
Mollusca	Gastropoda	Basommatophora	Physidae	*Physa gyrina*	Snail	G	D
Chordata	Actinopterygii	Acipenseriformes	Acipenseridae	*Acipenser brevirostrum*	Shortnose sturgeon	D	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Campostoma anomalum*	Central stoneroller	F	D

TABLE 3.2.2: Continued.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code NOG	Code TUC
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Cyprinus carpio*	Common carp	F	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Hybognathus amarus*	Rio Grande silvery minnow	F	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Notemigonus chrysoleucas*	Golden shiner	F	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Cyprinella lutrensis*	Red shiner	F	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Notropis spilopterus*	Spotfin shiner	F	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Notropis whipplei*	Steelcolor shiner	F	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Pimephales promelas*	Fathead minnow	F	D
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Catostomus commersoni*	White sucker	G	D
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Catostomus platyrynchus*	Mountain sucker	G	D
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Chasmistes brevirostris*	Shortnose sucker	D	D
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Deltistes luxatus*	Lost river sucker	D	D
Chordata	Actinopterygii	Siluriformes	Ictaluridae	*Ictalurus punctatus*	Channel catfish	D	F
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus aquabonita*	Golden trout	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus clarki*	Cutthroat trout	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus gorbuscha*	Pink salmon	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus kisutch*	Coho salmon	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus mykiss*	Rainbow trout	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus tshawytscha*	Chinook salmon	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Prosopium williamsoni*	Mountain whitefish	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salmo trutta*	Brown trout	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salvelinus fontinalis*	Brook trout	D	D
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	*Gambusia affinis*	Mosquitofish	G	S
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	*Poecilia reticulata*	Guppy	F	D
Chordata	Actinopterygii	Cyprinodontiformes	Cyprinodontidae	*Cyprinodon* sp.	Pupfish	D	D
Chordata	Actinopterygii	Scorpaeniformes	Cottidae	*Cottus bairdi*	Mottled sculpin	D	D
Chordata	Actinopterygii	Perciformes	Moronidae	*Morone chrysops*	White bass	D	D
Chordata	Actinopterygii	Perciformes	Moronidae	*Morone americana*	White perch	D	D
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Lepomis cyanellus*	Green sunfish	S	S
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Lepomis gibbosus*	Pumpkinseed	D	D
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Lepomis machrochirus*	Bluegill	D	D
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Micropterus dolomieui*	Smallmouth bass	D	D
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Micropterus salmoides*	Largemouth bass	D	D
Chordata	Actinopterygii	Perciformes	Percidae	*Etheostoma spectabile*	Orangethroat darter	D	D
Chordata	Actinopterygii	Perciformes	Percidae	*Sander vitreus*	Walleye	D	D
Chordata	Amphibia	Anura	Ranidae	*Rana pipiens*	Northern leopard frog	D	D

S = retained because this species occurs at the site
G = retained because there is a species in this genus that occurs at the site, but not in the national data set
F = retained because there is a genus in this Family that occurs at the site, but not in the national data set
O = retained because this Order occurs at the site, and is not represented by a lower taxon
C = retained because this Class occurs at the site, and is not represented by a lower taxon
P = retained because this Phylum occurs at the site, and is not represented by a lower taxon
D = deleted because this species does not satisfy any of the requirements for retaining species
R = non-resident species retained due to potential occurrence at the site
* = formally retained, but not used in the working database for reasons explained in the text

TABLE 3.2.3: Deletion process for the Salt/Gila rivers ammonia site-specific database.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code
Arthropoda	Insecta	Ephemeroptera	Baetidae	*Baetis rhodani*	Mayfly	F
Arthropoda	Insecta	Ephemeroptera	Baetidae	*Callibaetis skokianus*	Mayfly	G
Arthropoda	Insecta	Ephemeroptera	Baetidae	*Callibaetis* sp.	Mayfly	G
Arthropoda	Insecta	Ephemeroptera	Ephemerillidae	*Ephemerella grandis*	Mayfly	D
Arthropoda	Insecta	Odonata	Coenagrionidae	*Erythromma najas*	Damselfly	F
Arthropoda	Insecta	Odonata	Lestidae	*Lestes sponsa*	Dragonfly	F
Arthropoda	Insecta	Odonata	Libellulidae	*Sympetrum flaveolum*	Dragonfly	D
Arthropoda	Insecta	Plecoptera	Perlodidae	*Arcynopteryx parallela*	Stonefly	D
Arthropoda	Insecta	Coleoptera	Elmidae	*Stenelmis sexlineata*	Riffle beetle	F
Arthropoda	Insecta	Tricoptera	Limnephilidae	*Philarctus quaeris*	Caddisfly	O
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Ceriodaphnia acanthina*	Cladoceran	G
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Ceriodaphnia dubia*	Cladoceran	G
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia magna*	Cladoceran	F
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia pulicaria*	Cladoceran	F
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Simocephalus vetulus*	Cladoceran	F
Arthropoda	Malacostraca	Amphipoda	Cragonyctidae	*Crangonyx pseudogracillis*	Amphipod	O
Arthropoda	Malacostraca	Amphipoda	Cragonyctidae	*Crangonyx* sp.	Amphipod	O
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus pulex*	Amphipod	O
Arthropoda	Malacostraca	Amphipoda	Hyalellidae	*Hyalella azteca*	Amphipod	O
Arthropoda	Malacostraca	Decapoda	Cambaridae	*Orconectes immunis*	Calico crayfish	D
Arthropoda	Malacostraca	Decapoda	Cambaridae	*Orconectes naias*	Crayfish	D
Arthropoda	Malacostraca	Decapoda	Cambaridae	*Procambarus clarkii*	Red crayfish	D
Arthropoda	Malacostraca	Isopoda	Asellidae	*Asellus racovitzai*	Sowbug	D
Annelida	Oligochaeta	Haplotaxida	Tubificidae	*Tubifex tubifex*	Tube worm	F
Platyhelminthes	Turbellaria	Tricladida	Dendrocoelidae	*Dendrocoelom lacteum*	Flat worm	C
Mollusca	Bivalvia	Unionoida	Unionidae	*Actinonaias pectorosa*	Pheasantshell mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Fusconaia masoni*	Atlantic pigtoe mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Lampsilis cardium*	Plain pocketbook mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Lampsilis fasciola*	Wavy-rayed lampmussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Lampsilis siliquoidea*	Fatmucket mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Lasmigona subvirdis*	Green floater mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Medionidus conradicus*	Cumberland moccasinshell mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Pyganodon grandis*	Giant floater mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Utterbackia imbecellis*	Paper pondshell mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Villosa iris*	Rainbow mussel	D
Mollusca	Bivalvia	Veneroida	Pisidiidae	*Musculium transversum*	Fingernail clam	D
Mollusca	Gastropoda	Basommatophora	Planorbidae	*Helisoma trivolvis*	Snail	O
Mollusca	Gastropoda	Basommatophora	Physidae	*Physa gyrina*	Snail	G
Chordata	Actinopterygii	Acipenseriformes	Acipenseridae	*Acipenser brevirostrum*	Shortnose sturgeon	D

TABLE 3.2.3: Continued.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Campostoma anomalum*	Central stoneroller	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Cyprinus carpio*	Common carp	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Hybognathus amarus*	Rio Grande silvery minnow	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Notemigonus chrysoleucas*	Golden shiner	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Cyprinella lutrensis*	Red shiner	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Notropis spilopterus*	Spotfin shiner	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Notropis whipplei*	Steelcolor shiner	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Pimephales promelas*	Fathead minnow	S
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Catostomus commersoni*	White sucker	G
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Catostomus platyrynchus*	Mountain sucker	G
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Chasmistes brevirostris*	Shortnose sucker	F
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Deltistes luxatus*	Lost river sucker	F
Chordata	Actinopterygii	Siluriformes	Ictaluridae	*Ictalurus punctatus*	Channel catfish	S
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus aquabonita*	Golden trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus clarki*	Cutthroat trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus gorbuscha*	Pink salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus kisutch*	Coho salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus mykiss*	Rainbow trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus tshawytscha*	Chinook salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Prosopium williamsoni*	Mountain whitefish	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salmo trutta*	Brown trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salvelinus fontinalis*	Brook trout	D
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	*Gambusia affinis*	Mosquitofish	S
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	*Poecilia reticulata*	Guppy	G
Chordata	Actinopterygii	Cyprinodontiformes	Cyprinodontidae	*Cyprinodon* sp.	Pupfish	G
Chordata	Actinopterygii	Scorpaeniformes	Cottidae	*Cottus bairdi*	Mottled sculpin	D
Chordata	Actinopterygii	Perciformes	Moronidae	*Morone chrysops*	White bass	G
Chordata	Actinopterygii	Perciformes	Moronidae	*Morone americana*	White perch	G
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Lepomis cyanellus*	Green sunfish	S
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Lepomis gibbosus*	Pumpkinseed	G
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Lepomis machrochirus*	Bluegill	S
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Micropterus dolomieui*	Smallmouth bass	G
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Micropterus salmoides*	Largemouth bass	S
Chordata	Actinopterygii	Perciformes	Percidae	*Etheostoma spectabile*	Orangethroat darter	D
Chordata	Actinopterygii	Perciformes	Percidae	*Sander vitreus*	Walleye	D
Chordata	Amphibia	Anura	Ranidae	*Rana pipiens*	Northern leopard frog	D

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P = retained because this Phylum occurs at the site, and is not represented by a lower taxon
D = deleted because this species does not satisfy any of the requirements for retaining species
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TABLE 3.2.4: Deletion process for Fountain Creek ammonia site-specific database.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code
Arthropoda	Insecta	Ephemeroptera	Baetidae	*Baetis rhodani*	Mayfly	G
Arthropoda	Insecta	Ephemeroptera	Baetidae	*Callibaetis skokianus*	Mayfly	G
Arthropoda	Insecta	Ephemeroptera	Baetidae	*Callibaetis* sp.	Mayfly	G
Arthropoda	Insecta	Ephemeroptera	Ephemerillidae	*Ephemerella grandis*	Mayfly	G
Arthropoda	Insecta	Odonata	Coenagrionidae	*Erythromma najas*	Damselfly	F
Arthropoda	Insecta	Odonata	Lestidae	*Lestes sponsa*	Dragonfly	O
Arthropoda	Insecta	Odonata	Libellulidae	*Sympetrum flaveolum*	Dragonfly	F
Arthropoda	Insecta	Plecoptera	Perlodidae	*Arcynopteryx parallela*	Stonefly	F
Arthropoda	Insecta	Coleoptera	Elmidae	*Stenelmis sexlineata*	Riffle beetle	F
Arthropoda	Insecta	Tricoptera	Limnephilidae	*Philarctus quaeris*	Caddisfly	G
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Ceriodaphnia acanthina*	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Ceriodaphnia dubia*	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia magna*	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia pulicaria*	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Simocephalus vetulus*	Cladoceran	D
Arthropoda	Malacostraca	Amphipoda	Cragonyctidae	*Crangonyx pseudogracillis*	Amphipod	O
Arthropoda	Malacostraca	Amphipoda	Cragonyctidae	*Crangonyx* sp.	Amphipod	O
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus pulex*	Amphipod	G
Arthropoda	Malacostraca	Amphipoda	Hyalellidae	*Hyalella azteca*	Amphipod	S
Arthropoda	Malacostraca	Decapoda	Cambaridae	*Orconectes immunis*	Calico crayfish	G
Arthropoda	Malacostraca	Decapoda	Cambaridae	*Orconectes naias*	Crayfish	G
Arthropoda	Malacostraca	Decapoda	Cambaridae	*Procambarus clarkii*	Red crayfish	D
Arthropoda	Malacostraca	Isopoda	Asellidae	*Asellus racovitzai*	Sowbug	G
Annelida	Oligochaeta	Haplotaxida	Tubificidae	*Tubifex tubifex*	Tube worm	S
Platyhelminthes	Turbellaria	Tricladida	Dendrocoelidae	*Dendrocoelom lacteum*	Flat worm	O
Mollusca	Bivalvia	Unionoida	Unionidae	*Actinonaias pectorosa*	Pheasantshell mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Fusconaia masoni*	Atlantic pigtoe mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Lampsilis cardium*	Plain pocketbook mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Lampsilis fasciola*	Wavy-rayed lampmussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Lampsilis siliquoidea*	Fatmucket mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Lasmigona subvirdis*	Green floater mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Medionidus conradicus*	Cumberland moccasinshell mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Pyganodon grandis*	Giant floater mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Utterbackia imbecellis*	Paper pondshell mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Villosa iris*	Rainbow mussel	D
Mollusca	Bivalvia	Veneroida	Pisidiidae	*Musculium transversum*	Fingernail clam	D
Mollusca	Gastropoda	Basommatophora	Planorbidae	*Helisoma trivolvis*	Snail	O
Mollusca	Gastropoda	Basommatophora	Physidae	*Physa gyrina*	Snail	G
Chordata	Actinopterygii	Acipenseriformes	Acipenseridae	*Acipenser brevirostrum*	Shortnose sturgeon	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Campostoma anomalum*	Central stoneroller	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Cyprinus carpio*	Common carp	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Hybognathus amarus*	Rio Grande silvery minnow	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Notemigonus chrysoleucas*	Golden shiner	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Cyprinella lutrensis*	Red shiner	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Notropis spilopterus*	Spotfin shiner	G
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Notropis whipplei*	Steelcolor shiner	G

TABLE 3.2.4: Continued.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Pimephales promelas*	Fathead minnow	S
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Catostomus commersoni*	White sucker	S
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Catostomus platyrynchus*	Mountain sucker	G
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Chasmistes brevirostris*	Shortnose sucker	D
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Deltistes luxatus*	Lost river sucker	D
Chordata	Actinopterygii	Siluriformes	Ictaluridae	*Ictalurus punctatus*	Channel catfish	S
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus aquabonita*	Golden trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus clarki*	Cutthroat trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus gorbuscha*	Pink salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus kisutch*	Coho salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus mykiss*	Rainbow trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus tshawytscha*	Chinook salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Prosopium williamsoni*	Mountain whitefish	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salmo trutta*	Brown trout	S
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salvelinus fontinalis*	Brook trout	D
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	*Gambusia affinis*	Mosquitofish	O
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	*Poecilia reticulata*	Guppy	O
Chordata	Actinopterygii	Cyprinodontiformes	Cyprinodontidae	*Cyprinodon* sp.	Pupfish	O
Chordata	Actinopterygii	Scorpaeniformes	Cottidae	*Cottus bairdi*	Mottled sculpin	D
Chordata	Actinopterygii	Perciformes	Moronidae	*Morone chrysops*	White bass	D
Chordata	Actinopterygii	Perciformes	Moronidae	*Morone americana*	White perch	D
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Lepomis cyanellus*	Green sunfish	S
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Lepomis gibbosus*	Pumpkinseed	D
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Lepomis machrochirus*	Bluegill	S
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Micropterus dolomieui*	Smallmouth bass	S
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Micropterus salmoides*	Largemouth bass	D
Chordata	Actinopterygii	Perciformes	Percidae	*Etheostoma spectabile*	Orangethroat darter	G
Chordata	Actinopterygii	Perciformes	Percidae	*Sander vitreus*	Walleye	D
Chordata	Amphibia	Anura	Ranidae	*Rana pipiens*	Northern leopard frog	D

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* = formally retained, but not used in the working database for reasons explained in the text

TABLE 3.2.5: Deletion process for the South Platte River ammonia site-specific database.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code
Arthropoda	Insecta	Ephemeroptera	Baetidae	*Baetis rhodani*	Mayfly	G
Arthropoda	Insecta	Ephemeroptera	Baetidae	*Callibaetis skokianus*	Mayfly	G
Arthropoda	Insecta	Ephemeroptera	Baetidae	*Callibaetis* sp.	Mayfly	G
Arthropoda	Insecta	Ephemeroptera	Ephemerillidae	*Ephemerella grandis*	Mayfly	O
Arthropoda	Insecta	Odonata	Coenagrionidae	*Erythromma najas*	Damselfly	F
Arthropoda	Insecta	Odonata	Lestidae	*Lestes sponsa*	Dragonfly	O
Arthropoda	Insecta	Odonata	Libellulidae	*Sympetrum flaveolum*	Dragonfly	F
Arthropoda	Insecta	Plecoptera	Perlodidae	*Arcynopteryx parallela*	Stonefly	O
Arthropoda	Insecta	Coleoptera	Elmidae	*Stenelmis sexlineata*	Riffle beetle	F
Arthropoda	Insecta	Tricoptera	Limnephilidae	*Philarctus quaeris*	Caddisfly	O
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Ceriodaphnia acanthina*	Cladoceran	F
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Ceriodaphnia dubia*	Cladoceran	F
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia magna*	Cladoceran	G
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia pulicaria*	Cladoceran	G
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Simocephalus vetulus*	Cladoceran	F
Arthropoda	Malacostraca	Amphipoda	Cragonyctidae	*Crangonyx pseudogracillis*	Amphipod	D
Arthropoda	Malacostraca	Amphipoda	Cragonyctidae	*Crangonyx* sp.	Amphipod	D
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus pulex*	Amphipod	G
Arthropoda	Malacostraca	Amphipoda	Hyalellidae	*Hyalella azteca*	Amphipod	S
Arthropoda	Malacostraca	Decapoda	Cambaridae	*Orconectes immunis*	Calico crayfish	F
Arthropoda	Malacostraca	Decapoda	Cambaridae	*Orconectes naias*	Crayfish	F
Arthropoda	Malacostraca	Decapoda	Cambaridae	*Procambarus clarkii*	Red crayfish	F
Arthropoda	Malacostraca	Isopoda	Asellidae	*Asellus racovitzai*	Sowbug	G
Annelida	Oligochaeta	Haplotaxida	Tubificidae	*Tubifex tubifex*	Tube worm	F
Platyhelminthes	Turbellaria	Tricladida	Dendrocoelidae	*Dendrocoelom lacteum*	Flat worm	O
Mollusca	Bivalvia	Unionoida	Unionidae	*Actinonaias pectorosa*	Pheasantshell mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Fusconaia masoni*	Atlantic pigtoe mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Lampsilis cardium*	Plain pocketbook mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Lampsilis fasciola*	Wavy-rayed lampmussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Lampsilis siliquoidea*	Fatmucket mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Lasmigona subvirdis*	Green floater mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Medionidus conradicus*	Cumberland moccasinshell mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Pyganodon grandis*	Giant floater mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Utterbackia imbecellis*	Paper pondshell mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Villosa iris*	Rainbow mussel	D
Mollusca	Bivalvia	Veneroida	Pisidiidae	*Musculium transversum*	Fingernail clam	O
Mollusca	Gastropoda	Basommatophora	Planorbidae	*Helisoma trivolvis*	Snail	F
Mollusca	Gastropoda	Basommatophora	Physidae	*Physa gyrina*	Snail	G
Chordata	Actinopterygii	Acipenseriformes	Acipenseridae	*Acipenser brevirostrum*	Shortnose sturgeon	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Campostoma anomalum*	Central stoneroller	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Cyprinus carpio*	Common carp	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Hybognathus amarus*	Rio Grande silvery minnow	G
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Notemigonus chrysoleucas*	Golden shiner	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Cyprinella lutrensis*	Red shiner	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Notropis spilopterus*	Spotfin shiner	G
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Notropis whipplei*	Steelcolor shiner	G

TABLE 3.2.5: Continued.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Pimephales promelas*	Fathead minnow	S
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Catostomus commersoni*	White sucker	S
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Catostomus platyrynchus*	Mountain sucker	G
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Chasmistes brevirostris*	Shortnose sucker	F
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Deltistes luxatus*	Lost river sucker	F
Chordata	Actinopterygii	Siluriformes	Ictaluridae	*Ictalurus punctatus*	Channel catfish	S
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus aquabonita*	Golden trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus clarki*	Cutthroat trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus gorbuscha*	Pink salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus kisutch*	Coho salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus mykiss*	Rainbow trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus tshawytscha*	Chinook salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Prosopium williamsoni*	Mountain whitefish	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salmo trutta*	Brown trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salvelinus fontinalis*	Brook trout	D
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	*Gambusia affinis*	Mosquitofish	S
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	*Poecilia reticulata*	Guppy	O
Chordata	Actinopterygii	Cyprinodontiformes	Cyprinodontidae	*Cyprinodon* sp.	Pupfish	O
Chordata	Actinopterygii	Scorpaeniformes	Cottidae	*Cottus bairdi*	Mottled sculpin	D
Chordata	Actinopterygii	Perciformes	Moronidae	*Morone chrysops*	White bass	D
Chordata	Actinopterygii	Perciformes	Moronidae	*Morone americana*	White perch	D
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Lepomis cyanellus*	Green sunfish	S
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Lepomis gibbosus*	Pumpkinseed	S
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Lepomis machrochirus*	Bluegill	S
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Micropterus dolomieui*	Smallmouth bass	S
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Micropterus salmoides*	Largemouth bass	S
Chordata	Actinopterygii	Perciformes	Percidae	*Etheostoma spectabile*	Orangethroat darter	G
Chordata	Actinopterygii	Perciformes	Percidae	*Sander vitreus*	Walleye	S
Chordata	Amphibia	Anura	Ranidae	*Rana pipiens*	Northern leopard frog	D

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TABLE 3.2.6: Deletion process for the derivation of the southwest (SW) and high plains (HP) arid stream region ammonia databases.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code SW	Code HP
Arthropoda	Insecta	Ephemeroptera	Baetidae	*Baetis rhodani*	Mayfly	G	G
Arthropoda	Insecta	Ephemeroptera	Baetidae	*Callibaetis skokianus*	Mayfly	G	G
Arthropoda	Insecta	Ephemeroptera	Baetidae	*Callibaetis* sp.	Mayfly	G	G
Arthropoda	Insecta	Ephemeroptera	Ephemerillidae	*Ephemerella grandis*	Mayfly	O	G
Arthropoda	Insecta	Odonata	Coenagrionidae	*Erythromma najas*	Damselfly	F	F
Arthropoda	Insecta	Odonata	Lestidae	*Lestes sponsa*	Dragonfly	F	O
Arthropoda	Insecta	Odonata	Libellulidae	*Sympetrum flaveolum*	Dragonfly	F	F
Arthropoda	Insecta	Plecoptera	Perlodidae	*Arcynopteryx parallela*	Stonefly	O	F
Arthropoda	Insecta	Coleoptera	Elmidae	*Stenelmis sexlineata*	Riffle beetle	F	F
Arthropoda	Insecta	Tricoptera	Limnephilidae	*Philarctus quaeris*	Caddisfly	O	G
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Ceriodaphnia acanthina*	Cladoceran	G	F
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Ceriodaphnia dubia*	Cladoceran	G	F
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia magna*	Cladoceran	G	G
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia pulicaria*	Cladoceran	G	G
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Simocephalus vetulus*	Cladoceran	F	F
Arthropoda	Malacostraca	Amphipoda	Cragonyctidae	*Crangonyx pseudogracillis*	Amphipod	O	O
Arthropoda	Malacostraca	Amphipoda	Cragonyctidae	*Crangonyx* sp.	Amphipod	O	O
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus pulex*	Amphipod	G	G
Arthropoda	Malacostraca	Amphipoda	Hyalellidae	*Hyalella azteca*	Amphipod	S	S
Arthropoda	Malacostraca	Decapoda	Cambaridae	*Orconectes immunis*	Calico crayfish	D	G
Arthropoda	Malacostraca	Decapoda	Cambaridae	*Orconectes naias*	Crayfish	D	G
Arthropoda	Malacostraca	Decapoda	Cambaridae	*Procambarus clarkii*	Red crayfish	S	F
Arthropoda	Malacostraca	Isopoda	Asellidae	*Asellus racovitzai*	Sowbug	F	G
Annelida	Oligochaeta	Haplotaxida	Tubificidae	*Tubifex tubifex*	Tube worm	F	S
Platyhelminthes	Turbellaria	Tricladida	Dendrocoelidae	*Dendrocoelom lacteum*	Flat worm	O	O
Mollusca	Bivalvia	Unionoida	Unionidae	*Actinonaias pectorosa*	Pheasantshell mussel	D	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Fusconaia masoni*	Atlantic pigtoe mussel	D	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Lampsilis cardium*	Plain pocketbook mussel	D	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Lampsilis fasciola*	Wavy-rayed lampmussel	D	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Lampsilis siliquoidea*	Fatmucket mussel	D	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Lasmigona subvirdis*	Green floater mussel	D	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Medionidus conradicus*	Cumberland moccasinshell mussel	D	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Pyganodon grandis*	Giant floater mussel	D	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Utterbackia imbecellis*	Paper pondshell mussel	D	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Villosa iris*	Rainbow mussel	D	D
Mollusca	Bivalvia	Veneroida	Pisidiidae	*Musculium transversum*	Fingernail clam	F	O
Mollusca	Gastropoda	Basommatophora	Planorbidae	*Helisoma trivolvis*	Snail	F	F
Mollusca	Gastropoda	Basommatophora	Physidae	*Physa gyrina*	Snail	G	G
Chordata	Actinopterygii	Acipenseriformes	Acipenseridae	*Acipenser brevirostrum*	Shortnose sturgeon	D	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Campostoma anomalum*	Central stoneroller	F	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Cyprinus carpio*	Common carp	S	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Hybognathus amarus*	Rio Grande silvery minnow	F	G
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Notemigonus chrysoleucas*	Golden shiner	S	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Cyprinella lutrensis*	Red shiner	S	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Notropis spilopterus*	Spotfin shiner	F	G

TABLE 3.2.6: Continued.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code SW	Code FR
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Notropis whipplei*	Steelcolor shiner	F	G
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Pimephales promelas*	Fathead minnow	S	S
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Catostomus commersoni*	White sucker	G	S
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Catostomus platyrynchus*	Mountain sucker	G	G
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Chasmistes brevirostris*	Shortnose sucker	F	F
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Deltistes luxatus*	Lost river sucker	F	F
Chordata	Actinopterygii	Siluriformes	Ictaluridae	*Ictalurus punctatus*	Channel catfish	S	S
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus aquabonita*	Golden trout	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus clarki*	Cutthroat trout	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus gorbuscha*	Pink salmon	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus kisutch*	Coho salmon	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus mykiss*	Rainbow trout	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus tshawytscha*	Chinook salmon	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Prosopium williamsoni*	Mountain whitefish	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salmo trutta*	Brown trout	D	S
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salvelinus fontinalis*	Brook trout	D	D
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	*Gambusia affinis*	Mosquitofish	S	S
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	*Poecilia reticulata*	Guppy	G	D
Chordata	Actinopterygii	Cyprinodontiformes	Cyprinodontidae	*Cyprinodon* sp.	Pupfish	G	O
Chordata	Actinopterygii	Scorpaeniformes	Cottidae	*Cottus bairdi*	Mottled sculpin	G	D
Chordata	Actinopterygii	Perciformes	Moronidae	*Morone chrysops*	White bass	G	D
Chordata	Actinopterygii	Perciformes	Moronidae	*Morone americana*	White perch	G	D
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Lepomis cyanellus*	Green sunfish	S	S
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Lepomis gibbosus*	Pumpkinseed	G	S
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Lepomis machrochirus*	Bluegill	S	S
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Micropterus dolomieui*	Smallmouth bass	F	S
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Micropterus salmoides*	Largemouth bass	S	S
Chordata	Actinopterygii	Perciformes	Percidae	*Etheostoma spectabile*	Orangethroat darter	O	G
Chordata	Actinopterygii	Perciformes	Percidae	*Sander vitreus*	Walleye	O	S
Chordata	Amphibia	Anura	Ranidae	*Rana pipiens*	Northern leopard frog	D	D

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3.3.1 Copper

TABLE 3.3.1: Deletion process for the Santa Ana River site-specific copper database.

Phylum	Class	Order	Family	Genus/Species	Common name	Code
Bryozoa	Phylactolaemata	Plumatellida	Lophopodidae	*Lophopodella carteri*	Bryozoan	P
Bryozoa	Phylactolaemata	Plumatellida	Plumatellidae	*Plumatella emarginata*	Bryozoan	P
Bryozoa	Phylactolaemata	Plumatellida	Pectinatellidae	*Pectinatella magnifica*	Bryozoan	P
Annelida	Clitellata	Haplotaxida	Naididae	*Nais* sp.	Worm	G
Annelida	Clitellata	Haplotaxida	Tubificidae	*Limnodrilus hoffmeisteri*	Worm	G
Annelida	Clitellata	Haplotaxida	Tubificidae	*Tubifex tubifex*	Worm	F
Annelida	Clitellata	Lumbriculida	Lumbriculidae	*Lumbriculus variegatus*	Worm	S
Mollusca	Bivalvia	Veneroida	Corbiculidae	*Corbicula manilensis*	Asiatic clam	G
Mollusca	Bivalvia	Unionoida	Unionoidae	*Lampsilis teres*	Yellow sandshell	D
Mollusca	Bivalvia	Unionoida	Unionoidae	*Lampsilis claidornensis*	Freshwater mussel	D
Mollusca	Bivalvia	Unionoida	Unionoidae	*Utterbackia imbecilis*	Freshwater mussel	D
Mollusca	Bivalvia	Unionoida	Unionoidae	*Villosa vibex*	Rainbow mussel	D
Mollusca	Bivalvia	Unionoida	Unionoidae	*Villosa villosa*	Freshwater mussel	D
Mollusca	Bivalvia	Unionoida	Unionoidae	*Actinonaias pectorosa*	Freshwater mussel	D
Mollusca	Gastropoda	Architaenioglossa	Viviparidae	*Campeloma decisum*	Snail	D
Mollusca	Gastropoda	Basommatophora	Planorbidae	*Gyraulus circumstriatus*	Snail	G
Mollusca	Gastropoda	Basommatophora	Physidae	*Physa heterostropha*	Snail	G
Mollusca	Gastropoda	Basommatophora	Physidae	*Physa intergra*	Snail	G
Mollusca	Gastropoda	Basommatophora	Physidae	*Physella gyrina*	Snail	G
Mollusca	Gastropoda	Neotaenioglossa	Hydrobiidae	*Lithoglyphus virens*	Snail	D
Mollusca	Gastropoda	Neotaenioglossa	Hydrobiidae	*Amnicola* sp.	Snail	D
Mollusca	Gastropoda	Neotaenioglossa	Pleuroceridae	*Juga plicifera*	Snail	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Simocephalus vetulus*	Cladoceran	O*
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Scapholeberis* sp.	Cladoceran	O*
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia galeata*	Cladoceran	O*
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia magna*	Cladoceran	O*
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia pulex*	Cladoceran	O*
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia pulicaria*	Cladoceran	O*
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Ceriodaphnia reticulata*	Cladoceran	O*
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Ceriodaphnia dubia*	Cladoceran	O*
Arthropoda	Branchiopoda	Diplostraca	Chydoridae	*Chydorus sphaericus*	Cladoceran	O*
Arthropoda	Branchiopoda	Diplostraca	Bosminidae	*Bosmina longirostrus*	Cladoceran	O*
Arthropoda	Maxillopoda	Cyclopoida	Cyclopidae	*Tropocyclops prasinus*	Copepod	D
Arthropoda	Malacostraca	Decapoda	Cambaridae	*Orconectes rusticus*	Rusty crayfish	D
Arthropoda	Malacostraca	Decapoda	Cambaridae	*Procambarus clarkii*	Red crayfish	S
Arthropoda	Malacostraca	Amphipoda	Crangonyctidae	*Crangonyx pseudogracilis*	Amphipod	D
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus pseudolimnaeus*	Amphipod	G
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus pulex*	Amphipod	G
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus* sp.	Amphipod	G
Arthropoda	Malacostraca	Amphipoda	Hyelallidae	*Hyalella azteca*	Amphipod	S
Arthropoda	Insecta	Odonata (*Zygoptera*)	**********	sp.	Damselfly	O

TABLE 3.3.1: Continued.

Phylum	Class	Order	Family	Genus/Species	Common name	Code
Arthropoda	Insecta	Ephemeroptera	Polymitarcyidae	*Ephoron virgo*	Mayfly	O
Arthropoda	Insecta	Ephemeroptera	Ephemerellidae	*Ephemerella subvaria*	Mayfly	O
Arthropoda	Insecta	Plectoptera	Perlidae	*Acroneuria lycorias*	Stonefly	O
Arthropoda	Insecta	Trichoptera	**********	*Trichoptera* sp.	Caddisfly	O
Arthropoda	Insecta	Diptera	Chironomidae	*Chironomus tentans*	Midge	G
Arthropoda	Insecta	Diptera	Chironomidae	*Chironomus* sp.	Midge	G
Arthropoda	Insecta	Diptera	Chironomidae	*Chironomus decorus*	Midge	G
Arthropoda	Insecta	Diptera	Chironomidae	*Chironomus plumosus*	Midge	G
Chordata	Amphibia	Anura	Bufonidae	*Bufo boreas*	Boreal toad	D
Chordata	Actinopterygii	Acipenseriformes	Acipenseridae	*Scaphirhynchua platorynchus*	Shovelnose sturgeon	D
Chordata	Actinopterygii	Anguilliformes	Anguillidae	*Anguilla rostrata*	American eel	D
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Xyrauchen texanus*	Razorback sucker	D
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Catostomus latipinnis*	Flannelmouth sucker	G
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Campostoma anomalum*	Central stoneroller	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Brachydanio rerio*	Zebrafish	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Gila elegans*	Bonytail chub	G
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Carassius auratus*	Goldfish	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Cyprinus carpio*	Common carp	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Acrocheilus alutaceus*	Chiselmouth	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Rhinichthys atratulus*	Blacknose dace	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Semotilus atromaculatus*	Creek chub	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Cyprinella chrysocephalus*	Striped shiner	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Pimephales notatus*	Bluntnose minnow	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Pimephales promelas*	Fathead minnow	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Notemigonus crysoleucas*	Golden shiner	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Ptychocheilus oregonensis*	Northern pikeminnow	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Ptychocheilus lucius*	Colorado pikeminnow	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Hybognathus amarus*	Rio Grande silvery minnow	D
Chordata	Actinopterygii	Cyprinodontiformes	Cyprinodontidae	*Jordanella floridae*	Flagfish	D
Chordata	Actinopterygii	Cyprinodontiformes	Fundulidae	*Fundulus diaphanous*	Banded killifish	D
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	*Poeciliopsis occidentalis*	Gila topminnow	D
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	*Gambusia affinis*	Mosquitofish	S
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	*Poecilia reticulata*	Guppy	G
Chordata	Actinopterygii	Perciformies	Centrarchidae	*Lepomis macrochirus*	Bluegill	S
Chordata	Actinopterygii	Perciformies	Centrarchidae	*Lepomis gibbosus*	Pumpkinseed	G
Chordata	Actinopterygii	Perciformies	Cichlidaea	*Oreochromis mossambicus*	Tilapia	S
Chordata	Actinopterygii	Perciformies	Moronidae	*Morone saxatillis*	Striped bass	D
Chordata	Actinopterygii	Perciformies	Moronidae	*Morone americana*	White perch	D
Chordata	Actinopterygii	Perciformies	Percidae	*Etheostoma flabellare*	Fantail darter	D
Chordata	Actinopterygii	Perciformies	Percidae	*Etheostoma rubrum*	Fountain darter	D

TABLE 3.3.1: Continued.

Phylum	Class	Order	Family	Genus/Species	Common name	Code
Chordata	Actinopterygii	Perciformies	Percidae	*Etheostoma nigrum*	Johnny darter	D
Chordata	Actinopterygii	Perciformies	Percidae	*Etheostoma lepidum*	Greenthroat darter	D
Chordata	Actinopterygii	Perciformies	Percidae	*Etheostoma spectabile*	Orangethroat darter	D
Chordata	Actinopterygii	Perciformies	Percidae	*Etheostoma caeruleum*	Rainbow darter	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salmo salar*	Atlantic salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salvelinus fontinalis*	Brook trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salvelinus confluentus*	Bull trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Thymallus arcticus*	Arctic grayling	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus gorbuscha*	Pink salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus apache*	Apache trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus mykiss*	Rainbow trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus tshawytscha*	Chinook salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus clarki*	Cutthroat trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus nerka*	Sockeye salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus kisutch*	Coho salmon	D
Chordata	Actinopterygii	Siluriformes	Ictaluridae	*Ictalurus punctatus*	Channel catfish	S
Chordata	Actinopterygii	Siluriformes	Ictaluridae	*Ictalurus nebulosus*	Brown bullhead	D

S = retained because this species occurs at the site
G = retained because there is a species in this genus that occurs at the site, but not in the national data set
F = retained because there is a genus in this Family that occurs at the site, but not in the national data set
O = retained because this Order occurs at the site, and is not represented by a lower taxon
C = retained because this Class occurs at the site, and is not represented by a lower taxon
P = retained because this Phylum occurs at the site, and is not represented by a lower taxon
D = deleted because this species does not satisfy any of the requirements for retaining species
* = formally retained, but not used in the working database for reasons explained in the text

TABLE 3.3.2: Deletion process for the Santa Cruz River near Nogales (NOG) and near Tucson (TUC) site-specific copper databases.

Phylum	Class	Order	Family	Genus/Species	Common name	Code NOG	Code TUC
Bryozoa	Phylactolaemata	Plumatellida	Lophopodidae	*Lophopodella carteri*	Bryozoan	D	D
Bryozoa	Phylactolaemata	Plumatellida	Plumatellidae	*Plumatella emarginata*	Bryozoan	D	D
Bryozoa	Phylactolaemata	Plumatellida	Pectinatellidae	*Pectinatella magnifica*	Bryozoan	D	D
Annelida	Clitellata	Haplotaxida	Naididae	*Nais* sp.	Worm	F	F
Annelida	Clitellata	Haplotaxida	Tubificidae	*Limnodrilus hoffmeisteri*	Worm	F	F
Annelida	Clitellata	Haplotaxida	Tubificidae	*Tubifex tubifex*	Worm	F	F
Annelida	Clitellata	Lumbriculida	Lumbriculidae	*Lumbriculus variegatus*	Worm	F	D
Mollusca	Bivalvia	Veneroida	Corbiculidae	*Corbicula manilensis*	Asiatic clam	D	D
Mollusca	Bivalvia	Unionoida	Unionoidae	*Lampsilis teres*	Yellow sandshell	D	D
Mollusca	Bivalvia	Unionoida	Unionoidae	*Lampsilis claidornensis*	Freshwater mussel	D	D
Mollusca	Bivalvia	Unionoida	Unionoidae	*Utterbackia imbecilis*	Freshwater mussel	D	D
Mollusca	Bivalvia	Unionoida	Unionoidae	*Villosa vibex*	Rainbow mussel	D	D
Mollusca	Bivalvia	Unionoida	Unionoidae	*Villosa villosa*	Freshwater mussel	D	D
Mollusca	Bivalvia	Unionoida	Unionoidae	*Actinonaias pectorosa*	Freshwater mussel	D	D
Mollusca	Gastropoda	Architaenioglossa	Viviparidae	*Campeloma decisum*	Snail	D	D
Mollusca	Gastropoda	Basommatophora	Planorbidae	*Gyraulus circumstriatus*	Snail	O	D
Mollusca	Gastropoda	Basommatophora	Physidae	*Physa heterostropha*	Snail	G	D
Mollusca	Gastropoda	Basommatophora	Physidae	*Physa intergra*	Snail	G	D
Mollusca	Gastropoda	Basommatophora	Physidae	*Physella gyrina*	Snail	D	D
Mollusca	Gastropoda	Neotaenioglossa	Hydrobiidae	*Lithoglyphus virens*	Snail	D	D
Mollusca	Gastropoda	Neotaenioglossa	Hydrobiidae	*Amnicola* sp.	Snail	D	D
Mollusca	Gastropoda	Neotaenioglossa	Pleuroceridae	*Juga plicifera*	Snail	D	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Simocephalus vetulus*	Cladoceran	D	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Scapholeberis* sp.	Cladoceran	D	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia galeata*	Cladoceran	G*	G*
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia magna*	Cladoceran	G*	G*
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia pulex*	Cladoceran	G*	G*
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia pulicaria*	Cladoceran	G*	G*
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Ceriodaphnia reticulata*	Cladoceran	D	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Ceriodaphnia dubia*	Cladoceran	D	D
Arthropoda	Branchiopoda	Diplostraca	Chydoridae	*Chydorus sphaericus*	Cladoceran	O*	O*
Arthropoda	Branchiopoda	Diplostraca	Bosminidae	*Bosmina longirostrus*	Cladoceran	O*	G*
Arthropoda	Maxillopoda	Cyclopoida	Cyclopidae	*Tropocyclops prasinus*	Copepod	D	D
Arthropoda	Malacostraca	Decapoda	Cambaridae	*Orconectes rusticus*	Rusty crayfish	R	R
Arthropoda	Malacostraca	Decapoda	Cambaridae	*Procambarus clarkii*	Red crayfish	R	R
Arthropoda	Malacostraca	Amphipoda	Crangonyctidae	*Crangonyx pseudogracilis*	Amphipod	D	D
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus pseudolimnaeus*	Amphipod	R	R

TABLE 3.3.2: Continued.

Phylum	Class	Order	Family	Genus/Species	Common name	Code NOG	Code TUC
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus pulex*	Amphipod	R	R
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus* sp.	Amphipod	R	R
Arthropoda	Malacostraca	Amphipoda	Hyelallidae	*Hyalella azteca*	Amphipod	R	R
Arthropoda	Insecta	Odonata (*Zygoptera*)	**********	sp.	Damselfly	O	O
Arthropoda	Insecta	Ephemeroptera	Polymitarcyidae	*Ephoron virgo*	Mayfly	O	O
Arthropoda	Insecta	Ephemeroptera	Ephemerellidae	*Ephemerella subvaria*	Mayfly	O	O
Arthropoda	Insecta	Plectoptera	Perlidae	*Acroneuria lycorias*	Stonefly	D	O
Arthropoda	Insecta	Trichoptera	**********	*Trichoptera* sp.	Caddisfly	O	O
Arthropoda	Insecta	Diptera	Chironomidae	*Chironomus tentans*	Midge	G	G
Arthropoda	Insecta	Diptera	Chironomidae	*Chironomus* sp.	Midge	G	G
Arthropoda	Insecta	Diptera	Chironomidae	*Chironomus decorus*	Midge	G	G
Arthropoda	Insecta	Diptera	Chironomidae	*Chironomus plumosus*	Midge	G	G
Chordata	Amphibia	Anura	Bufonidae	*Bufo boreas*	Boreal toad	D	D
Chordata	Actinopterygii	Acipenseriformes	Acipenseridae	*Scaphirhynchua platorynchus*	Shovelnose sturgeon	D	D
Chordata	Actinopterygii	Anguilliformes	Anguillidae	*Anguilla rostrata*	American eel	D	D
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Xyrauchen texanus*	Razorback sucker	D	D
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Catostomus latipinnis*	Flannelmouth sucker	G	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Campostoma anomalum*	Central stoneroller	F	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Brachydanio rerio*	Zebrafish	F	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Gila elegans*	Bonytail chub	G	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Carassius auratus*	Goldfish	F	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Cyprinus carpio*	Common carp	F	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Acrocheilus alutaceus*	Chiselmouth	F	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Rhinichthys atratulus*	Blacknose dace	F	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Semotilus atromaculatus*	Creek chub	F	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Cyprinella chrysocephalus*	Striped shiner	F	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Pimephales notatus*	Bluntnose minnow	D	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Pimephales promelas*	Fathead minnow	F	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Notemigonus crysoleucas*	Golden shiner	F	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Ptychocheilus oregonensis*	Northern pikeminnow	F	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Ptychocheilus lucius*	Colorado pikeminnow	F	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Hybognathus amarus*	Rio Grande silvery minnow	F	D
Chordata	Actinopterygii	Cyprinodontiformes	Cyprinodontidae	*Jordanella floridae*	Flagfish	D	D
Chordata	Actinopterygii	Cyprinodontiformes	Fundulidae	*Fundulus diaphanous*	Banded killifish	D	D
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	*Poeciliopsis occidentalis*	Gila topminnow	S	D
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	*Gambusia affinis*	Mosquitofish	S	S

TABLE 3.3.2: Continued.

Phylum	Class	Order	Family	Genus/Species	Common name	Code NOG	Code TUC
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	*Poecilia reticulata*	Guppy	F	D
Chordata	Actinopterygii	Perciformies	Centrarchidae	*Lepomis macrochirus*	Bluegill	G	G
Chordata	Actinopterygii	Perciformies	Centrarchidae	*Lepomis gibbosus*	Pumpkinseed	G	G
Chordata	Actinopterygii	Perciformies	Cichlidaea	*Oreochromis mossambicus*	Tilapia	D	D
Chordata	Actinopterygii	Perciformies	Moronidae	*Morone saxatillis*	Striped bass	D	D
Chordata	Actinopterygii	Perciformies	Moronidae	*Morone americana*	White perch	D	D
Chordata	Actinopterygii	Perciformies	Percidae	*Etheostoma flabellare*	Fantail darter	D	D
Chordata	Actinopterygii	Perciformies	Percidae	*Etheostoma rubrum*	Fountain darter	D	D
Chordata	Actinopterygii	Perciformies	Percidae	*Etheostoma nigrum*	Johnny darter	D	D
Chordata	Actinopterygii	Perciformies	Percidae	*Etheostoma lepidum*	Greenthroat darter	D	D
Chordata	Actinopterygii	Perciformies	Percidae	*Etheostoma spectabile*	Orangethroat darter	D	D
Chordata	Actinopterygii	Perciformies	Percidae	*Etheostoma caeruleum*	Rainbow darter	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salmo salar*	Atlantic salmon	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salvelinus fontinalis*	Brook trout	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salvelinus confluentus*	Bull trout	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Thymallus arcticus*	Arctic grayling	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus gorbuscha*	Pink salmon	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus apache*	Apache trout	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus mykiss*	Rainbow trout	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus tshawytscha*	Chinook salmon	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus clarki*	Cutthroat trout	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus nerka*	Sockeye salmon	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus kisutch*	Coho salmon	D	D
Chordata	Actinopterygii	Siluriformes	Ictaluridae	*Ictalurus punctatus*	Channel catfish	D	F
Chordata	Actinopterygii	Siluriformes	Ictaluridae	*Ictalurus nebulosus*	Brown bullhead	D	F

S = retained because this species occurs at the site
G = retained because there is a species in this genus that occurs at the site, but not in the national data set
F = retained because there is a genus in this Family that occurs at the site, but not in the national data set
O = retained because this Order occurs at the site, and is not represented by a lower taxon
C = retained because this Class occurs at the site, and is not represented by a lower taxon
P = retained because this Phylum occurs at the site, and is not represented by a lower taxon
D = deleted because this species does not satisfy any of the requirements for retaining species
R = non-resident species retained due to potential occurrence at the site
* = formally retained, but not used in the working database for reasons explained in the text

TABLE 3.3.3: Deletion process for the Salt/Gila rivers site-specific copper database.

Phylum	Class	Order	Family	Genus/Species	Common name	Code
Bryozoa	Phylactolaemata	Plumatellida	Lophopodidae	*Lophopodella carteri*	Bryozoan	D
Bryozoa	Phylactolaemata	Plumatellida	Plumatellidae	*Plumatella emarginata*	Bryozoan	D
Bryozoa	Phylactolaemata	Plumatellida	Pectinatellidae	*Pectinatella magnifica*	Bryozoan	D
Annelida	Clitellata	Haplotaxida	Naididae	*Nais* sp.	Worm	F
Annelida	Clitellata	Haplotaxida	Tubificidae	*Limnodrilus hoffmeisteri*	Worm	F
Annelida	Clitellata	Haplotaxida	Tubificidae	*Tubifex tubifex*	Worm	F
Annelida	Clitellata	Lumbriculida	Lumbriculidae	*Lumbriculus variegatus*	Worm	D
Mollusca	Bivalvia	Veneroida	Corbiculidae	*Corbicula manilensis*	Asiatic clam	D
Mollusca	Bivalvia	Unionoida	Unionoidae	*Lampsilis teres*	Yellow sandshell	D
Mollusca	Bivalvia	Unionoida	Unionoidae	*Lampsilis claidornensis*	Freshwater mussel	D
Mollusca	Bivalvia	Unionoida	Unionoidae	*Utterbackia imbecilis*	Freshwater mussel	D
Mollusca	Bivalvia	Unionoida	Unionoidae	*Villosa vibex*	Rainbow mussel	D
Mollusca	Bivalvia	Unionoida	Unionoidae	*Villosa villosa*	Freshwater mussel	D
Mollusca	Bivalvia	Unionoida	Unionoidae	*Actinonaias pectorosa*	Freshwater mussel	D
Mollusca	Gastropoda	Architaenioglossa	Viviparidae	*Campeloma decisum*	Snail	D
Mollusca	Gastropoda	Basommatophora	Planobidae	*Gyraulus circumstriatus*	Snail	D
Mollusca	Gastropoda	Basommatophora	Physidae	*Physa heterostropha*	Snail	G
Mollusca	Gastropoda	Basommatophora	Physidae	*Physa intergra*	Snail	G
Mollusca	Gastropoda	Basommatophora	Physidae	*Physella gyrina*	Snail	D
Mollusca	Gastropoda	Neotaenioglossa	Hydrobiidae	*Lithoglyphus virens*	Snail	D
Mollusca	Gastropoda	Neotaenioglossa	Hydrobiidae	*Amnicola* sp.	Snail	D
Mollusca	Gastropoda	Neotaenioglossa	Pleuroceridae	*Juga plicifera*	Snail	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Simocephalus vetulus*	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Scapholeberis* sp.	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia galeata*	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia magna*	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia pulex*	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia pulicaria*	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Ceriodaphnia reticulata*	Cladoceran	G*
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Ceriodaphnia dubia*	Cladoceran	G*
Arthropoda	Branchiopoda	Diplostraca	Chydoridae	*Chydorus sphaericus*	Cladoceran	S*
Arthropoda	Branchiopoda	Diplostraca	Bosminidae	*Bosmina longirostrus*	Cladoceran	D
Arthropoda	Maxillopoda	Cyclopoida	Cyclopidae	*Tropocyclops prasinus*	Copepod	D
Arthropoda	Malacostraca	Decapoda	Cambaridae	*Orconectes rusticus*	Rusty crayfish	D
Arthropoda	Malacostraca	Decapoda	Cambaridae	*Procambarus clarkii*	Red crayfish	D
Arthropoda	Malacostraca	Amphipoda	Crangonyctidae	*Crangonyx pseudogracilis*	Amphipod	O
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus pseudolimnaeus*	Amphipod	O
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus pulex*	Amphipod	O
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus* sp.	Amphipod	O
Arthropoda	Malacostraca	Amphipoda	Hyelallidae	*Hyalella azteca*	Amphipod	O
Arthropoda	Insecta	Odonata (*Zygoptera*)	**********	sp.	Damselfly	O
Arthropoda	Insecta	Ephemeroptera	Polymitarcyidae	*Ephoron virgo*	Mayfly	O

TABLE 3.3.3: Continued.

Phylum	Class	Order	Family	Genus/Species	Common name	Code
Arthropoda	Insecta	Ephemeroptera	Ephemerellidae	*Ephemerella subvaria*	Mayfly	O
Arthropoda	Insecta	Plectoptera	Perlidae	*Acroneuria lycorias*	Stonefly	D
Arthropoda	Insecta	Trichoptera	**********	*Trichoptera* sp.	Caddisfly	O
Arthropoda	Insecta	Diptera	Chironomidae	*Chironomus tentans*	Midge	G
Arthropoda	Insecta	Diptera	Chironomidae	*Chironomus* sp.	Midge	G
Arthropoda	Insecta	Diptera	Chironomidae	*Chironomus decorus*	Midge	G
Arthropoda	Insecta	Diptera	Chironomidae	*Chironomus plumosus*	Midge	G
Chordata	Amphibia	Anura	Bufonidae	*Bufo boreas*	Boreal toad	D
Chordata	Actinopterygii	Acipenseriformes	Acipenseridae	*Scaphirhynchua platorynchus*	Shovelnose sturgeon	D
Chordata	Actinopterygii	Anguilliformes	Anguillidae	*Anguilla rostrata*	American eel	D
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Xyrauchen texanus*	Razorback sucker	S
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Catostomus latipinnis*	Flannelmouth sucker	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Campostoma anomalum*	Central stoneroller	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Brachydanio rerio*	Zebrafish	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Gila elegans*	Bonytail chub	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Carassius auratus*	Goldfish	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Cyprinus carpio*	Common carp	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Acrocheilus alutaceus*	Chiselmouth	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Rhinichthys atratulus*	Blacknose dace	G
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Semotilus atromaculatus*	Creek chub	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Cyprinella chrysocephalus*	Striped shiner	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Pimephales notatus*	Bluntnose minnow	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Pimephales promelas*	Fathead minnow	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Notemigonus crysoleucas*	Golden shiner	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Ptychocheilus oregonensis*	Northern pikeminnow	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Ptychocheilus lucius*	Colorado pikeminnow	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Hybognathus amarus*	Rio Grande silvery minnow	F
Chordata	Actinopterygii	Cyprinodontiformes	Cyprinodontidae	*Jordanella floridae*	Flagfish	F
Chordata	Actinopterygii	Cyprinodontiformes	Fundulidae	*Fundulus diaphanous*	Banded killifish	D
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	*Poeciliopsis occidentalis*	Gila topminnow	S
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	*Gambusia affinis*	Mosquitofish	S
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	*Poecilia reticulata*	Guppy	G
Chordata	Actinopterygii	Perciformies	Centrarchidae	*Lepomis macrochirus*	Bluegill	S
Chordata	Actinopterygii	Perciformies	Centrarchidae	*Lepomis gibbosus*	Pumpkinseed	G
Chordata	Actinopterygii	Perciformies	Cichlidaea	*Oreochromis mossambicus*	Tilapia	S
Chordata	Actinopterygii	Perciformies	Moronidae	*Morone saxatillis*	Striped bass	G
Chordata	Actinopterygii	Perciformies	Moronidae	*Morone americana*	White perch	G
Chordata	Actinopterygii	Perciformies	Percidae	*Etheostoma flabellare*	Fantail darter	D
Chordata	Actinopterygii	Perciformies	Percidae	*Etheostoma rubrum*	Fountain darter	D
Chordata	Actinopterygii	Perciformies	Percidae	*Etheostoma nigrum*	Johnny darter	D
Chordata	Actinopterygii	Perciformies	Percidae	*Etheostoma lepidum*	Greenthroat darter	D
Chordata	Actinopterygii	Perciformies	Percidae	*Etheostoma spectabile*	Orangethroat darter	D

TABLE 3.3.3: Continued.

Phylum	Class	Order	Family	Genus/Species	Common name	Code
Chordata	Actinopterygii	Perciformies	Percidae	*Etheostoma caeruleum*	Rainbow darter	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salmo salar*	Atlantic salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salvelinus fontinalis*	Brook trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salvelinus confluentus*	Bull trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Thymallus arcticus*	Arctic grayling	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus gorbuscha*	Pink salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus apache*	Apache trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus mykiss*	Rainbow trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus tshawytscha*	Chinook salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus clarki*	Cutthroat trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus nerka*	Sockeye salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus kisutch*	Coho salmon	D
Chordata	Actinopterygii	Siluriformes	Ictaluridae	*Ictalurus punctatus*	Channel catfish	S
Chordata	Actinopterygii	Siluriformes	Ictaluridae	*Ictalurus nebulosus*	Brown bullhead	D

S = retained because this species occurs at the site
G = retained because there is a species in this genus that occurs at the site, but not in the national data set
F = retained because there is a genus in this Family that occurs at the site, but not in the national data set
O = retained because this Order occurs at the site, and is not represented by a lower taxon
C = retained because this Class occurs at the site, and is not represented by a lower taxon
P = retained because this Phylum occurs at the site, and is not represented by a lower taxon
D = deleted because this species does not satisfy any of the requirements for retaining species
* = formally retained, but not used in the working database for reasons explained in the text

TABLE 3.3.4: Deletion process for Fountain Creek site-specific copper database.

Phylum	Class	Order	Family	Genus/Species	Common name	Code
Bryozoa	Phylactolaemata	Plumatellida	Lophopodidae	*Lophopodella carteri*	Bryozoan	D
Bryozoa	Phylactolaemata	Plumatellida	Plumatellidae	*Plumatella emarginata*	Bryozoan	D
Bryozoa	Phylactolaemata	Plumatellida	Pectinatellidae	*Pectinatella magnifica*	Bryozoan	D
Annelida	Clitellata	Haplotaxida	Naididae	*Nais* sp.	Worm	G
Annelida	Clitellata	Haplotaxida	Tubificidae	*Limnodrilus hoffmeisteri*	Worm	S
Annelida	Clitellata	Haplotaxida	Tubificidae	*Tubifex tubifex*	Worm	S
Annelida	Clitellata	Lumbriculida	Lumbriculidae	*Lumbriculus variegatus*	Worm	S
Mollusca	Bivalvia	Veneroida	Corbiculidae	*Corbicula manilensis*	Asiatic clam	D
Mollusca	Bivalvia	Unionoida	Unionoidae	*Lampsilis teres*	Yellow sandshell	D
Mollusca	Bivalvia	Unionoida	Unionoidae	*Lampsilis claidornensis*	Freshwater mussel	D
Mollusca	Bivalvia	Unionoida	Unionoidae	*Utterbackia imbecilis*	Freshwater mussel	D
Mollusca	Bivalvia	Unionoida	Unionoidae	*Villosa vibex*	Rainbow mussel	D
Mollusca	Bivalvia	Unionoida	Unionoidae	*Villosa villosa*	Freshwater mussel	D
Mollusca	Bivalvia	Unionoida	Unionoidae	*Actinonaias pectorosa*	Freshwater mussel	D
Mollusca	Gastropoda	Architaenioglossa	Viviparidae	*Campeloma decisum*	Snail	D
Mollusca	Gastropoda	Basommatophora	Planorbidae	*Gyraulus circumstriatus*	Snail	O
Mollusca	Gastropoda	Basommatophora	Physidae	*Physa heterostropha*	Snail	G
Mollusca	Gastropoda	Basommatophora	Physidae	*Physa intergra*	Snail	G
Mollusca	Gastropoda	Basommatophora	Physidae	*Physella gyrina*	Snail	D
Mollusca	Gastropoda	Neotaenioglossa	Hydrobiidae	*Lithoglyphus virens*	Snail	D
Mollusca	Gastropoda	Neotaenioglossa	Hydrobiidae	*Amnicola* sp.	Snail	D
Mollusca	Gastropoda	Neotaenioglossa	Pleuroceridae	*Juga plicifera*	Snail	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Simocephalus vetulus*	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Scapholeberis* sp.	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia galeata*	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia magna*	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia pulex*	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia pulicaria*	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Ceriodaphnia reticulata*	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Ceriodaphnia dubia*	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Chydoridae	*Chydorus sphaericus*	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Bosminidae	*Bosmina longirostrus*	Cladoceran	D
Arthropoda	Maxillopoda	Cyclopoida	Cyclopidae	*Tropocyclops prasinus*	Copepod	D
Arthropoda	Malacostraca	Decapoda	Cambaridae	*Orconectes rusticus*	Rusty crayfish	G
Arthropoda	Malacostraca	Decapoda	Cambaridae	*Procambarus clarkii*	Red crayfish	D
Arthropoda	Malacostraca	Amphipoda	Crangonyctidae	*Crangonyx pseudogracilis*	Amphipod	D
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus pseudolimnaeus*	Amphipod	G
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus pulex*	Amphipod	G
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus* sp.	Amphipod	G
Arthropoda	Malacostraca	Amphipoda	Hyelallidae	*Hyalella azteca*	Amphipod	S
Arthropoda	Insecta	Odonata (*Zygoptera*)	**********	sp.	Damselfly	O
Arthropoda	Insecta	Ephemeroptera	Polymitarcyidae	*Ephoron virgo*	Mayfly	O

TABLE 3.3.4: Continued.

Phylum	Class	Order	Family	Genus/Species	Common name	Code
Arthropoda	Insecta	Ephemeroptera	Ephemerellidae	*Ephemerella subvaria*	Mayfly	G
Arthropoda	Insecta	Plectoptera	Perlidae	*Acroneuria lycorias*	Stonefly	O
Arthropoda	Insecta	Trichoptera	**********	*Trichoptera* sp.	Caddisfly	O
Arthropoda	Insecta	Diptera	Chironomidae	*Chironomus tentans*	Midge	G
Arthropoda	Insecta	Diptera	Chironomidae	*Chironomus* sp.	Midge	G
Arthropoda	Insecta	Diptera	Chironomidae	*Chironomus decorus*	Midge	G
Arthropoda	Insecta	Diptera	Chironomidae	*Chironomus plumosus*	Midge	G
Chordata	Amphibia	Anura	Bufonidae	*Bufo boreas*	Boreal toad	D
Chordata	Actinopterygii	Acipenseriformes	Acipenseridae	*Scaphirhynchua platorynchus*	Shovelnose sturgeon	D
Chordata	Actinopterygii	Anguilliformes	Anguillidae	*Anguilla rostrata*	American eel	D
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Xyrauchen texanus*	Razorback sucker	D
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Catostomus latipinnis*	Flannelmouth sucker	G
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Campostoma anomalum*	Central stoneroller	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Brachydanio rerio*	Zebrafish	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Gila elegans*	Bonytail chub	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Carassius auratus*	Goldfish	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Cyprinus carpio*	Common carp	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Acrocheilus alutaceus*	Chiselmouth	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Rhinichthys atratulus*	Blacknose dace	G
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Semotilus atromaculatus*	Creek chub	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Cyprinella chrysocephalus*	Striped shiner	G
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Pimephales notatus*	Bluntnose minnow	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Pimephales promelas*	Fathead minnow	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Notemigonus crysoleucas*	Golden shiner	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Ptychocheilus oregonensis*	Northern pikeminnow	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Ptychocheilus lucius*	Colorado pikeminnow	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Hybognathus amarus*	Rio Grande silvery minnow	F
Chordata	Actinopterygii	Cyprinodontiformes	Cyprinodontidae	*Jordanella floridae*	Flagfish	D
Chordata	Actinopterygii	Cyprinodontiformes	Fundulidae	*Fundulus diaphanous*	Banded killifish	G
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	*Poeciliopsis occidentalis*	Gila topminnow	D
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	*Gambusia affinis*	Mosquitofish	D
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	*Poecilia reticulata*	Guppy	D
Chordata	Actinopterygii	Perciformies	Centrarchidae	*Lepomis macrochirus*	Bluegill	S
Chordata	Actinopterygii	Perciformies	Centrarchidae	*Lepomis gibbosus*	Pumpkinseed	G
Chordata	Actinopterygii	Perciformies	Cichlidaea	*Oreochromis mossambicus*	Tilapia	D
Chordata	Actinopterygii	Perciformies	Moronidae	*Morone saxatillis*	Striped bass	D
Chordata	Actinopterygii	Perciformies	Moronidae	*Morone americana*	White perch	D
Chordata	Actinopterygii	Perciformies	Percidae	*Etheostoma flabellare*	Fantail darter	G
Chordata	Actinopterygii	Perciformies	Percidae	*Etheostoma rubrum*	Fountain darter	G
Chordata	Actinopterygii	Perciformies	Percidae	*Etheostoma nigrum*	Johnny darter	G
Chordata	Actinopterygii	Perciformies	Percidae	*Etheostoma lepidum*	Greenthroat darter	G
Chordata	Actinopterygii	Perciformies	Percidae	*Etheostoma spectabile*	Orangethroat darter	G

TABLE 3.3.4: Continued.

Phylum	Class	Order	Family	Genus/Species	Common name	Code
Chordata	Actinopterygii	Perciformies	Percidae	*Etheostoma caeruleum*	Rainbow darter	G
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salmo salar*	Atlantic salmon	G
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salvelinus fontinalis*	Brook trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salvelinus confluentus*	Bull trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Thymallus arcticus*	Arctic grayling	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus gorbuscha*	Pink salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus apache*	Apache trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus mykiss*	Rainbow trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus tshawytscha*	Chinook salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus clarki*	Cutthroat trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus nerka*	Sockeye salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus kisutch*	Coho salmon	D
Chordata	Actinopterygii	Siluriformes	Ictaluridae	*Ictalurus punctatus*	Channel catfish	S
Chordata	Actinopterygii	Siluriformes	Ictaluridae	*Ictalurus nebulosus*	Brown bullhead	D

S = retained because this species occurs at the site
G = retained because there is a species in this genus that occurs at the site, but not in the national data set
F = retained because there is a genus in this Family that occurs at the site, but not in the national data set
O = retained because this Order occurs at the site, and is not represented by a lower taxon
C = retained because this Class occurs at the site, and is not represented by a lower taxon
P = retained because this Phylum occurs at the site, and is not represented by a lower taxon
D = deleted because this species does not satisfy any of the requirements for retaining species
* = formally retained, but not used in the working database for reasons explained in the text

TABLE 3.3.5: Deletion process for the South Platte River site-specific copper database.

Phylum	Class	Order	Family	Genus/Species	Common name	Code
Bryozoa	Phylactolaemata	Plumatellida	Lophopodidae	*Lophopodella carteri*	Bryozoan	D
Bryozoa	Phylactolaemata	Plumatellida	Plumatellidae	*Plumatella emarginata*	Bryozoan	D
Bryozoa	Phylactolaemata	Plumatellida	Pectinatellidae	*Pectinatella magnifica*	Bryozoan	D
Annelida	Clitellata	Haplotaxida	Naididae	*Nais* sp.	Worm	G
Annelida	Clitellata	Haplotaxida	Tubificidae	*Limnodrilus hoffmeisteri*	Worm	S
Annelida	Clitellata	Haplotaxida	Tubificidae	*Tubifex tubifex*	Worm	F
Annelida	Clitellata	Limbriculida	Lumbriculidae	*Lumbriculus variegatus*	Worm	D
Mollusca	Bivalvia	Veneroida	Corbiculidae	*Corbicula manilensis*	Asiatic clam	G
Mollusca	Bivalvia	Unionoida	Unionoidae	*Lampsilis teres*	Yellow sandshell	D
Mollusca	Bivalvia	Unionoida	Unionoidae	*Lampsilis claidornensis*	Freshwater mussel	D
Mollusca	Bivalvia	Unionoida	Unionoidae	*Utterbackia imbecilis*	Freshwater mussel	D
Mollusca	Bivalvia	Unionoida	Unionoidae	*Villosa vibex*	Rainbow mussel	D
Mollusca	Bivalvia	Unionoida	Unionoidae	*Villosa villosa*	Freshwater mussel	D
Mollusca	Bivalvia	Unionoida	Unionoidae	*Actinonaias pectorosa*	Freshwater mussel	D
Mollusca	Gastropoda	Architaenioglossa	Viviparidae	*Campeloma decisum*	Snail	D
Mollusca	Gastropoda	Basommatophora	Planorbidae	*Gyraulus circumstriatus*	Snail	G
Mollusca	Gastropoda	Basommatophora	Physidae	*Physa heterostropha*	Snail	G
Mollusca	Gastropoda	Basommatophora	Physidae	*Physa intergra*	Snail	G
Mollusca	Gastropoda	Basommatophora	Physidae	*Physella gyrina*	Snail	G
Mollusca	Gastropoda	Neotaenioglossa	Hydrobiidae	*Lithoglyphus virens*	Snail	D
Mollusca	Gastropoda	Neotaenioglossa	Hydrobiidae	*Amnicola* sp.	Snail	D
Mollusca	Gastropoda	Neotaenioglossa	Pleuroceridae	*Juga plicifera*	Snail	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Simocephalus vetulus*	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Scapholeberis* sp.	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia galeata*	Cladoceran	G*
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia magna*	Cladoceran	G*
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia pulex*	Cladoceran	G*
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia pulicaria*	Cladoceran	G*
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Ceriodaphnia reticulata*	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Ceriodaphnia dubia*	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Chydoridae	*Chydorus sphaericus*	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Bosminidae	*Bosmina longirostrus*	Cladoceran	D
Arthropoda	Maxillopoda	Cyclopoida	Cyclopidae	*Tropocyclops prasinus*	Copepod	D
Arthropoda	Malacostraca	Decapoda	Cambaridae	*Orconectes rusticus*	Rusty crayfish	F
Arthropoda	Malacostraca	Decapoda	Cambaridae	*Procambarus clarkii*	Red crayfish	F
Arthropoda	Malacostraca	Amphipoda	Crangonyctidae	*Crangonyx pseudogracilis*	Amphipod	D
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus pseudolimnaeus*	Amphipod	G
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus pulex*	Amphipod	G
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus* sp.	Amphipod	G
Arthropoda	Malacostraca	Amphipoda	Hyelallidae	*Hyalella azteca*	Amphipod	S
Arthropoda	Insecta	Odonata (*Zygoptera*)	**********	sp.	Damselfly	O
Arthropoda	Insecta	Ephemeroptera	Polymitarcyidae	*Ephoron virgo*	Mayfly	O

TABLE 3.3.5: Continued.

Phylum	Class	Order	Family	Genus/Species	Common name	Code
Arthropoda	Insecta	Ephemeroptera	Ephemerellidae	*Ephemerella subvaria*	Mayfly	O
Arthropoda	Insecta	Plectoptera	Perlidae	*Acroneuria lycorias*	Stonefly	O
Arthropoda	Insecta	Trichoptera	**********	Trichoptera sp.	Caddisfly	O
Arthropoda	Insecta	Diptera	Chironomidae	*Chironomus tentans*	Midge	G
Arthropoda	Insecta	Diptera	Chironomidae	*Chironomus* sp.	Midge	G
Arthropoda	Insecta	Diptera	Chironomidae	*Chironomus decorus*	Midge	G
Arthropoda	Insecta	Diptera	Chironomidae	*Chironomus plumosus*	Midge	G
Chordata	Amphibia	Anura	Bufonidae	*Bufo boreas*	Boreal toad	D
Chordata	Actinopterygii	Acipenseriformes	Acipenseridae	*Scaphirhynchua platorynchus*	Shovelnose sturgeon	D
Chordata	Actinopterygii	Anguilliformes	Anguillidae	*Anguilla rostrata*	American eel	D
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Xyrauchen texanus*	Razorback sucker	F
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Catostomus latipinnis*	Flannelmouth sucker	G
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Campostoma anomalum*	Central stoneroller	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Brachydanio rerio*	Zebrafish	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Gila elegans*	Bonytail chub	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Carassius auratus*	Goldfish	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Cyprinus carpio*	Common carp	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Acrocheilus alutaceus*	Chiselmouth	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Rhinichthys atratulus*	Blacknose dace	G
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Semotilus atromaculatus*	Creek chub	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Cyprinella chrysocephalus*	Striped shiner	G
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Pimephales notatus*	Bluntnose minnow	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Pimephales promelas*	Fathead minnow	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Notemigonus crysoleucas*	Golden shiner	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Ptychocheilus oregonensis*	Northern pikeminnow	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Ptychocheilus lucius*	Colorado pikeminnow	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Hybognathus amarus*	Rio Grande silvery minnow	G
Chordata	Actinopterygii	Cyprinodontiformes	Cyprinodontidae	*Jordanella floridae*	Flagfish	D
Chordata	Actinopterygii	Cyprinodontiformes	Fundulidae	*Fundulus diaphanous*	Banded killifish	G
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	*Poeciliopsis occidentalis*	Gila topminnow	D
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	*Gambusia affinis*	Mosquitofish	S
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	*Poecilia reticulata*	Guppy	D
Chordata	Actinopterygii	Perciformies	Centrarchidae	*Lepomis macrochirus*	Bluegill	S
Chordata	Actinopterygii	Perciformies	Centrarchidae	*Lepomis gibbosus*	Pumpkinseed	S
Chordata	Actinopterygii	Perciformies	Cichlidaea	*Oreochromis mossambicus*	Tilapia	D
Chordata	Actinopterygii	Perciformies	Moronidae	*Morone saxatillis*	Striped bass	D
Chordata	Actinopterygii	Perciformies	Moronidae	*Morone americana*	White perch	D
Chordata	Actinopterygii	Perciformies	Percidae	*Etheostoma flabellare*	Fantail darter	G
Chordata	Actinopterygii	Perciformies	Percidae	*Etheostoma rubrum*	Fountain darter	G
Chordata	Actinopterygii	Perciformies	Percidae	*Etheostoma nigrum*	Johnny darter	S
Chordata	Actinopterygii	Perciformies	Percidae	*Etheostoma lepidum*	Greenthroat darter	G
Chordata	Actinopterygii	Perciformies	Percidae	*Etheostoma spectabile*	Orangethroat darter	G

TABLE 3.3.5: Continued.

Phylum	Class	Order	Family	Genus/Species	Common name	Code
Chordata	Actinopterygii	Perciformies	Percidae	*Etheostoma caeruleum*	Rainbow darter	G
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salmo salar*	Atlantic salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salvelinus fontinalis*	Brook trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salvelinus confluentus*	Bull trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Thymallus arcticus*	Arctic grayling	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus gorbuscha*	Pink salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus apache*	Apache trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus mykiss*	Rainbow trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus tshawytscha*	Chinook salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus clarki*	Cutthroat trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus nerka*	Sockeye salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus kisutch*	Coho salmon	D
Chordata	Actinopterygii	Siluriformes	Ictaluridae	*Ictalurus punctatus*	Channel catfish	S
Chordata	Actinopterygii	Siluriformes	Ictaluridae	*Ictalurus nebulosus*	Brown bullhead	S

S = retained because this species occurs at the site
G = retained because there is a species in this genus that occurs at the site, but not in the national data set
F = retained because there is a genus in this Family that occurs at the site, but not in the national data set
O = retained because this Order occurs at the site, and is not represented by a lower taxon
C = retained because this Class occurs at the site, and is not represented by a lower taxon
P = retained because this Phylum occurs at the site, and is not represented by a lower taxon
D = deleted because this species does not satisfy any of the requirements for retaining species
* = formally retained, but not used in the working database for reasons explained in the text

TABLE 3.3.6: Deletion process for the derivation of the southwest (SW) and high plains (HP) arid stream region copper databases.

Phylum	Class	Order	Family	Genus/Species	Common name	Code SW	Code HP
Bryozoa	Phylactolaemata	Plumatellida	Lophopodidae	*Lophopodella carteri*	Bryozoan	P	D
Bryozoa	Phylactolaemata	Plumatellida	Plumatellidae	*Plumatella emarginata*	Bryozoan	P	D
Bryozoa	Phylactolaemata	Plumatellida	Pectinatellidae	*Pectinatella magnifica*	Bryozoan	P	D
Annelida	Clitellata	Haplotaxida	Naididae	*Nais* sp.	Worm	G	G
Annelida	Clitellata	Haplotaxida	Tubificidae	*Limnodrilus hoffmeisteri*	Worm	G	S
Annelida	Clitellata	Haplotaxida	Tubificidae	*Tubifex tubifex*	Worm	S	S
Annelida	Clitellata	Lumbriculida	Lumbriculidae	*Lumbriculus variegatus*	Worm	S	S
Mollusca	Bivalvia	Veneroida	Corbiculidae	*Corbicula manilensis*	Asiatic clam	G	G
Mollusca	Bivalvia	Unionoida	Unionoidae	*Lampsilis teres*	Yellow sandshell	D	D
Mollusca	Bivalvia	Unionoida	Unionoidae	*Lampsilis claidornensis*	Freshwater mussel	D	D
Mollusca	Bivalvia	Unionoida	Unionoidae	*Utterbackia imbecilis*	Freshwater mussel	D	D
Mollusca	Bivalvia	Unionoida	Unionoidae	*Villosa vibex*	Rainbow mussel	D	D
Mollusca	Bivalvia	Unionoida	Unionoidae	*Villosa villosa*	Freshwater mussel	D	D
Mollusca	Bivalvia	Unionoida	Unionoidae	*Actinonaias pectorosa*	Freshwater mussel	D	D
Mollusca	Gastropoda	Architaenioglossa	Viviparidae	*Campeloma decisum*	Snail	D	D
Mollusca	Gastropoda	Basommatophora	Planorbidae	*Gyraulus circumstriatus*	Snail	G	G
Mollusca	Gastropoda	Basommatophora	Physidae	*Physa heterostropha*	Snail	G	G
Mollusca	Gastropoda	Basommatophora	Physidae	*Physa intergra*	Snail	G	G
Mollusca	Gastropoda	Basommatophora	Physidae	*Physella gyrina*	Snail	G	G
Mollusca	Gastropoda	Neotaenioglossa	Hydrobiidae	*Lithoglyphus virens*	Snail	D	D
Mollusca	Gastropoda	Neotaenioglossa	Hydrobiidae	*Amnicola* sp.	Snail	D	D
Mollusca	Gastropoda	Neotaenioglossa	Pleuroceridae	*Juga plicifera*	Snail	D	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Simocephalus vetulus*	Cladoceran	D	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Scapholeberis* sp.	Cladoceran	D	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia galeata*	Cladoceran	G*	G*
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia magna*	Cladoceran	G*	G*
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia pulex*	Cladoceran	G*	G*
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia pulicaria*	Cladoceran	G*	G*
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Ceriodaphnia reticulata*	Cladoceran	G*	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Ceriodaphnia dubia*	Cladoceran	G*	D
Arthropoda	Branchiopoda	Diplostraca	Chydoridae	*Chydorus sphaericus*	Cladoceran	G*	D
Arthropoda	Branchiopoda	Diplostraca	Bosminidae	*Bosmina longirostrus*	Cladoceran	G*	D
Arthropoda	Maxillopoda	Cyclopoida	Cyclopidae	*Tropocyclops prasinus*	Copepod	D	D
Arthropoda	Malacostraca	Decapoda	Cambaridae	*Orconectes rusticus*	Rusty crayfish	D	G
Arthropoda	Malacostraca	Decapoda	Cambaridae	*Procambarus clarkii*	Red crayfish	S	D
Arthropoda	Malacostraca	Amphipoda	Crangonyctidae	*Crangonyx pseudogracilis*	Amphipod	D	D
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus pseudolimnaeus*	Amphipod	G	G
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus pulex*	Amphipod	G	G
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus* sp.	Amphipod	G	G
Arthropoda	Malacostraca	Amphipoda	Hyelallidae	*Hyalella azteca*	Amphipod	S	S

TABLE 3.3.6: Continued.

Phylum	Class	Order	Family	Genus/Species	Common name	Code SW	Code HP
Arthropoda	Insecta	Odonata (*Zygoptera*)	**********	sp.	Damselfly	O	O
Arthropoda	Insecta	Ephemeroptera	Polymitarcyidae	*Ephoron virgo*	Mayfly	O	O
Arthropoda	Insecta	Ephemeroptera	Ephemerellidae	*Ephemerella subvaria*	Mayfly	O	G
Arthropoda	Insecta	Plectoptera	Perlidae	*Acroneuria lycorias*	Stonefly	O	O
Arthropoda	Insecta	Trichoptera	**********	*Trichoptera* sp.	Caddisfly	O	O
Arthropoda	Insecta	Diptera	Chironomidae	*Chironomus tentans*	Midge	G	G
Arthropoda	Insecta	Diptera	Chironomidae	*Chironomus* sp.	Midge	G	G
Arthropoda	Insecta	Diptera	Chironomidae	*Chironomus decorus*	Midge	G	G
Arthropoda	Insecta	Diptera	Chironomidae	*Chironomus plumosus*	Midge	G	D
Chordata	Amphibia	Anura	Bufonidae	*Bufo boreas*	Boreal toad	D	D
Chordata	Actinopterygii	Acipenseriformes	Acipenseridae	*Scaphirhynchua platorynchus*	Shovelnose sturgeon	D	D
Chordata	Actinopterygii	Anguilliformes	Anguillidae	*Anguilla rostrata*	American eel	D	D
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Xyrauchen texanus*	Razorback sucker	S	F
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Catostomus latipinnis*	Flannelmouth sucker	S	G
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Campostoma anomalum*	Central stoneroller	F	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Brachydanio rerio*	Zebrafish	F	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Gila elegans*	Bonytail chub	S	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Carassius auratus*	Goldfish	S	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Cyprinus carpio*	Common carp	S	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Acrocheilus alutaceus*	Chiselmouth	F	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Rhinichthys atratulus*	Blacknose dace	G	G
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Semotilus atromaculatus*	Creek chub	F	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Cyprinella chrysocephalus*	Striped shiner	F	G
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Pimephales notatus*	Bluntnose minnow	D	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Pimephales promelas*	Fathead minnow	S	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Notemigonus crysoleucas*	Golden shiner	S	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Ptychocheilus oregonensis*	Northern pikeminnow	F	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Ptychocheilus lucius*	Colorado pikeminnow	S	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Hybognathus amarus*	Rio Grande silvery minnow	F	G
Chordata	Actinopterygii	Cyprinodontiformes	Cyprinodontidae	*Jordanella floridae*	Flagfish	F	D
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	*Poeciliopsis occidentalis*	Gila topminnow	S	D
Chordata	Actinopterygii	Cyprinodontiformes	Fundulidae	*Fundulus diaphanous*	Banded killifish	D	G
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	*Gambusia affinis*	Mosquitofish	S	S
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	*Poecilia reticulata*	Guppy	G	D
Chordata	Actinopterygii	Perciformies	Centrarchidae	*Lepomis macrochirus*	Bluegill	S	S
Chordata	Actinopterygii	Perciformies	Centrarchidae	*Lepomis gibbosus*	Pumpkinseed	G	S
Chordata	Actinopterygii	Perciformies	Cichlidaea	*Oreochromis mossambicus*	Tilapia	S	D
Chordata	Actinopterygii	Perciformies	Moronidae	*Morone saxatillis*	Striped bass	G	D
Chordata	Actinopterygii	Perciformies	Moronidae	*Morone americana*	White perch	G	D
Chordata	Actinopterygii	Perciformies	Percidae	*Etheostoma flabellare*	Fantail darter	D	G

TABLE 3.3.6: Continued.

Phylum	Class	Order	Family	Genus/Species	Common name	Code SW	Code HP
Chordata	Actinopterygii	Perciformies	Percidae	*Etheostoma rubrum*	Fountain darter	D	G
Chordata	Actinopterygii	Perciformies	Percidae	*Etheostoma nigrum*	Johnny darter	D	S
Chordata	Actinopterygii	Perciformies	Percidae	*Etheostoma lepidum*	Greenthroat darter	D	G
Chordata	Actinopterygii	Perciformies	Percidae	*Etheostoma spectabile*	Orangethroat darter	D	G
Chordata	Actinopterygii	Perciformies	Percidae	*Etheostoma caeruleum*	Rainbow darter	D	G
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salmo salar*	Atlantic salmon	D	G
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salvelinus fontinalis*	Brook trout	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salvelinus confluentus*	Bull trout	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Thymallus arcticus*	Artic grayling	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus gorbuscha*	Pink salmon	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus apache*	Apache trout	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus mykiss*	Rainbow trout	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus tshawytscha*	Chinook salmon	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus clarki*	Cutthroat trout	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus nerka*	Sockeye salmon	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus kisutch*	Coho salmon	D	D
Chordata	Actinopterygii	Siluriformes	Ictaluridae	*Ictalurus punctatus*	Channel catfish	S	S
Chordata	Actinopterygii	Siluriformes	Ictaluridae	*Ictalurus nebulosus*	Brown bullhead	D	S

S = retained because this species occurs at the site
G = retained because there is a species in this genus that occurs at the site, but not in the national data set
F = retained because there is a genus in this Family that occurs at the site, but not in the national data set
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* = formally retained, but not used in the working database for reasons explained in the text

3.4 Diazinon

TABLE 3.4.1: Deletion process for the Santa Ana River diazinon site-specific database.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code
Platyhelminthes	Turbellaria	Tricladida	Planarlidae	*Girardia tigrina*	Planaria	G
Annelida	Oligochaeta	Lumbriculida	Lumbriculidae	*Lumbriculus variegatus*	Worm	S
Mollusca	Gastropoda	Prosobranchia	Hydrobiidae	*Gillia altilis*	Pebblesnail	C
Mollusca	Gastropoda	Caenogastropoda	Ampullariidae	*Pomacea paludosa*	Fla apple snail	C
Arthropoda	Branchiopoda	Diplostraca	Daphnidae	*Ceriodaphnia dubia*	Cladoceran	O*
Arthropoda	Branchiopoda	Diplostraca	Daphnidae	*Daphnia magna*	Cladoceran	O*
Arthropoda	Branchiopoda	Diplostraca	Daphnidae	*Daphnia pulex*	Cladoceran	O*
Arthropoda	Branchiopoda	Diplostraca	Daphnidae	*Simocephalus serrulatus*	Cladoceran	O*
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus fasciatus*	Amphipod	D
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus lacustris*	Amphipod	S
Arthropoda	Insecta	Odonata	Coenagrionidae	*Lestes congener*	Damselfly	F
Arthropoda	Insecta	Plecoptera	Pteronarcidae	*Pteronarcella californica*	Stonefly	O
Arthropoda	Insecta	Diptera	Chironomidae	*Chironomus tentans*	Midge	G
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus clarkii*	Cuttthroat trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus mykiss*	Rainbow trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salvelinus fontinalis*	Brook trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salvelinus namaycush*	Lake trout	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Brachydanio rerio*	Zebrafish	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Pimephales promelas*	Fathead minnow	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Carassius auratus*	Goldfish	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Carassius carassius*	Crucian carp	D
Chordata	Actinopterygii	Cyprinodontiformes	Cyprinodontidae	*Jordanella floridea*	Flagfish	D
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	*Poecilia reticulata*	Guppy	G
Chordata	Actinopterygii	Perciformes	Cichlidae	*Oreochromis mossambicus*	Tilapia	S
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Lepomis macrochirus*	Bluegill	S
Chordata	Actinopterygii	Siluriformes	Ictaluridae	*Ameiurus melas*	Black bullhead	S
Chordata	Actinopterygii	Siluriformes	Ictaluridae	*Clarias batrachus*	Walking catfish	D

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TABLE 3.4.2: Deletion process for the Santa Cruz River near Nogales (NOG) and near Tucson (TUC) diazinon site-specific databases.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code NOG	Code TUC
Platyhelminthes	Turbellaria	Tricladida	Planarlidae	*Girardia tigrina*	Planaria	D	D
Annelida	Oligochaeta	Lumbriculida	Lumbriculidae	*Lumbriculus variegatus*	Worm	F	C
Mollusca	Gastropoda	Prosobranchia	Hydrobiidae	*Gillia altilis*	Pebblesnail	C	D
Mollusca	Gastropoda	Caenogastropoda	Ampullariidae	*Pomacea paludosa*	Fla. apple snail	C	D
Arthropoda	Bronchiopoda	Diplostraca	Daphnidae	*Ceriodaphnia dubia*	Cladoceran	F*	F*
Arthropoda	Bronchiopoda	Diplostraca	Daphnidae	*Daphnia magna*	Cladoceran	G*	G*
Arthropoda	Bronchiopoda	Diplostraca	Daphnidae	*Daphnia pulex*	Cladoceran	G*	G*
Arthropoda	Bronchiopoda	Diplostraca	Daphnidae	*Simocephalus serrulatus*	Cladoceran	F*	F*
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus fasciatus*	Amphipod	D	D
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus lacustris*	Amphipod	R	R
Arthropoda	Insecta	Odonata	Coenagrionidae	*Lestes congener*	Damselfly	F	F
Arthropoda	Insecta	Plecoptera	Pteronarcidae	*Pteronarcella californica*	Stonefly	D	O
Arthropoda	Insecta	Diptera	Chironomidae	*Chironomus tentans*	Midge	G	G
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus clarkii*	Cuttthroat trout	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus mykiss*	Rainbow trout	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salvelinus fontinalis*	Brook trout	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salvelinus namaycush*	Lake trout	D	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Brachydanio rerio*	Zebrafish	F	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Pimephales promelas*	Fathead minnow	F	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Carassius auratus*	Goldfish	F	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Carassius carassius*	Crucian carp	F	D
Chordata	Actinopterygii	Cyprinodontiformes	Cyprinodontidae	*Jordanella floridea*	Flagfish	D	D
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	*Poecilia reticulata*	Guppy	F	F
Chordata	Actinopterygii	Perciformes	Cichlidae	*Oreochromis mossambicus*	Tilapia	D	D
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Lepomis macrochirus*	Bluegill	G	G
Chordata	Actinopterygii	Siluriformes	Ictaluridae	*Ameiurus melas*	Black bullhead	D	S
Chordata	Actinopterygii	Siluriformes	Ictaluridae	*Clarias batrachus*	Walking catfish	D	D

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P = retained because this Phylum occurs at the site, and is not represented by a lower taxon
D = deleted because this species does not satisfy any of the requirements for retaining species
R = non-resident species retained due to potential occurrence at the site
* = formally retained, but not included in working database for reasons explained in text

TABLE 3.4.3: Deletion process for the Salt/Gila rivers diazinon site-specific database.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code
Platyhelminthes	Turbellaria	Tricladida	Planarlidae	*Girardia tigrina*	Planaria	C
Annelida	Oligochaeta	Lumbriculida	Lumbriculidae	*Lumbriculus variegatus*	Worm	C
Mollusca	Gastropoda	Prosobranchia	Hydrobiidae	*Gillia altilis*	Pebblesnail	C
Mollusca	Gastropoda	Caenogastropoda	Ampullariidae	*Pomacea paludosa*	Fla apple snail	C
Arthropoda	Bronchiopoda	Diplostraca	Daphnidae	*Ceriodaphnia dubia*	Cladoceran	G*
Arthropoda	Bronchiopoda	Diplostraca	Daphnidae	*Daphnia magna*	Cladoceran	F*
Arthropoda	Bronchiopoda	Diplostraca	Daphnidae	*Daphnia pulex*	Cladoceran	F*
Arthropoda	Bronchiopoda	Diplostraca	Daphnidae	*Simocephalus serrulatus*	Cladoceran	F*
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus fasciatus*	Amphipod	O*
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus lacustris*	Amphipod	O
Arthropoda	Insecta	Odonata	Coenagrionidae	*Lestes congener*	Damselfly	F
Arthropoda	Insecta	Plecoptera	Pteronarcidae	*Pteronarcella californica*	Stonefly	D
Arthropoda	Insecta	Diptera	Chironomidae	*Chironomus tentans*	Midge	G
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus clarkii*	Cuttthroat trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus mykiss*	Rainbow trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salvelinus fontinalis*	Brook trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salvelinus namaycush*	Lake trout	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Brachydanio rerio*	Zebrafish	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Pimephales promelas*	Fathead minnow	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Carassius auratus*	Goldfish	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Carassius carassius*	Crucian carp	F
Chordata	Actinopterygii	Cyprinodontiformes	Cyprinodontidae	*Jordanella floridea*	Flagfish	F
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	*Poecilia reticulata*	Guppy	G
Chordata	Actinopterygii	Perciformes	Cichlidae	*Oreochromis mossambicus*	Tilapia	S
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Lepomis macrochirus*	Bluegill	S
Chordata	Actinopterygii	Siluriformes	Ictaluridae	*Ameiurus melas*	Black bullhead	S
Chordata	Actinopterygii	Siluriformes	Ictaluridae	*Clarias batrachus*	Walking catfish	F

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TABLE 3.4.4: Deletion process for Fountain Creek diazinon site-specific database.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code
Platyhelminthes	Turbellaria	Tricladida	Planarlidae	*Girardia tigrina*	Planaria	S
Annelida	Oligochaeta	Lumbriculida	Lumbriculidae	*Lumbriculus variegatus*	Worm	S
Mollusca	Gastropoda	Prosobranchia	Hydrobiidae	*Gillia altilis*	Pebblesnail	C
Mollusca	Gastropoda	Caenogastropoda	Ampullariidae	*Pomacea paludosa*	Fla apple snail	C
Arthropoda	Bronchiopoda	Diplostraca	Daphnidae	*Ceriodaphnia dubia*	Cladoceran	D*
Arthropoda	Bronchiopoda	Diplostraca	Daphnidae	*Daphnia magna*	Cladoceran	D*
Arthropoda	Bronchiopoda	Diplostraca	Daphnidae	*Daphnia pulex*	Cladoceran	D*
Arthropoda	Bronchiopoda	Diplostraca	Daphnidae	*Simocephalus serrulatus*	Cladoceran	D*
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus fasciatus*	Amphipod	D
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus lacustris*	Amphipod	S
Arthropoda	Insecta	Odonata	Coenagrionidae	*Lestes congener*	Damselfly	F
Arthropoda	Insecta	Plecoptera	Pteronarcidae	*Pteronarcella californica*	Stonefly	G
Arthropoda	Insecta	Diptera	Chironomidae	*Chironomus tentans*	Midge	G
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus clarkii*	Cuttthroat trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus mykiss*	Rainbow trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salvelinus fontinalis*	Brook trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salvelinus namaycush*	Lake trout	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Brachydanio rerio*	Zebrafish	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Pimephales promelas*	Fathead minnow	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Carassius auratus*	Goldfish	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Carassius carassius*	Crucian carp	F
Chordata	Actinopterygii	Cyprinodontiformes	Cyprinodontidae	*Jordanella floridea*	Flagfish	O
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	*Poecilia reticulata*	Guppy	O
Chordata	Actinopterygii	Perciformes	Cichlidae	*Oreochromis mossambicus*	Tilapia	O
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Lepomis macrochirus*	Bluegill	S
Chordata	Actinopterygii	Siluriformes	Ictaluridae	*Ameiurus melas*	Black bullhead	S
Chordata	Actinopterygii	Siluriformes	Ictaluridae	*Clarias batrachus*	Walking catfish	F

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TABLE 3.4.5: Deletion process for the South Platte River diazinon site-specific database.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code
Platyhelminthes	Turbellaria	Tricladida	Planarlidae	*Girardia tigrina*	Planaria	S
Annelida	Oligochaeta	Lumbriculida	Lumbriculidae	*Lumbriculus variegatus*	Worm	C
Mollusca	Gastropoda	Prosobranchia	Hydrobiidae	*Gillia altilis*	Pebblesnail	C
Mollusca	Gastropoda	Caenogastropoda	Ampullariidae	*Pomacea paludosa*	Fla apple snail	C
Arthropoda	Bronchiopoda	Diplostraca	Daphnidae	*Ceriodaphnia dubia*	Cladoceran	F*
Arthropoda	Bronchiopoda	Diplostraca	Daphnidae	*Daphnia magna*	Cladoceran	G*
Arthropoda	Bronchiopoda	Diplostraca	Daphnidae	*Daphnia pulex*	Cladoceran	G*
Arthropoda	Bronchiopoda	Diplostraca	Daphnidae	*Simocephalus serrulatus*	Cladoceran	F*
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus fasciatus*	Amphipod	D
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus lacustris*	Amphipod	S
Arthropoda	Insecta	Odonata	Coenagrionidae	*Lestes congener*	Damselfly	F
Arthropoda	Insecta	Plecoptera	Pteronarcidae	*Pteronarcella californica*	Stonefly	O
Arthropoda	Insecta	Diptera	Chironomidae	*Chironomus tentans*	Midge	G
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus clarkii*	Cuttthroat trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus mykiss*	Rainbow trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salvelinus fontinalis*	Brook trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salvelinus namaycush*	Lake trout	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Brachydanio rerio*	Zebrafish	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Pimephales promelas*	Fathead minnow	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Carassius auratus*	Goldfish	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Carassius carassius*	Crucian carp	F
Chordata	Actinopterygii	Cyprinodontiformes	Cyprinodontidae	*Jordanella floridea*	Flagfish	O
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	*Poecilia reticulata*	Guppy	F
Chordata	Actinopterygii	Perciformes	Cichlidae	*Oreochromis mossambicus*	Tilapia	O
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Lepomis macrochirus*	Bluegill	S
Chordata	Actinopterygii	Siluriformes	Ictaluridae	*Ameiurus melas*	Black bullhead	S
Chordata	Actinopterygii	Siluriformes	Ictaluridae	*Clarias batrachus*	Walking catfish	F

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TABLE 3.4.6: Deletion process for the derivation of the southwest (SW) and high plains (HP) arid stream region diazinon databases.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code SW	Code HP
Platyhelminthes	Turbellaria	Tricladida	Planarlidae	*Girardia tigrina*	Planaria	G	S
Annelida	Oligochaeta	Lumbriculida	Lumbriculidae	*Lumbriculus variegatus*	Worm	S	S
Mollusca	Gastropoda	Prosobranchia	Hydrobiidae	*Gillia altilis*	Pebblesnail	C	C
Mollusca	Gastropoda	Caenogastropoda	Ampullariidae	*Pomacea paludosa*	Fla. apple snail	C	C
Arthropoda	Bronchiopoda	Diplostraca	Daphnidae	*Ceriodaphnia dubia*	Cladoceran	G*	F*
Arthropoda	Bronchiopoda	Diplostraca	Daphnidae	*Daphnia magna*	Cladoceran	G*	G*
Arthropoda	Bronchiopoda	Diplostraca	Daphnidae	*Daphnia pulex*	Cladoceran	G*	G*
Arthropoda	Bronchiopoda	Diplostraca	Daphnidae	*Simocephalus serrulatus*	Cladoceran	F*	F*
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus fasciatus*	Amphipod	D	D
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus lacustris*	Amphipod	S	S
Arthropoda	Insecta	Odonata	Coenagrionidae	*Lestes congener*	Damselfly	F	F
Arthropoda	Insecta	Plecoptera	Pteronarcidae	*Pteronarcella californica*	Stonefly	O	G
Arthropoda	Insecta	Diptera	Chironomidae	*Chironomus tentans*	Midge	G	G
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus clarkii*	Cuttthroat trout	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus mykiss*	Rainbow trout	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salvelinus fontinalis*	Brook trout	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salvelinus namaycush*	Lake trout	D	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Brachydanio rerio*	Zebrafish	F	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Pimephales promelas*	Fathead minnow	S	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Carassius auratus*	Goldfish	S	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Carassius carassius*	Crucian carp	F	F
Chordata	Actinopterygii	Cyprinodontiformes	Cyprinodontidae	*Jordanella floridea*	Flagfish	F	O
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	*Poecilia reticulata*	Guppy	G	F
Chordata	Actinopterygii	Perciformes	Cichlidae	*Oreochromis mossambicus*	Tilapia	S	O
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Lepomis macrochirus*	Bluegill	S	S
Chordata	Actinopterygii	Siluriformes	Ictaluridae	*Ameiurus melas*	Black bullhead	S	S
Chordata	Actinopterygii	Siluriformes	Ictaluridae	*Clarias batrachus*	Walking catfish	F	F

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3.5 Zinc

TABLE 3.5.1: Deletion process for the Santa Ana River zinc site-specific database.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code
Bryozoa	Phylactolaemata	Plumatellida	Lophopodidae	*Lophopodella carteri*	Bryozoan	P
Bryozoa	Phylactolaemata	Plumatellida	Plumatellidae	*Plumatella emarginata*	Bryozoan	P
Bryozoa	Phylactolaemata	Plumatellida	Pectinatelidae	*Pectinatella magnifica*	Bryozoan	P
Platyhelminthes	Turbellaria	Tricladida	Planariidae	*Girardia tigrina*	Flatworm	G
Annelida	Clitellata	Haplotaxida	Naididae	*Nais* sp.	Worm	G
Annelida	Clitellata	Haplotaxida	Tubificidae	*Tubifex tubifex*	Worm	F
Annelida	Clitellata	Haplotaxida	Tubificidae	*Limnodrilus hoffmeisteri*	Worm	G
Annelida	Clitellata	Lumbriculidae	Lumbriculidae	*Lumbriculus variegatus*	Worm	S
Annelida	Polychaeta	Aeolosomatida	Aeolosomatidae	*Aeolosoma headleyi*	Worm	G
Mollusca	Bivalvia	Unionoida	Unionidae	*Anodonta imbecilis*	fw mussel	D
Mollusca	Bivalvia	Veneroida	Corbiculidae	*Corbicula fluminea*	Asiatic clam	S
Mollusca	Gastropoda	Basommatophora	Planorbidae	*Helisoma campanulatum*	Snail	F
Mollusca	Gastropoda	Basommatophora	Physidae	*Physa gyrina*	Snail	G
Mollusca	Gastropoda	Basommatophora	Physidae	*Physa heterostropha*	Snail	G
Mollusca	Gastropoda	Neotaenioglossa	Bithyniidae	*Amnicola* sp.	Snail	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Ceriodaphnia dubia*	Cladoceran	O*
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Ceriodaphnia reticulata*	Cladoceran	O*
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia magna*	Cladoceran	O*
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia pulex*	Cladoceran	O*
Arthropoda	Branchiopoda	Diplostraca	Moinidae	*Moina irrasa*	Cladoceran	O*
Arthropoda	Branchiopoda	Diplostraca	Moinidae	*Moina macrocopa*	Cladoceran	O*
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Crangonyx pseudogracilis*	Amphipod	D
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Echinogammarus tibaldii*	Amphipod	D
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus* sp.	Amphipod	G
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus italicus*	Amphipod	G
Arthropoda	Malacostraca	Amphipoda	Hyalellidae	*Hyalella azteca*	Amphipod	S
Arthropoda	Malacostraca	Isopoda	Asellidae	*Asellus aquaticus*	Isopod	D
Arthropoda	Malacostraca	Isopoda	Asellidae	*Caecidotea bicrenata*	Isopod	G
Arthropoda	Malacostraca	Isopoda	Asellidae	*Caecidotea communis*	Isopod	G
Arthropoda	Malacostraca	Isopoda	Asellidae	*Lirceus alabamae*	Isopod	D
Arthropoda	Maxillopoda	Cyclopida	Cyclopidae	*Tropocyclops prasinus*	Copepod	D
Arthropoda	Maxillopoda	Cyclopida	Cyclopidae	*Mesocyclops hyalinus*	Copepod	D
Arthropoda	Maxillopoda	Harpacticoida	Canthocamptidae	*Bryocamptus zschokkei*	Copepod	D
Arthropoda	Maxillopoda	Calanoide	Diatomidae	*Heliodiaptomus viduus*	Copepod	D
Arthropoda	Ostracoda	Podocopida	Cyprididae	*Stenocypris malcomsoni*	Ostracod	D
Arthropoda	Ostracoda	Podocopida	Cyprididae	*Cypris* sp.	Ostracod	D
Arthropoda	Insecta	Diptera	Chironomindae	*Chironomus* sp.	Midge	G
Arthropoda	Insecta	Diptera	Chironomindae	*Chironomus plumosus*	Midge	G
Arthropoda	Insecta	Ephemeroptera	Ephemerellidae	*Drunella grandis*	Mayfly	O
Arthropoda	Insecta	Hemiptera	Nepidae	*Ranatra elongata*	Water scorpion	O

TABLE 3.5.1: Continued.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code
Arthropoda	Insecta	Odonata	Coenagrionidae	*Argia* sp.	Damselfly	G
Arthropoda	Insecta	Odonata (Zygoptera)	--	sp.	Damselfly	O
Arthropoda	Insecta	Plecoptera	Perlodidae	*Isoperla* sp.	Stonefly	O
Arthropoda	Insecta	Trichoptera	--	sp.	Caddisfly	O
Arthropoda	Insecta	Trichoptera	Lepodostomatidae	*Lepidostoma* sp.	Caddisfly	O
Chordata	Actinopterygii	Anguilliformes	Anguillidae	*Anguilla rostrata*	American eel	D
Chordata	Actinopterygii	Cypiniformes	Catostomidae	*Catostomus latipinnis*	Flannelmouth sucker	G
Chordata	Actinopterygii	Cypiniformes	Catostomidae	*Catostomus commersonii*	White sucker	G
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Xyrauchen texanus*	Razorback sucker	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Agosia chrysogaster*	Longfin dace	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Carassius auratus*	Goldfish	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Cyprinus carpio*	Common carp	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Gila elegans*	Bonytail	G
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Notemigonus crysoleucus*	Golden shiner	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Pimephales promelas*	Fathead minnow	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Ptychocheilus lusius*	Colorado pikeminnow	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Ptychocheilus oregonensis*	Northern pikeminnow	D
Chordata	Actinopterygii	Cyprinodontiformes	Cyprinodontidae	*Jordanella floridae*	Flagfish	D
Chordata	Actinopterygii	Cyprinodontiformes	Fundulidae	*Fundulus diaphanus*	Banded killifish	D
Chordata	Actinopterygii	Cyprinodontiformes	Poecilidae	*Gambusia affinis*	Mosquitofish	S
Chordata	Actinopterygii	Cyprinodontiformes	Poecilidae	*Poecilia reticulata*	Guppy	G
Chordata	Actinopterygii	Cyprinodontiformes	Poecilidae	*Xiphophorus maculatus*	Southern platyfish	D
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Lepomis gibbosus*	Pumpkinseed	G
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Lepomis macrochirus*	Bluegill	S
Chordata	Actinopterygii	Perciformes	Cichlidae	*Tilapia mossambica*	Mozambique tilapia	G
Chordata	Actinopterygii	Perciformes	Moronidae	*Morone saxatilis*	Striped bass	D
Chordata	Actinopterygii	Perciformes	Moronidae	*Morone americana*	White perch	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus mykiss*	Rainbow trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus kisutch*	Coho salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus nerka*	Sockeye salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus tshawytscha*	Chinook salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus clarki*	Cutthroat trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salmo trutta*	Brown trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salmo salar*	Atlantic salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salvelinus fontinalis*	Brook trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Thymallus arcticus*	Artic grayling	D
Chordata	Actinopterygii	Scorpaeniformes	Cottidae	*Cottus bairdi*	Mottled sculpin	G
Chordata	Amphibia	Anura	Pipidae	*Xenopus laevis*	African clawed frog	D

S = retained because this species occurs at the site
G = retained because there is a species in this genus that occurs at the site, but not in the national data set
F = retained because there is a genus in this Family that occurs at the site, but not in the national data set
O = retained because this Order occurs at the site, and is not represented by a lower taxon
C = retained because this Class occurs at the site, and is not represented by a lower taxon
P = retained because this Phylum occurs at the site, and is not represented by a lower taxon
D = deleted because this species does not satisfy any of the requirements for retaining species
* = formally retained, but not included in working database for reasons explained in text

TABLE 3.5.2 : Deletion process for the Santa Cruz River near Nogales (NOG) and near Tucson (TUC) zinc site-specific databases.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code NOG	Code TUC
Bryozoa	Phylactolaemata	Plumatellida	Lophopodidae	*Lophopodella carteri*	Bryozoan	D	D
Bryozoa	Phylactolaemata	Plumatellida	Plumatellidae	*Plumatella emarginata*	Bryozoan	D	D
Bryozoa	Phylactolaemata	Plumatellida	Pectinatelidae	*Pectinatella magnifica*	Bryozoan	D	D
Platyhelminthes	Turbellaria	Tricladida	Planariidae	*Girardia tigrina*	Flatworm	D	D
Annelida	Clitellata	Haplotaxida	Naididae	*Nais* sp.	Worm	G	F
Annelida	Clitellata	Haplotaxida	Tubificidae	*Tubifex tubifex*	Worm	F	F
Annelida	Clitellata	Haplotaxida	Tubificidae	*Limnodrilus hoffmeisteri*	Worm	F	F
Annelida	Clitellata	Lumbriculidae	Lumbriculidae	*Lumbriculus variegatus*	Worm	F	D
Annelida	Polychaeta	Aeolosomatida	Aeolosomatidae	*Aeolosoma headleyi*	Worm	D	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Anodonta imbecilis*	fw mussel	D	D
Mollusca	Bivalvia	Veneroida	Corbiculidae	*Corbicula fluminea*	Asiatic clam	D	D
Mollusca	Gastropoda	Basommatophora	Planorbidae	*Helisoma campanulatum*	Snail	D	D
Mollusca	Gastropoda	Basommatophora	Physidae	*Physa gyrina*	Snail	G	D
Mollusca	Gastropoda	Basommatophora	Physidae	*Physa heterostropha*	Snail	G	D
Mollusca	Gastropoda	Neotaenioglossa	Bithyniidae	*Amnicola* sp.	Snail	D	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Ceriodaphnia dubia*	Cladoceran	D	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Ceriodaphnia reticulata*	Cladoceran	D	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia magna*	Cladoceran	G*	G*
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia pulex*	Cladoceran	G*	G*
Arthropoda	Branchiopoda	Diplostraca	Moinidae	*Moina irrasa*	Cladoceran	G*	G*
Arthropoda	Branchiopoda	Diplostraca	Moinidae	*Moina macrocopa*	Cladoceran	G*	G*
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Crangonyx pseudogracilis*	Amphipod	D	D
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Echinogammarus tibaldii*	Amphipod	R	R
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus* sp.	Amphipod	R	R
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus italicus*	Amphipod	R	R
Arthropoda	Malacostraca	Amphipoda	Hyalellidae	*Hyalella azteca*	Amphipod	R	R
Arthropoda	Malacostraca	Isopoda	Asellidae	*Asellus aquaticus*	Isopod	R	R
Arthropoda	Malacostraca	Isopoda	Asellidae	*Caecidotea bicrenata*	Isopod	R	R
Arthropoda	Malacostraca	Isopoda	Asellidae	*Caecidotea communis*	Isopod	R	R
Arthropoda	Malacostraca	Isopoda	Asellidae	*Lirceus alabamae*	Isopod	D	D
Arthropoda	Maxillopoda	Cyclopida	Cyclopidae	*Tropocyclops prasinus*	Copepod	D	D
Arthropoda	Maxillopoda	Cyclopida	Cyclopidae	*Mesocyclops hyalinus*	Copepod	D	D
Arthropoda	Maxillopoda	Harpacticoida	Canthocamptidae	*Bryocamptus zschokkei*	Copepod	D	D
Arthropoda	Maxillopoda	Calanoide	Diatomidae	*Heliodiaptomus viduus*	Copepod	D	D
Arthropoda	Ostracoda	Podocopida	Cyprididae	*Stenocypris malcomsoni*	Ostracod	D	D
Arthropoda	Ostracoda	Podocopida	Cyprididae	*Cypris* sp.	Ostracod	D	D
Arthropoda	Insecta	Diptera	Chironomindae	*Chironomus* sp.	Midge	G	G
Arthropoda	Insecta	Diptera	Chironomindae	*Chironomus plumosus*	Midge	G	G
Arthropoda	Insecta	Ephemeroptera	Ephemerellidae	*Drunella grandis*	Mayfly	O	O
Arthropoda	Insecta	Hemiptera	Nepidae	*Ranatra elongata*	Water scorpion	G	O

TABLE 3.5.2 : Continued.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code NOG	Code TUC
Arthropoda	Insecta	Odonata	Coenagrionidae	*Argia* sp.	Damselfly	G	O
Arthropoda	Insecta	Odonata (*Zygoptera*)	--	sp.	Damselfly	O	O
Arthropoda	Insecta	Plecoptera	Perlodidae	*Isoperla* sp.	Stonefly	D	O
Arthropoda	Insecta	Trichoptera	--	sp.	Caddisfly	O	O
Arthropoda	Insecta	Trichoptera	Lepodostomatidae	*Lepidostoma* sp.	Caddisfly	O	O
Chordata	Actinopterygii	Anguilliformes	Anguillidae	*Anguilla rostrata*	American eel	D	D
Chordata	Actinopterygii	Cypiniformes	Catostomidae	*Catostomus latipinnis*	Flannelmouth sucker	G	D
Chordata	Actinopterygii	Cypiniformes	Catostomidae	*Catostomus commersonii*	White sucker	G	D
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Xyrauchen texanus*	Razorback sucker	D	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Agosia chrysogaster*	Longfin dace	S	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Carassius auratus*	Goldfish	D	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Cyprinus carpio*	Common carp	D	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Gila elegans*	Bonytail	G	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Notemigonus crysoleucus*	Golden shiner	D	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Pimephales promelas*	Fathead minnow	D	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Ptychocheilus lusius*	Colorado pikeminnow	D	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Ptychocheilus oregonensis*	Northern pikeminnow	D	D
Chordata	Actinopterygii	Cyprinodontiformes	Cyprinodontidae	*Jordanella floridae*	Flagfish	D	D
Chordata	Actinopterygii	Cyprinodontiformes	Fundulidae	*Fundulus diaphanus*	Banded killifish	D	D
Chordata	Actinopterygii	Cyprinodontiformes	Poecilidae	*Gambusia affinis*	Mosquitofish	S	S
Chordata	Actinopterygii	Cyprinodontiformes	Poecilidae	*Poecilia reticulata*	Guppy	D	D
Chordata	Actinopterygii	Cyprinodontiformes	Poecilidae	*Xiphophorus maculatus*	Southern platyfish	D	D
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Lepomis gibbosus*	Pumpkinseed	G	G
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Lepomis macrochirus*	Bluegill	G	G
Chordata	Actinopterygii	Perciformes	Cichlidae	*Tilapia mossambica*	Mozambique tilapia	D	D
Chordata	Actinopterygii	Perciformes	Moronidae	*Morone saxatilis*	Striped bass	D	D
Chordata	Actinopterygii	Perciformes	Moronidae	*Morone americana*	White perch	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus mykiss*	Rainbow trout	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus kisutch*	Coho salmon	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus nerka*	Sockeye salmon	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus tshawytscha*	Chinook salmon	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus clarki*	Cutthroat trout	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salmo trutta*	Brown trout	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salmo salar*	Atlantic salmon	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salvelinus fontinalis*	Brook trout	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Thymallus arcticus*	Artic grayling	D	D

TABLE 3.5.2 : Continued.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code NOG	Code TUC
Chordata	Actinopterygii	Scorpaeniformes	Cottidae	*Cottus bairdi*	Mottled sculpin	D	D
Chordata	Amphibia	Anura	Pipidae	*Xenopus laevis*	African clawed frog	D	D

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TABLE 3.5.3: Deletion process for the Salt/Gila rivers zinc site-specific database.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code
Bryozoa	Phylactolaemata	Plumatellida	Lophopodidae	*Lophopodella carteri*	Bryozoan	D
Bryozoa	Phylactolaemata	Plumatellida	Plumatellidae	*Plumatella emarginata*	Bryozoan	D
Bryozoa	Phylactolaemata	Plumatellida	Pectinatelidae	*Pectinatella magnifica*	Bryozoan	D
Platyhelminthes	Turbellaria	Tricladida	Planariidae	*Girardia tigrina*	Flatworm	C
Annelida	Clitellata	Haplotaxida	Naididae	*Nais* sp.	Worm	F
Annelida	Clitellata	Haplotaxida	Tubificidae	*Tubifex tubifex*	Worm	F
Annelida	Clitellata	Haplotaxida	Tubificidae	*Limnodrilus hoffmeisteri*	Worm	F
Annelida	Clitellata	Lumbriculidae	Lumbriculidae	*Lumbriculus variegatus*	Worm	D
Annelida	Polychaeta	Aeolosomatida	Aeolosomatidae	*Aeolosoma headleyi*	Worm	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Anodonta imbecilis*	fw mussel	D
Mollusca	Bivalvia	Veneroida	Corbiculidae	*Corbicula fluminea*	Asiatic clam	D
Mollusca	Gastropoda	Basommatophora	Planorbidae	*Helisoma campanulatum*	Snail	D
Mollusca	Gastropoda	Basommatophora	Physidae	*Physa gyrina*	Snail	G
Mollusca	Gastropoda	Basommatophora	Physidae	*Physa heterostropha*	Snail	G
Mollusca	Gastropoda	Neotaenioglossa	Bithyniidae	*Amnicola* sp.	Snail	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Ceriodaphnia dubia*	Cladoceran	G*
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Ceriodaphnia reticulata*	Cladoceran	G*
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia magna*	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia pulex*	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Moinidae	*Moina irrasa*	Cladoceran	G*
Arthropoda	Branchiopoda	Diplostraca	Moinidae	*Moina macrocopa*	Cladoceran	G*
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Crangonyx pseudogracilis*	Amphipod	O
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Echinogammarus tibaldii*	Amphipod	O
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus* sp.	Amphipod	O
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus italicus*	Amphipod	O
Arthropoda	Malacostraca	Amphipoda	Hyalellidae	*Hyalella azteca*	Amphipod	O
Arthropoda	Malacostraca	Isopoda	Asellidae	*Asellus aquaticus*	Isopod	D
Arthropoda	Malacostraca	Isopoda	Asellidae	*Caecidotea bicrenata*	Isopod	D
Arthropoda	Malacostraca	Isopoda	Asellidae	*Caecidotea communis*	Isopod	D
Arthropoda	Malacostraca	Isopoda	Asellidae	*Lirceus alabamae*	Isopod	D
Arthropoda	Maxillopoda	Cyclopida	Cyclopidae	*Tropocyclops prasinus*	Copepod	D
Arthropoda	Maxillopoda	Cyclopida	Cyclopidae	*Mesocyclops hyalinus*	Copepod	D
Arthropoda	Maxillopoda	Harpacticoida	Canthocamptidae	*Bryocamptus zschokkei*	Copepod	D
Arthropoda	Maxillopoda	Calanoide	Diatomidae	*Heliodiaptomus viduus*	Copepod	D
Arthropoda	Ostracoda	Podocopida	Cyprididae	*Stenocypris malcomsoni*	Ostracod	D
Arthropoda	Ostracoda	Podocopida	Cyprididae	*Cypris* sp.	Ostracod	D
Arthropoda	Insecta	Diptera	Chironomindae	*Chironomus* sp.	Midge	G
Arthropoda	Insecta	Diptera	Chironomindae	*Chironomus plumosus*	Midge	G
Arthropoda	Insecta	Ephemeroptera	Ephemerellidae	*Drunella grandis*	Mayfly	O
Arthropoda	Insecta	Hemiptera	Nepidae	*Ranatra elongata*	Water scorpion	O
Arthropoda	Insecta	Odonata	Coenagrionidae	*Argia* sp.	Damselfly	G
Arthropoda	Insecta	Odonata (*Zygoptera*)	--	sp.	Damselfly	O

TABLE 3.5.3: Continued.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code
Arthropoda	Insecta	Trichoptera	--	sp.	Caddisfly	O
Arthropoda	Insecta	Trichoptera	Lepodostomatidae	*Lepidostoma* sp.	Caddisfly	O
Chordata	Actinopterygii	Anguilliformes	Anguillidae	*Anguilla rostrata*	American eel	D
Chordata	Actinopterygii	Cypiniformes	Catostomidae	*Catostomus latipinnis*	Flannelmouth sucker	S
Chordata	Actinopterygii	Cypiniformes	Catostomidae	*Catostomus commersonii*	White sucker	G
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Xyrauchen texanus*	Razorback sucker	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Agosia chrysogaster*	Longfin dace	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Carassius auratus*	Goldfish	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Cyprinus carpio*	Common carp	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Gila elegans*	Bonytail	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Notemigonus crysoleucus*	Golden shiner	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Pimephales promelas*	Fathead minnow	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Ptychocheilus lusius*	Colorado pikeminnow	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Ptychocheilus oregonensis*	Northern pikeminnow	F
Chordata	Actinopterygii	Cyprinodontiformes	Cyprinodontidae	*Jordanella floridae*	Flagfish	F
Chordata	Actinopterygii	Cyprinodontiformes	Fundulidae	*Fundulus diaphanus*	Banded killifish	D
Chordata	Actinopterygii	Cyprinodontiformes	Poecilidae	*Gambusia affinis*	Mosquitofish	S
Chordata	Actinopterygii	Cyprinodontiformes	Poecilidae	*Poecilia reticulata*	Guppy	G
Chordata	Actinopterygii	Cyprinodontiformes	Poecilidae	*Xiphophorus maculatus*	Southern platyfish	G
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Lepomis gibbosus*	Pumpkinseed	G
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Lepomis macrochirus*	Bluegill	S
Chordata	Actinopterygii	Perciformes	Cichlidae	*Tilapia mossambica*	Mozambique tilapia	G
Chordata	Actinopterygii	Perciformes	Moronidae	*Morone saxatilis*	Striped bass	G
Chordata	Actinopterygii	Perciformes	Moronidae	*Morone americana*	White perch	G
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus mykiss*	Rainbow trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus kisutch*	Coho salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus nerka*	Sockeye salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus tshawytscha*	Chinook salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus clarki*	Cutthroat trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salmo trutta*	Brown trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salmo salar*	Atlantic salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salvelinus fontinalis*	Brook trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Thymallus arcticus*	Artic grayling	D
Chordata	Actinopterygii	Scorpaeniformes	Cottidae	*Cottus bairdi*	Mottled sculpin	D
Chordata	Amphibia	Anura	Pipidae	*Xenopus laevis*	African clawed frog	D

S = retained because this species occurs at the site
G = retained because there is a species in this genus that occurs at the site, but not in the national data set
F = retained because there is a genus in this Family that occurs at the site, but not in the national data set
O = retained because this Order occurs at the site, and is not represented by a lower taxon
C = retained because this Class occurs at the site, and is not represented by a lower taxon
P = retained because this Phylum occurs at the site, and is not represented by a lower taxon
D = deleted because this species does not satisfy any of the requirements for retaining species
* = formally retained, but not included in working database for reasons explained in text

TABLE 3.5.4: Deletion process for the Fountain Creek zinc site-specific database.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code
Bryozoa	Phylactolaemata	Plumatellida	Lophopodidae	*Lophopodella carteri*	Bryozoan	D
Bryozoa	Phylactolaemata	Plumatellida	Plumatellidae	*Plumatella emarginata*	Bryozoan	D
Bryozoa	Phylactolaemata	Plumatellida	Pectinatelidae	*Pectinatella magnifica*	Bryozoan	D
Platyhelminthes	Turbellaria	Tricladida	Planariidae	*Girardia tigrina*	Flatworm	S
Annelida	Clitellata	Haplotaxida	Naididae	*Nais* sp.	Worm	S
Annelida	Clitellata	Haplotaxida	Tubificidae	*Tubifex tubifex*	Worm	S
Annelida	Clitellata	Haplotaxida	Tubificidae	*Limnodrilus hoffmeisteri*	Worm	S
Annelida	Clitellata	Lumbriculidae	Lumbriculidae	*Lumbriculus variegatus*	Worm	S
Annelida	Polychaeta	Aeolosomatida	Aeolosomatidae	*Aeolosoma headleyi*	Worm	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Anodonta imbecilis*	fw mussel	D
Mollusca	Bivalvia	Veneroida	Corbiculidae	*Corbicula fluminea*	Asiatic clam	D
Mollusca	Gastropoda	Basommatophora	Planorbidae	*Helisoma campanulatum*	Snail	O
Mollusca	Gastropoda	Basommatophora	Physidae	*Physa gyrina*	Snail	G
Mollusca	Gastropoda	Basommatophora	Physidae	*Physa heterostropha*	Snail	G
Mollusca	Gastropoda	Neotaenioglossa	Bithyniidae	*Amnicola* sp.	Snail	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Ceriodaphnia dubia*	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Ceriodaphnia reticulata*	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia magna*	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia pulex*	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Moinidae	*Moina irrasa*	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Moinidae	*Moina macrocopa*	Cladoceran	D
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Crangonyx pseudogracilis*	Amphipod	D
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Echinogammarus tibaldii*	Amphipod	D
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus* sp.	Amphipod	G
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus italicus*	Amphipod	G
Arthropoda	Malacostraca	Amphipoda	Hyalellidae	*Hyalella azteca*	Amphipod	S
Arthropoda	Malacostraca	Isopoda	Asellidae	*Asellus aquaticus*	Isopod	G
Arthropoda	Malacostraca	Isopoda	Asellidae	*Caecidotea bicrenata*	Isopod	G
Arthropoda	Malacostraca	Isopoda	Asellidae	*Caecidotea communis*	Isopod	S
Arthropoda	Malacostraca	Isopoda	Asellidae	*Lirceus alabamae*	Isopod	D
Arthropoda	Maxillopoda	Cyclopida	Cyclopidae	*Tropocyclops prasinus*	Copepod	D
Arthropoda	Maxillopoda	Cyclopida	Cyclopidae	*Mesocyclops hyalinus*	Copepod	D
Arthropoda	Maxillopoda	Harpacticoida	Canthocamptidae	*Bryocamptus zschokkei*	Copepod	D
Arthropoda	Maxillopoda	Calanoide	Diatomidae	*Heliodiaptomus viduus*	Copepod	D
Arthropoda	Ostracoda	Podocopida	Cyprididae	*Stenocypris malcomsoni*	Ostracod	D
Arthropoda	Ostracoda	Podocopida	Cyprididae	*Cypris* sp.	Ostracod	D
Arthropoda	Insecta	Diptera	Chironomindae	*Chironomus* sp.	Midge	G
Arthropoda	Insecta	Diptera	Chironomindae	*Chironomus plumosus*	Midge	G
Arthropoda	Insecta	Ephemeroptera	Ephemerellidae	*Drunella grandis*	Mayfly	F
Arthropoda	Insecta	Hemiptera	Nepidae	*Ranatra elongata*	Water scorpion	O
Arthropoda	Insecta	Odonata	Coenagrionidae	*Argia* sp.	Damselfly	S
Arthropoda	Insecta	Odonata (*Zygoptera*)	--	sp.	Damselfly	O

TABLE 3.5.4: Continued.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code
Arthropoda	Insecta	Plecoptera	Perlodidae	*Isoperla* sp.	Stonefly	G
Arthropoda	Insecta	Trichoptera	--	sp.	Caddisfly	O
Arthropoda	Insecta	Trichoptera	Lepodostomatidae	*Lepidostoma* sp.	Caddisfly	O
Chordata	Actinopterygii	Anguilliformes	Anguillidae	*Anguilla rostrata*	American eel	D
Chordata	Actinopterygii	Cypiniformes	Catostomidae	*Catostomus latipinnis*	Flannelmouth sucker	G
Chordata	Actinopterygii	Cypiniformes	Catostomidae	*Catostomus commersonii*	White sucker	S
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Xyrauchen texanus*	Razorback sucker	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Agosia chrysogaster*	Longfin dace	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Carassius auratus*	Goldfish	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Cyprinus carpio*	Common carp	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Gila elegans*	Bonytail	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Notemigonus crysoleucus*	Golden shiner	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Pimephales promelas*	Fathead minnow	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Ptychocheilus lusius*	Colorado pikeminnow	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Ptychocheilus oregonensis*	Northern pikeminnow	F
Chordata	Actinopterygii	Cyprinodontiformes	Cyprinodontidae	*Jordanella floridae*	Flagfish	D
Chordata	Actinopterygii	Cyprinodontiformes	Fundulidae	*Fundulus diaphanus*	Banded killifish	G
Chordata	Actinopterygii	Cyprinodontiformes	Poecilidae	*Gambusia affinis*	Mosquitofish	D
Chordata	Actinopterygii	Cyprinodontiformes	Poecilidae	*Poecilia reticulata*	Guppy	D
Chordata	Actinopterygii	Cyprinodontiformes	Poecilidae	*Xiphophorus maculatus*	Southern platyfish	D
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Lepomis gibbosus*	Pumpkinseed	G
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Lepomis macrochirus*	Bluegill	S
Chordata	Actinopterygii	Perciformes	Cichlidae	*Tilapia mossambica*	Mozambique tilapia	O
Chordata	Actinopterygii	Perciformes	Moronidae	*Morone saxatilis*	Striped bass	O
Chordata	Actinopterygii	Perciformes	Moronidae	*Morone americana*	White perch	O
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus mykiss*	Rainbow trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus kisutch*	Coho salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus nerka*	Sockeye salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus tshawytscha*	Chinook salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus clarki*	Cutthroat trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salmo trutta*	Brown trout	S
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salmo salar*	Atlantic salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salvelinus fontinalis*	Brook trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Thymallus arcticus*	Artic grayling	D
Chordata	Actinopterygii	Scorpaeniformes	Cottidae	*Cottus bairdi*	Mottled sculpin	D
Chordata	Amphibia	Anura	Pipidae	*Xenopus laevis*	African clawed frog	D

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TABLE 3.5.5: Deletion process for the South Platte River zinc site-specific database.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code
Bryozoa	Phylactolaemata	Plumatellida	Lophopodidae	*Lophopodella carteri*	Bryozoan	D
Bryozoa	Phylactolaemata	Plumatellida	Plumatellidae	*Plumatella emarginata*	Bryozoan	D
Bryozoa	Phylactolaemata	Plumatellida	Pectinatelidae	*Pectinatella magnifica*	Bryozoan	D
Platyhelminthes	Turbellaria	Tricladida	Planariidae	*Girardia tigrina*	Flatworm	S
Annelida	Clitellata	Haplotaxida	Naididae	*Nais* sp.	Worm	G
Annelida	Clitellata	Haplotaxida	Tubificidae	*Tubifex tubifex*	Worm	G
Annelida	Clitellata	Haplotaxida	Tubificidae	*Limnodrilus hoffmeisteri*	Worm	S
Annelida	Clitellata	Lumbriculidae	Lumbriculidae	*Lumbriculus variegatus*	Worm	D
Annelida	Polychaeta	Aeolosomatida	Aeolosomatidae	*Aeolosoma headleyi*	Worm	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Anodonta imbecilis*	fw mussel	D
Mollusca	Bivalvia	Veneroida	Corbiculidae	*Corbicula fluminea*	Asiatic clam	S
Mollusca	Gastropoda	Basommatophora	Planorbidae	*Helisoma campanulatum*	Snail	F
Mollusca	Gastropoda	Basommatophora	Physidae	*Physa gyrina*	Snail	G
Mollusca	Gastropoda	Basommatophora	Physidae	*Physa heterostropha*	Snail	G
Mollusca	Gastropoda	Neotaenioglossa	Bithyniidae	*Amnicola* sp.	Snail	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Ceriodaphnia dubia*	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Ceriodaphnia reticulata*	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia magna*	Cladoceran	G*
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia pulex*	Cladoceran	G*
Arthropoda	Branchiopoda	Diplostraca	Moinidae	*Moina irrasa*	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Moinidae	*Moina macrocopa*	Cladoceran	D
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Crangonyx pseudogracilis*	Amphipod	D
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Echinogammarus tibaldii*	Amphipod	D
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus* sp.	Amphipod	G
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus italicus*	Amphipod	G
Arthropoda	Malacostraca	Amphipoda	Hyalellidae	*Hyalella azteca*	Amphipod	S
Arthropoda	Malacostraca	Isopoda	Asellidae	*Asellus aquaticus*	Isopod	G
Arthropoda	Malacostraca	Isopoda	Asellidae	*Caecidotea bicrenata*	Isopod	G
Arthropoda	Malacostraca	Isopoda	Asellidae	*Caecidotea communis*	Isopod	G
Arthropoda	Malacostraca	Isopoda	Asellidae	*Lirceus alabamae*	Isopod	D
Arthropoda	Maxillopoda	Cyclopida	Cyclopidae	*Tropocyclops prasinus*	Copepod	D
Arthropoda	Maxillopoda	Cyclopida	Cyclopidae	*Mesocyclops hyalinus*	Copepod	D
Arthropoda	Maxillopoda	Harpacticoida	Canthocamptidae	*Bryocamptus zschokkei*	Copepod	D
Arthropoda	Maxillopoda	Calanoide	Diatomidae	*Heliodiaptomus viduus*	Copepod	D
Arthropoda	Ostracoda	Podocopida	Cyprididae	*Stenocypris malcomsoni*	Ostracod	D
Arthropoda	Ostracoda	Podocopida	Cyprididae	*Cypris* sp.	Ostracod	D
Arthropoda	Insecta	Diptera	Chironomindae	*Chironomus* sp.	Midge	G
Arthropoda	Insecta	Diptera	Chironomindae	*Chironomus plumosus*	Midge	G
Arthropoda	Insecta	Ephemeroptera	Ephemerellidae	*Drunella grandis*	Mayfly	O
Arthropoda	Insecta	Hemiptera	Nepidae	*Ranatra elongata*	Water scorpion	O
Arthropoda	Insecta	Odonata	Coenagrionidae	*Argia* sp.	Damselfly	G
Arthropoda	Insecta	Odonata (*Zygoptera*)	--	sp.	Damselfly	O

TABLE 3.5.5: Continued.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code
Arthropoda	Insecta	Plecoptera	Perlodidae	*Isoperla* sp.	Stonefly	F
Arthropoda	Insecta	Trichoptera	--	sp.	Caddisfly	O
Arthropoda	Insecta	Trichoptera	Lepodostomatidae	*Lepidostoma* sp.	Caddisfly	O
Chordata	Actinopterygii	Anguilliformes	Anguillidae	*Anguilla rostrata*	American eel	D
Chordata	Actinopterygii	Cypiniformes	Catostomidae	*Catostomus latipinnis*	Flannelmouth sucker	G
Chordata	Actinopterygii	Cypiniformes	Catostomidae	*Catostomus commersonii*	White sucker	S
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Xyrauchen texanus*	Razorback sucker	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Agosia chrysogaster*	Longfin dace	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Carassius auratus*	Goldfish	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Cyprinus carpio*	Common carp	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Gila elegans*	Bonytail	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Notemigonus crysoleucus*	Golden shiner	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Pimephales promelas*	Fathead minnow	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Ptychocheilus lusius*	Colorado pikeminnow	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Ptychocheilus oregonensis*	Northern pikeminnow	F
Chordata	Actinopterygii	Cyprinodontiformes	Cyprinodontidae	*Jordanella floridae*	Flagfish	D
Chordata	Actinopterygii	Cyprinodontiformes	Fundulidae	*Fundulus diaphanus*	Banded killifish	G
Chordata	Actinopterygii	Cyprinodontiformes	Poecilidae	*Gambusia affinis*	Mosquitofish	S
Chordata	Actinopterygii	Cyprinodontiformes	Poecilidae	*Poecilia reticulata*	Guppy	D
Chordata	Actinopterygii	Cyprinodontiformes	Poecilidae	*Xiphophorus maculatus*	Southern platyfish	D
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Lepomis gibbosus*	Pumpkinseed	S
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Lepomis macrochirus*	Bluegill	S
Chordata	Actinopterygii	Perciformes	Cichlidae	*Tilapia mossambica*	Mozambique tilapia	O
Chordata	Actinopterygii	Perciformes	Moronidae	*Morone saxatilis*	Striped bass	O
Chordata	Actinopterygii	Perciformes	Moronidae	*Morone americana*	White perch	O
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus mykiss*	Rainbow trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus kisutch*	Coho salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus nerka*	Sockeye salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus tshawytscha*	Chinook salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus clarki*	Cutthroat trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salmo trutta*	Brown trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salmo salar*	Atlantic salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salvelinus fontinalis*	Brook trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Thymallus arcticus*	Artic grayling	D
Chordata	Actinopterygii	Scorpaeniformes	Cottidae	*Cottus bairdi*	Mottled sculpin	D
Chordata	Amphibia	Anura	Pipidae	*Xenopus laevis*	African clawed frog	D

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TABLE 3.5.6: Deletion process for the derivation of the southwest (SW) and high plains (HP) arid stream region zinc databases.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code SW	Code HP
Bryozoa	Phylactolaemata	Plumatellida	Lophopodidae	*Lophopodella carteri*	Bryozoan	P	D
Bryozoa	Phylactolaemata	Plumatellida	Plumatellidae	*Plumatella emarginata*	Bryozoan	P	D
Bryozoa	Phylactolaemata	Plumatellida	Pectinatelidae	*Pectinatella magnifica*	Bryozoan	P	D
Platyhelminthes	Turbellaria	Tricladida	Planariidae	*Girardia tigrina*	Flatworm	G	S
Annelida	Clitellata	Haplotaxida	Naididae	*Nais* sp.	Worm	G	S
Annelida	Clitellata	Haplotaxida	Tubificidae	*Tubifex tubifex*	Worm	F	S
Annelida	Clitellata	Haplotaxida	Tubificidae	*Limnodrilus hoffmeisteri*	Worm	G	S
Annelida	Clitellata	Lumbriculidae	Lumbriculidae	*Lumbriculus variegatus*	Worm	S	S
Annelida	Polychaeta	Aeolosomatida	Aeolosomatidae	*Aeolosoma headleyi*	Worm	G	D
Mollusca	Bivalvia	Unionoida	Unionidae	*Anodonta imbecilis*	fw mussel	D	D
Mollusca	Bivalvia	Veneroida	Corbiculidae	*Corbicula fluminea*	Asiatic clam	S	S
Mollusca	Gastropoda	Basommatophora	Planorbidae	*Helisoma campanulatum*	Snail	F	F
Mollusca	Gastropoda	Basommatophora	Physidae	*Physa gyrina*	Snail	G	G
Mollusca	Gastropoda	Basommatophora	Physidae	*Physa heterostropha*	Snail	G	G
Mollusca	Gastropoda	Neotaenioglossa	Bithyniidae	*Amnicola* sp.	Snail	D	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Ceriodaphnia dubia*	Cladoceran	G*	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Ceriodaphnia reticulata*	Cladoceran	G*	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia magna*	Cladoceran	G*	G*
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	*Daphnia pulex*	Cladoceran	G*	G*
Arthropoda	Branchiopoda	Diplostraca	Moinidae	*Moina irrasa*	Cladoceran	G*	D
Arthropoda	Branchiopoda	Diplostraca	Moinidae	*Moina macrocopa*	Cladoceran	G*	D
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Crangonyx pseudogracilis*	Amphipod	D	D
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Echinogammarus tibaldii*	Amphipod	D	D
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus* sp.	Amphipod	G	G
Arthropoda	Malacostraca	Amphipoda	Gammaridae	*Gammarus italicus*	Amphipod	G	G
Arthropoda	Malacostraca	Amphipoda	Hyalellidae	*Hyalella azteca*	Amphipod	S	S
Arthropoda	Malacostraca	Isopoda	Asellidae	*Asellus aquaticus*	Isopod	D	G
Arthropoda	Malacostraca	Isopoda	Asellidae	*Caecidotea bicrenata*	Isopod	G	G
Arthropoda	Malacostraca	Isopoda	Asellidae	*Caecidotea communis*	Isopod	G	S
Arthropoda	Malacostraca	Isopoda	Asellidae	*Lirceus alabamae*	Isopod	D	D
Arthropoda	Maxillopoda	Cyclopida	Cyclopidae	*Tropocyclops prasinus*	Copepod	D	D
Arthropoda	Maxillopoda	Cyclopida	Cyclopidae	*Mesocyclops hyalinus*	Copepod	D	D
Arthropoda	Maxillopoda	Harpacticoida	Canthocamptidae	*Bryocamptus zschokkei*	Copepod	D	D
Arthropoda	Maxillopoda	Calanoide	Diatomidae	*Heliodiaptomus viduus*	Copepod	D	D
Arthropoda	Ostracoda	Podocopida	Cyprididae	*Stenocypris malcomsoni*	Ostracod	D	D
Arthropoda	Ostracoda	Podocopida	Cyprididae	*Cypris* sp.	Ostracod	D	D
Arthropoda	Insecta	Diptera	Chironomindae	*Chironomus* sp.	Midge	G	G
Arthropoda	Insecta	Diptera	Chironomindae	*Chironomus plumosus*	Midge	G	G
Arthropoda	Insecta	Ephemeroptera	Ephemerellidae	*Drunella grandis*	Mayfly	O	F
Arthropoda	Insecta	Hemiptera	Nepidae	*Ranatra elongata*	Water scorpion	O	O
Arthropoda	Insecta	Odonata	Coenagrionidae	*Argia* sp.	Damselfly	O	G

TABLE 3.5.6: Continued.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code SW	Code HP
Arthropoda	Insecta	Odonata (*Zygoptera*)	--	sp.	Damselfly	O	O
Arthropoda	Insecta	Plecoptera	Perlodidae	*Isoperla* sp.	Stonefly	O	G
Arthropoda	Insecta	Trichoptera	--	sp.	Caddisfly	O	O
Arthropoda	Insecta	Trichoptera	Lepodostomatidae	*Lepidostoma* sp.	Caddisfly	O	O
Chordata	Actinopterygii	Anguilliformes	Anguillidae	*Anguilla rostrata*	American eel	D	D
Chordata	Actinopterygii	Cypiniformes	Catostomidae	*Catostomus latipinnis*	Flannelmouth sucker	S	G
Chordata	Actinopterygii	Cypiniformes	Catostomidae	*Catostomus commersonii*	White sucker	G	S
Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Xyrauchen texanus*	Razorback sucker	S	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Agosia chrysogaster*	Longfin dace	S	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Carassius auratus*	Goldfish	S	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Cyprinus carpio*	Common carp	S	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Gila elegans*	Bonytail	S	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Notemigonus crysoleucus*	Golden shiner	S	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Pimephales promelas*	Fathead minnow	S	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Ptychocheilus lusius*	Colorado pikeminnow	S	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Ptychocheilus oregonensis*	Northern pikeminnow	D	F
Chordata	Actinopterygii	Cyprinodontiformes	Cyprinodontidae	*Jordanella floridae*	Flagfish	F	D
Chordata	Actinopterygii	Cyprinodontiformes	Fundulidae	*Fundulus diaphanus*	Banded killifish	D	G
Chordata	Actinopterygii	Cyprinodontiformes	Poecilidae	*Gambusia affinis*	Mosquitofish	S	S
Chordata	Actinopterygii	Cyprinodontiformes	Poecilidae	*Poecilia reticulata*	Guppy	G	D
Chordata	Actinopterygii	Cyprinodontiformes	Poecilidae	*Xiphophorus maculatus*	Southern platyfish	G	D
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Lepomis gibbosus*	Pumpkinseed	G	S
Chordata	Actinopterygii	Perciformes	Centrarchidae	*Lepomis macrochirus*	Bluegill	S	S
Chordata	Actinopterygii	Perciformes	Cichlidae	*Tilapia mossambica*	Mozambique tilapia	G	O
Chordata	Actinopterygii	Perciformes	Moronidae	*Morone saxatilis*	Striped bass	G	O
Chordata	Actinopterygii	Perciformes	Moronidae	*Morone americana*	White perch	G	O
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus mykiss*	Rainbow trout	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus kisutch*	Coho salmon	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus nerka*	Sockeye salmon	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus tshawytscha*	Chinook salmon	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus clarki*	Cutthroat trout	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salmo trutta*	Brown trout	D	S
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salmo salar*	Atlantic salmon	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salvelinus fontinalis*	Brook trout	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Thymallus arcticus*	Artic grayling	D	D
Chordata	Actinopterygii	Scorpaeniformes	Cottidae	*Cottus bairdi*	Mottled sculpin	G	D
Chordata	Amphibia	Anura	Pipidae	*Xenopus laevis*	African clawed frog	D	D

TABLE 3.5.6: Continued.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code SW	Code HP

S = retained because this species occurs at the site
G = retained because there is a species in this genus that occurs at the site, but not in the national data set
F = retained because there is a genus in this Family that occurs at the site, but not in the national data set
O = retained because this Order occurs at the site, and is not represented by a lower taxon
C = retained because this Class occurs at the site, and is not represented by a lower taxon
P = retained because this Phylum occurs at the site, and is not represented by a lower taxon
D = deleted because this species does not satisfy any of the requirements for retaining species
* = formally retained, but not included in working database for reasons explained in text