

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

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C = retained because this Class occurs at the site, and is not represented by a lower taxon

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D = deleted because this species does not satisfy any of the requirements for retaining species

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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	TUC
Platyhelminthes	Turbellaria	Tricladida	Planariidae	<i>Girardia tigrina</i>	Flatworm	D	D
Annelida	Oligochaeta	Haplotaxida	Tubificidae	<i>Tubifex tubifex</i>	Worm	F	F
Mollusca	Gastropoda	Limnophila	Physidae	<i>Physa</i> sp.	Snail	G	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Ceriodaphnia dubia</i>	Cladoceran	F*	F*
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Daphnia magna</i>	Cladoceran	G*	G*
Arthropoda	Malacostraca	Isopoda	Asellidae	<i>Caecidotea aquaticus</i>	Isopod	R	R
Arthropoda	Malacostraca	Amphipoda	Gammaridae	<i>Crangonyx pseudogracilis</i>	Amphipod	R	R
Arthropoda	Malacostraca	Amphipoda	Gammaridae	<i>Gammarus pseudolimnaeus</i>	Amphipod	R	R
Arthropoda	Insecta	Plecoptera	Perlidae	<i>Acroneuria</i> sp.	Stonefly	D	O
Arthropoda	Insecta	Diptera	Chironomidae	<i>Tanytarsus dissimilis</i>	Midge	G	F
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus mykiss</i>	Rainbow trout	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus tshawytscha</i>	Chinook Salmon	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Salmo salar</i>	Atlantic salmon	D	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Hybognathus amarus</i>	Rio Grande silvery minnow	F	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Pimephales promelas</i>	Fathead minnow	F	D
Chordata	Actinopterygii	Perifomes	Centrarchidae	<i>Lepomis cyanellus</i>	Green sunfish	S	S
Chordata	Actinopterygii	Perifomes	Centrarchidae	<i>Micropterus dolomieu</i>	Smallmouth bass	D	D
Chordata	Actinopterygii	Perifomes	Percidae	<i>Perca flavescens</i>	Yellow perch	D	D
Chordata	Actinopterygii	Siluriformes	Ictaluridae	<i>Ictalurus punctatus</i>	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	Planariidae	<i>Girardia tigrina</i>	Flatworm	C
Annelida	Oligochaeta	Haplotaxida	Tubificidae	<i>Tubifex tubifex</i>	Worm	F
Mollusca	Gastropoda	Limnophila	Physidae	<i>Physa</i> sp.	Snail	G
Arthropoda	Branchiopoda	Diplostraca	Daphnidae	<i>Ceriodaphnia dubia</i>	Cladoceran	G*
Arthropoda	Branchiopoda	Diplostraca	Daphnidae	<i>Daphnia magna</i>	Cladoceran	F*
Arthropoda	Malacostraca	Isopoda	Asellidae	<i>Caecidotea aquaticus</i>	Isopod	D
Arthropoda	Malacostraca	Amphipoda	Gammaridae	<i>Crangonyx pseudogracilis</i>	Amphipod	O
Arthropoda	Malacostraca	Amphipoda	Gammaridae	<i>Gammarus pseudolimnaeus</i>	Amphipod	O
Arthropoda	Insecta	Plecoptera	Perlidae	<i>Acronuria</i> sp.	Stonefly	R
Arthropoda	Insecta	Diptera	Chironomidae	<i>Tanytarsus dissimilis</i>	Midge	F
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus mykiss</i>	Rainbow trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus tshawytscha</i>	Chinook Salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Salmo salar</i>	Atlantic salmon	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Hybognathus amarus</i>	Rio Grande silvery minnow	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Pimephales promelas</i>	Fathead minnow	S
Chordata	Actinopterygii	Perifomes	Centrarchidae	<i>Lepomis cyanellus</i>	Green sunfish	S
Chordata	Actinopterygii	Perifomes	Centrarchidae	<i>Micropterus dolomieu</i>	Smallmouth bass	G
Chordata	Actinopterygii	Perifomes	Percidae	<i>Perca flavescens</i>	Yellow perch	O
Chordata	Actinopterygii	Siluriformes	Ictaluridae	<i>Ictalurus punctatus</i>	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	Planariidae	<i>Girardia tigrina</i>	Flatworm	S
Annelida	Oligochaeta	Haplotaxida	Tubificidae	<i>Tubifex tubifex</i>	Worm	S
Mollusca	Gastropoda	Limnophila	Physidae	<i>Physa</i> sp.	Snail	G
Arthropoda	Branchiopoda	Diplostraca	Daphnidae	<i>Ceriodaphnia dubia</i>	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Daphnidae	<i>Daphnia magna</i>	Cladoceran	D
Arthropoda	Malacostraca	Isopoda	Asellidae	<i>Caecidotea aquaticus</i>	Isopod	G
Arthropoda	Malacostraca	Amphipoda	Gammaridae	<i>Crangonyx pseudogracilis</i>	Amphipod	F
Arthropoda	Malacostraca	Amphipoda	Gammaridae	<i>Gammarus pseudolimnaeus</i>	Amphipod	G
Arthropoda	Insecta	Plecoptera	Perlidae	<i>Acroneuria</i> sp.	Stonefly	O
Arthropoda	Insecta	Diptera	Chironomidae	<i>Tanytarsus dissimilis</i>	Midge	G
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus mykiss</i>	Rainbow trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus tshawytscha</i>	Chinook Salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Salmo salar</i>	Atlantic salmon	G
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Hybognathus amarus</i>	Rio Grande silvery minnow	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Pimephales promelas</i>	Fathead minnow	S
Chordata	Actinopterygii	Perifomes	Centrarchidae	<i>Lepomis cyanellus</i>	Green sunfish	S
Chordata	Actinopterygii	Perifomes	Centrarchidae	<i>Micropterus dolomieu</i>	Smallmouth bass	S
Chordata	Actinopterygii	Perifomes	Percidae	<i>Perca flavescens</i>	Yellow perch	F
Chordata	Actinopterygii	Siluriformes	Ictaluridae	<i>Ictalurus punctatus</i>	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	Planariidae	<i>Girardia tigrina</i>	Flatworm	S
Annelida	Oligochaeta	Haplotaxida	Tubificidae	<i>Tubifex tubifex</i>	Worm	G
Mollusca	Gastropoda	Limnophila	Physidae	<i>Physa</i> sp.	Snail	G
Arthropoda	Branchiopoda	Diplostraca	Daphnidae	<i>Ceriodaphnia dubia</i>	Cladoceran	F*
Arthropoda	Branchiopoda	Diplostraca	Daphnidae	<i>Daphnia magna</i>	Cladoceran	G*
Arthropoda	Malacostraca	Isopoda	Asellidae	<i>Caecidotea aquaticus</i>	Isopod	G
Arthropoda	Malacostraca	Amphipoda	Gammaridae	<i>Crangonyx pseudogracilis</i>	Amphipod	F
Arthropoda	Malacostraca	Amphipoda	Gammaridae	<i>Gammarus pseudolimnaeus</i>	Amphipod	G
Arthropoda	Insecta	Plecoptera	Perlidae	<i>Acroneuria</i> sp.	Stonefly	O
Arthropoda	Insecta	Diptera	Chironomidae	<i>Tanytarsus dissimilis</i>	Midge	G
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus mykiss</i>	Rainbow trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus tshawytscha</i>	Chinook Salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Salmo salar</i>	Atlantic salmon	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Hybognathus amarus</i>	Rio Grande silvery minnow	G
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Pimephales promelas</i>	Fathead minnow	S
Chordata	Actinopterygii	Perifomes	Centrarchidae	<i>Lepomis cyanellus</i>	Green sunfish	S
Chordata	Actinopterygii	Perifomes	Centrarchidae	<i>Micropterus dolomieu</i>	Smallmouth bass	S
Chordata	Actinopterygii	Perifomes	Percidae	<i>Perca flavescens</i>	Yellow perch	S
Chordata	Actinopterygii	Siluriformes	Ictaluridae	<i>Ictalurus punctatus</i>	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	HP
Platyhelminthes	Turbellaria	Tricladida	Planariidae	<i>Girardia tigrina</i>	Flatworm	G	S
Annelida	Oligochaeta	Haplotaxida	Tubificidae	<i>Tubifex tubifex</i>	Worm	F	S
Mollusca	Gastropoda	Limnophila	Physidae	<i>Physa</i> sp.	Snail	G	G
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Ceriodaphnia dubia</i>	Cladoceran	G*	F*
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Daphnia magna</i>	Cladoceran	G*	G*
Arthropoda	Malacostraca	Isopoda	Asellidae	<i>Caecidotea aquaticus</i>	Isopod	F	G
Arthropoda	Malacostraca	Amphipoda	Gammaridae	<i>Crangonyx pseudogracilis</i>	Amphipod	F	F
Arthropoda	Malacostraca	Amphipoda	Gammaridae	<i>Gammarus pseudolimnaeus</i>	Amphipod	G	G
Arthropoda	Insecta	Plecoptera	Perlidae	<i>Acroneuria</i> sp.	Stonefly	O	O
Arthropoda	Insecta	Diptera	Chironomidae	<i>Tanytarsus dissimilis</i>	Midge	G	G
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus mykiss</i>	Rainbow trout	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus tshawytscha</i>	Chinook Salmon	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Salmo salar</i>	Atlantic salmon	D	G
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Hybognathus amarus</i>	Rio Grande silvery minnow	F	G
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Pimephales promelas</i>	Fathead minnow	S	S
Chordata	Actinopterygii	Perifomes	Centrarchidae	<i>Lepomis cyanellus</i>	Green sunfish	S	S
Chordata	Actinopterygii	Perifomes	Centrarchidae	<i>Micropterus dolomieu</i>	Smallmouth bass	G	S
Chordata	Actinopterygii	Perifomes	Percidae	<i>Perca flavescens</i>	Yellow perch	O	S
Chordata	Actinopterygii	Siluriformes	Ictaluridae	<i>Ictalurus punctatus</i>	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	<i>Baetis rhodani</i>	Mayfly	G
Arthropoda	Insecta	Ephemeroptera	Baetidae	<i>Callibaetis skokianus</i>	Mayfly	G
Arthropoda	Insecta	Ephemeroptera	Baetidae	<i>Callibaetis</i> sp.	Mayfly	G
Arthropoda	Insecta	Ephemeroptera	Ephemerillidae	<i>Ephemerella grandis</i>	Mayfly	O
Arthropoda	Insecta	Odonata	Coenagrionidae	<i>Erythromma najas</i>	Damselfly	F
Arthropoda	Insecta	Odonata	Lestidae	<i>Lestes sponsa</i>	Dragonfly	O
Arthropoda	Insecta	Odonata	Libellulidae	<i>Sympetrum flaveolum</i>	Dragonfly	F
Arthropoda	Insecta	Plecoptera	Perlodidae	<i>Arcynopteryx parallela</i>	Stonefly	O
Arthropoda	Insecta	Coleoptera	Elmidae	<i>Stenelmis sexlineata</i>	Riffle beetle	F
Arthropoda	Insecta	Tricoptera	Limnephilidae	<i>Philartctus quaeris</i>	Caddisfly	O
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Ceriodaphnia acanthina</i>	Cladoceran	O
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Ceriodaphnia dubia</i>	Cladoceran	O
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Daphnia magna</i>	Cladoceran	O
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Daphnia pulicaria</i>	Cladoceran	O
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Simocephalus vetulus</i>	Cladoceran	O
Arthropoda	Malacostraca	Amphipoda	Cragonyctidae	<i>Crangonyx pseudogracillis</i>	Amphipod	D
Arthropoda	Malacostraca	Amphipoda	Cragonyctidae	<i>Crangonyx</i> sp.	Amphipod	D
Arthropoda	Malacostraca	Amphipoda	Gammaridae	<i>Gammarus pulex</i>	Amphipod	G
Arthropoda	Malacostraca	Amphipoda	Hyalellidae	<i>Hyalella azteca</i>	Amphipod	S
Arthropoda	Malacostraca	Decapoda	Cambaridae	<i>Orconectes immunis</i>	Calico crayfish	D
Arthropoda	Malacostraca	Decapoda	Cambaridae	<i>Orconectes naias</i>	Crayfish	D
Arthropoda	Malacostraca	Decapoda	Cambaridae	<i>Procambarus clarkii</i>	Red crayfish	S
Arthropoda	Malacostraca	Isopoda	Asellidae	<i>Asellus racovitzai</i>	Sowbug	F
Annelida	Oligochaeta	Haplotaxida	Tubificidae	<i>Tubifex tubifex</i>	Tube worm	F
Platyhelminthes	Turbellaria	Tricladida	Dendrocoelidae	<i>Dendrocoelum lacteum</i>	Flat worm	O
Mollusca	Bivalvia	Unionoida	Unionidae	<i>Actinonaias pectorosa</i>	Pheasantshell mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	<i>Fusconaia masoni</i>	Atlantic pigtoe mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	<i>Lampsilis cardium</i>	Plain pocketbook mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	<i>Lampsilis fasciola</i>	Wavy-rayed lampmussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	<i>Lampsilis siliquoidea</i>	Fatmucket mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	<i>Lasmigona subviridis</i>	Green floater mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	<i>Medionidus conradicus</i>	Cumberland moccasinshell mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	<i>Pyganodon grandis</i>	Giant floater mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	<i>Utterbackia imbecillis</i>	Paper pondshell mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	<i>Villosa iris</i>	Rainbow mussel	D
Mollusca	Bivalvia	Veneroida	Pisidiidae	<i>Musculium transversum</i>	Fingernail clam	F
Mollusca	Gastropoda	Basommatophora	Planorbidae	<i>Helisoma trivolvis</i>	Snail	F
Mollusca	Gastropoda	Basommatophora	Physidae	<i>Physa gyrina</i>	Snail	G
Chordata	Actinopterygii	Acipenseriformes	Acipenseridae	<i>Acipenser brevirostrum</i>	Shortnose sturgeon	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Campostoma anomalum</i>	Central stoneroller	F

TABLE 3.2.1: Continued.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Cyprinus carpio</i>	Common carp	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Hybognathus amarus</i>	Rio Grande silvery minnow	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Notemigonus chrysoleucas</i>	Golden shiner	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Cyprinella lutrensis</i>	Red shiner	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Notropis spilopterus</i>	Spotfin shiner	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Notropis whipplei</i>	Steelcolor shiner	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Pimephales promelas</i>	Fathead minnow	S
Chordata	Actinopterygii	Cypriniformes	Catostomidae	<i>Catostomus commersoni</i>	White sucker	G
Chordata	Actinopterygii	Cypriniformes	Catostomidae	<i>Catostomus platyrhynchus</i>	Mountain sucker	G
Chordata	Actinopterygii	Cypriniformes	Catostomidae	<i>Chasmistes brevirostris</i>	Shortnose sucker	D
Chordata	Actinopterygii	Cypriniformes	Catostomidae	<i>Deltistes luxatus</i>	Lost river sucker	D
Chordata	Actinopterygii	Siluriformes	Ictaluridae	<i>Ictalurus punctatus</i>	Channel catfish	S
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus aquabonita</i>	Golden trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus clarki</i>	Cutthroat trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus gorbuscha</i>	Pink salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus kisutch</i>	Coho salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus mykiss</i>	Rainbow trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus tshawytscha</i>	Chinook salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Prosopium williamsoni</i>	Mountain whitefish	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Salmo trutta</i>	Brown trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Salvelinus fontinalis</i>	Brook trout	D
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	<i>Gambusia affinis</i>	Mosquitofish	S
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	<i>Poecilia reticulata</i>	Guppy	G
Chordata	Actinopterygii	Cyprinodontiformes	Cyprinodontidae	<i>Cyprinodon</i> sp.	Pupfish	D
Chordata	Actinopterygii	Scorpaeniformes	Cottidae	<i>Cottus bairdi</i>	Mottled sculpin	G
Chordata	Actinopterygii	Perciformes	Moronidae	<i>Morone chrysops</i>	White bass	O
Chordata	Actinopterygii	Perciformes	Moronidae	<i>Morone americana</i>	White perch	O
Chordata	Actinopterygii	Perciformes	Centrarchidae	<i>Lepomis cyanellus</i>	Green sunfish	S
Chordata	Actinopterygii	Perciformes	Centrarchidae	<i>Lepomis gibbosus</i>	Pumpkinseed	D
Chordata	Actinopterygii	Perciformes	Centrarchidae	<i>Lepomis machrochirus</i>	Bluegill	S
Chordata	Actinopterygii	Perciformes	Centrarchidae	<i>Micropterus dolomieu</i>	Smallmouth bass	D
Chordata	Actinopterygii	Perciformes	Centrarchidae	<i>Micropterus salmoides</i>	Largemouth bass	S
Chordata	Actinopterygii	Perciformes	Percidae	<i>Etheostoma spectabile</i>	Orangethroat darter	O
Chordata	Actinopterygii	Perciformes	Percidae	<i>Sander vitreus</i>	Walleye	O
Chordata	Amphibia	Anura	Ranidae	<i>Rana pipiens</i>	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	TUC
Arthropoda	Insecta	Ephemeroptera	Baetidae	<i>Baetis rhodani</i>	Mayfly	G	F
Arthropoda	Insecta	Ephemeroptera	Baetidae	<i>Callibaetis skokianus</i>	Mayfly	G	F
Arthropoda	Insecta	Ephemeroptera	Baetidae	<i>Callibaetis</i> sp.	Mayfly	G	F
Arthropoda	Insecta	Ephemeroptera	Ephemerillidae	<i>Ephemerella grandis</i>	Mayfly	O	D
Arthropoda	Insecta	Odonata	Coenagrionidae	<i>Erythromma najas</i>	Damselfly	F	F
Arthropoda	Insecta	Odonata	Lestidae	<i>Lestes sponsa</i>	Dragonfly	O	D
Arthropoda	Insecta	Odonata	Libellulidae	<i>Sympetrum flaveolum</i>	Dragonfly	F	D
Arthropoda	Insecta	Plecoptera	Perlodidae	<i>Arcynopteryx parallela</i>	Stonefly	D	O
Arthropoda	Insecta	Coleoptera	Elmidae	<i>Stenelmis sexlineata</i>	Riffle beetle	F	F
Arthropoda	Insecta	Tricoptera	Limnephilidae	<i>Philarctus quaeris</i>	Caddisfly	O	O
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Ceriodaphnia acanthina</i>	Cladoceran	F	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Ceriodaphnia dubia</i>	Cladoceran	F	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Daphnia magna</i>	Cladoceran	G	G
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Daphnia pulicaria</i>	Cladoceran	G	G
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Simocephalus vetulus</i>	Cladoceran	F	D
Arthropoda	Malacostraca	Amphipoda	Cragonyctidae	<i>Cragonyx pseudogracillis</i>	Amphipod	R	R
Arthropoda	Malacostraca	Amphipoda	Cragonyctidae	<i>Cragonyx</i> sp.	Amphipod	R	R
Arthropoda	Malacostraca	Amphipoda	Gammaridae	<i>Gammarus pulex</i>	Amphipod	R	R
Arthropoda	Malacostraca	Amphipoda	Hyalellidae	<i>Hyalella azteca</i>	Amphipod	R	R
Arthropoda	Malacostraca	Decapoda	Cambaridae	<i>Orconectes immunis</i>	Calico crayfish	R	R
Arthropoda	Malacostraca	Decapoda	Cambaridae	<i>Orconectes nais</i>	Crayfish	R	R
Arthropoda	Malacostraca	Decapoda	Cambaridae	<i>Procambarus clarkii</i>	Red crayfish	R	R
Arthropoda	Malacostraca	Isopoda	Asellidae	<i>Asellus racovitzai</i>	Sowbug	R	R
Annelida	Oligochaeta	Haplotaxida	Tubificidae	<i>Tubifex tubifex</i>	Tube worm	F	F
Platyhelminthes	Turbellaria	Tricladida	Dendrocoelidae	<i>Dendrocoelom lacteum</i>	Flat worm	D	D
Mollusca	Bivalvia	Unionoida	Unionidae	<i>Actinonaias pectorosa</i>	Pheasantshell mussel	D	D
Mollusca	Bivalvia	Unionoida	Unionidae	<i>Fusconaia masoni</i>	Atlantic pigtoe mussel	D	D
Mollusca	Bivalvia	Unionoida	Unionidae	<i>Lampsilis cardium</i>	Plain pocketbook mussel	D	D
Mollusca	Bivalvia	Unionoida	Unionidae	<i>Lampsilis fasciola</i>	Wavy-rayed lampmussel	D	D
Mollusca	Bivalvia	Unionoida	Unionidae	<i>Lampsilis siliquoidea</i>	Fatmucket mussel	D	D
Mollusca	Bivalvia	Unionoida	Unionidae	<i>Lasmigona subviridis</i>	Green floater mussel	D	D
Mollusca	Bivalvia	Unionoida	Unionidae	<i>Medionidus conradicus</i>	Cumberland moccasinshell mussel	D	D
Mollusca	Bivalvia	Unionoida	Unionidae	<i>Pyganodon grandis</i>	Giant floater mussel	D	D
Mollusca	Bivalvia	Unionoida	Unionidae	<i>Utterbackia imbecellis</i>	Paper pondshell mussel	D	D
Mollusca	Bivalvia	Unionoida	Unionidae	<i>Villosa iris</i>	Rainbow mussel	D	D
Mollusca	Bivalvia	Veneroida	Pisidiidae	<i>Musculium transversum</i>	Fingernail clam	D	D
Mollusca	Gastropoda	Basommatophora	Planorbidae	<i>Helisoma trivolvis</i>	Snail	O	D
Mollusca	Gastropoda	Basommatophora	Physidae	<i>Physa gyrina</i>	Snail	G	D
Chordata	Actinopterygii	Acipenseriformes	Acipenseridae	<i>Acipenser brevirostrum</i>	Shortnose sturgeon	D	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Campostoma anomalum</i>	Central stoneroller	F	D

TABLE 3.2.2: Continued.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code	
						NOG	TUC
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Cyprinus carpio</i>	Common carp	F	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Hybognathus amarus</i>	Rio Grande silvery minnow	F	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Notemigonus chrysoleucas</i>	Golden shiner	F	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Cyprinella lutrensis</i>	Red shiner	F	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Notropis spilopterus</i>	Spotfin shiner	F	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Notropis whipplei</i>	Steelcolor shiner	F	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Pimephales promelas</i>	Fathead minnow	F	D
Chordata	Actinopterygii	Cypriniformes	Catostomidae	<i>Catostomus commersoni</i>	White sucker	G	D
Chordata	Actinopterygii	Cypriniformes	Catostomidae	<i>Catostomus platyrhynchus</i>	Mountain sucker	G	D
Chordata	Actinopterygii	Cypriniformes	Catostomidae	<i>Chasmistes brevirostris</i>	Shortnose sucker	D	D
Chordata	Actinopterygii	Cypriniformes	Catostomidae	<i>Deltistes luxatus</i>	Lost river sucker	D	D
Chordata	Actinopterygii	Siluriformes	Ictaluridae	<i>Ictalurus punctatus</i>	Channel catfish	D	F
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus aquabonita</i>	Golden trout	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus clarki</i>	Cutthroat trout	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus gorbuscha</i>	Pink salmon	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus kisutch</i>	Coho salmon	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus mykiss</i>	Rainbow trout	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus tshawytscha</i>	Chinook salmon	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Prosopium williamsoni</i>	Mountain whitefish	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Salmo trutta</i>	Brown trout	D	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Salvelinus fontinalis</i>	Brook trout	D	D
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	<i>Gambusia affinis</i>	Mosquitofish	G	S
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	<i>Poecilia reticulata</i>	Guppy	F	D
Chordata	Actinopterygii	Cyprinodontiformes	Cyprinodontidae	<i>Cyprinodon</i> sp.	Pupfish	D	D
Chordata	Actinopterygii	Scorpaeniformes	Cottidae	<i>Cottus bairdi</i>	Mottled sculpin	D	D
Chordata	Actinopterygii	Perciformes	Moronidae	<i>Morone chrysops</i>	White bass	D	D
Chordata	Actinopterygii	Perciformes	Moronidae	<i>Morone americana</i>	White perch	D	D
Chordata	Actinopterygii	Perciformes	Centrarchidae	<i>Lepomis cyanellus</i>	Green sunfish	S	S
Chordata	Actinopterygii	Perciformes	Centrarchidae	<i>Lepomis gibbosus</i>	Pumpkinseed	D	D
Chordata	Actinopterygii	Perciformes	Centrarchidae	<i>Lepomis machrochirus</i>	Bluegill	D	D
Chordata	Actinopterygii	Perciformes	Centrarchidae	<i>Micropterus dolomieu</i>	Smallmouth bass	D	D
Chordata	Actinopterygii	Perciformes	Centrarchidae	<i>Micropterus salmoides</i>	Largemouth bass	D	D
Chordata	Actinopterygii	Perciformes	Percidae	<i>Etheostoma spectabile</i>	Orangethroat darter	D	D
Chordata	Actinopterygii	Perciformes	Percidae	<i>Sander vitreus</i>	Walleye	D	D
Chordata	Amphibia	Anura	Ranidae	<i>Rana pipiens</i>	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	<i>Baetis rhodani</i>	Mayfly	F
Arthropoda	Insecta	Ephemeroptera	Baetidae	<i>Callibaetis skokianus</i>	Mayfly	G
Arthropoda	Insecta	Ephemeroptera	Baetidae	<i>Callibaetis</i> sp.	Mayfly	G
Arthropoda	Insecta	Ephemeroptera	Ephemerillidae	<i>Ephemerella grandis</i>	Mayfly	D
Arthropoda	Insecta	Odonata	Coenagrionidae	<i>Erythromma najas</i>	Damselfly	F
Arthropoda	Insecta	Odonata	Lestidae	<i>Lestes sponsa</i>	Dragonfly	F
Arthropoda	Insecta	Odonata	Libellulidae	<i>Sympetrum flaveolum</i>	Dragonfly	D
Arthropoda	Insecta	Plecoptera	Perlodidae	<i>Arcynopteryx parallela</i>	Stonefly	D
Arthropoda	Insecta	Coleoptera	Elmidae	<i>Stenelmis sexlineata</i>	Riffle beetle	F
Arthropoda	Insecta	Tricoptera	Limnephilidae	<i>Philartctus quaeris</i>	Caddisfly	O
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Ceriodaphnia acanthina</i>	Cladoceran	G
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Ceriodaphnia dubia</i>	Cladoceran	G
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Daphnia magna</i>	Cladoceran	F
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Daphnia pulicaria</i>	Cladoceran	F
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Simocephalus vetulus</i>	Cladoceran	F
Arthropoda	Malacostraca	Amphipoda	Cragonyctidae	<i>Crangonyx pseudogracillis</i>	Amphipod	O
Arthropoda	Malacostraca	Amphipoda	Cragonyctidae	<i>Crangonyx</i> sp.	Amphipod	O
Arthropoda	Malacostraca	Amphipoda	Gammaridae	<i>Gammarus pulex</i>	Amphipod	O
Arthropoda	Malacostraca	Amphipoda	Hyalellidae	<i>Hyalella azteca</i>	Amphipod	O
Arthropoda	Malacostraca	Decapoda	Cambaridae	<i>Orconectes immunis</i>	Calico crayfish	D
Arthropoda	Malacostraca	Decapoda	Cambaridae	<i>Orconectes naias</i>	Crayfish	D
Arthropoda	Malacostraca	Decapoda	Cambaridae	<i>Procambarus clarkii</i>	Red crayfish	D
Arthropoda	Malacostraca	Isopoda	Asellidae	<i>Asellus racovitzai</i>	Sowbug	D
Annelida	Oligochaeta	Haplotaxida	Tubificidae	<i>Tubifex tubifex</i>	Tube worm	F
Platyhelminthes	Turbellaria	Tricladida	Dendrocoelidae	<i>Dendrocoelom lacteum</i>	Flat worm	C
Mollusca	Bivalvia	Unionoida	Unionidae	<i>Actinonaias pectorosa</i>	Pheasantshell mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	<i>Fusconaia masoni</i>	Atlantic pigtoe mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	<i>Lampsilis cardium</i>	Plain pocketbook mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	<i>Lampsilis fasciola</i>	Wavy-rayed lampmussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	<i>Lampsilis siliquoidea</i>	Fatmucket mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	<i>Lasmigona subviridis</i>	Green floater mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	<i>Medionidus conradicus</i>	Cumberland moccasinshell mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	<i>Pyganodon grandis</i>	Giant floater mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	<i>Utterbackia imbecellis</i>	Paper pondshell mussel	D
Mollusca	Bivalvia	Unionoida	Unionidae	<i>Villosa iris</i>	Rainbow mussel	D
Mollusca	Bivalvia	Veneroida	Pisidiidae	<i>Musculium transversum</i>	Fingernail clam	D
Mollusca	Gastropoda	Basommatophora	Planorbidae	<i>Helisoma trivolvis</i>	Snail	O
Mollusca	Gastropoda	Basommatophora	Physidae	<i>Physa gyrina</i>	Snail	G
Chordata	Actinopterygii	Acipenseriformes	Acipenseridae	<i>Acipenser brevirostrum</i>	Shortnose sturgeon	D

TABLE 3.2.3: Continued.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Campostoma anomalum</i>	Central stoneroller	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Cyprinus carpio</i>	Common carp	S
					Rio Grande silvery minnow	
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Hybognathus amarus</i>	minnow	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Notemigonus chrysoleucas</i>	Golden shiner	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Cyprinella lutrensis</i>	Red shiner	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Notropis spilopterus</i>	Spotfin shiner	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Notropis whipplei</i>	Steelcolor shiner	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Pimephales promelas</i>	Fathead minnow	S
Chordata	Actinopterygii	Cypriniformes	Catostomidae	<i>Catostomus commersoni</i>	White sucker	G
Chordata	Actinopterygii	Cypriniformes	Catostomidae	<i>Catostomus platyrhynchus</i>	Mountain sucker	G
Chordata	Actinopterygii	Cypriniformes	Catostomidae	<i>Chasmistes brevirostris</i>	Shortnose sucker	F
Chordata	Actinopterygii	Cypriniformes	Catostomidae	<i>Deltistes luxatus</i>	Lost river sucker	F
Chordata	Actinopterygii	Siluriformes	Ictaluridae	<i>Ictalurus punctatus</i>	Channel catfish	S
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus aquabonita</i>	Golden trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus clarki</i>	Cutthroat trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus gorbuscha</i>	Pink salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus kisutch</i>	Coho salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus mykiss</i>	Rainbow trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus tshawytscha</i>	Chinook salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Prosopium williamsoni</i>	Mountain whitefish	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Salmo trutta</i>	Brown trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Salvelinus fontinalis</i>	Brook trout	D
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	<i>Gambusia affinis</i>	Mosquitofish	S
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	<i>Poecilia reticulata</i>	Guppy	G
Chordata	Actinopterygii	Cyprinodontiformes	Cyprinodontidae	<i>Cyprinodon</i> sp.	Pupfish	G
Chordata	Actinopterygii	Scorpaeniformes	Cottidae	<i>Cottus bairdi</i>	Mottled sculpin	D
Chordata	Actinopterygii	Perciformes	Moronidae	<i>Morone chrysops</i>	White bass	G
Chordata	Actinopterygii	Perciformes	Moronidae	<i>Morone americana</i>	White perch	G
Chordata	Actinopterygii	Perciformes	Centrarchidae	<i>Lepomis cyanellus</i>	Green sunfish	S
Chordata	Actinopterygii	Perciformes	Centrarchidae	<i>Lepomis gibbosus</i>	Pumpkinseed	G
Chordata	Actinopterygii	Perciformes	Centrarchidae	<i>Lepomis machrochirus</i>	Bluegill	S
Chordata	Actinopterygii	Perciformes	Centrarchidae	<i>Micropterus dolomieu</i>	Smallmouth bass	G
Chordata	Actinopterygii	Perciformes	Centrarchidae	<i>Micropterus salmoides</i>	Largemouth bass	S
Chordata	Actinopterygii	Perciformes	Percidae	<i>Etheostoma spectabile</i>	Orangethroat darter	D
Chordata	Actinopterygii	Perciformes	Percidae	<i>Sander vitreus</i>	Walleye	D
Chordata	Amphibia	Anura	Ranidae	<i>Rana pipiens</i>	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 3.2.4: Deletion process for Fountain Creek ammonia site-specific database.

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

TABLE 3.2.4: Continued.

Phylum	Class	Order	Family	Genus/Species	Common Name	Code
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Pimephales promelas</i>	Fathead minnow	S
Chordata	Actinopterygii	Cypriniformes	Catostomidae	<i>Catostomus commersoni</i>	White sucker	S
Chordata	Actinopterygii	Cypriniformes	Catostomidae	<i>Catostomus platyrhynchus</i>	Mountain sucker	G
Chordata	Actinopterygii	Cypriniformes	Catostomidae	<i>Chasmistes brevirostris</i>	Shortnose sucker	D
Chordata	Actinopterygii	Cypriniformes	Catostomidae	<i>Deltistes luxatus</i>	Lost river sucker	D
Chordata	Actinopterygii	Siluriformes	Ictaluridae	<i>Ictalurus punctatus</i>	Channel catfish	S
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus aquabonita</i>	Golden trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus clarki</i>	Cutthroat trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus gorbuscha</i>	Pink salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus kisutch</i>	Coho salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus mykiss</i>	Rainbow trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus tshawytscha</i>	Chinook salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Prosopium williamsoni</i>	Mountain whitefish	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Salmo trutta</i>	Brown trout	S
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Salvelinus fontinalis</i>	Brook trout	D
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	<i>Gambusia affinis</i>	Mosquitofish	O
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	<i>Poecilia reticulata</i>	Guppy	O
Chordata	Actinopterygii	Cyprinodontiformes	Cyprinodontidae	<i>Cyprinodon</i> sp.	Pupfish	O
Chordata	Actinopterygii	Scorpaeniformes	Cottidae	<i>Cottus bairdi</i>	Mottled sculpin	D
Chordata	Actinopterygii	Perciformes	Moronidae	<i>Morone chrysops</i>	White bass	D
Chordata	Actinopterygii	Perciformes	Moronidae	<i>Morone americana</i>	White perch	D
Chordata	Actinopterygii	Perciformes	Centrarchidae	<i>Lepomis cyanellus</i>	Green sunfish	S
Chordata	Actinopterygii	Perciformes	Centrarchidae	<i>Lepomis gibbosus</i>	Pumpkinseed	D
Chordata	Actinopterygii	Perciformes	Centrarchidae	<i>Lepomis machrochirus</i>	Bluegill	S
Chordata	Actinopterygii	Perciformes	Centrarchidae	<i>Micropterus dolomieu</i>	Smallmouth bass	S
Chordata	Actinopterygii	Perciformes	Centrarchidae	<i>Micropterus salmoides</i>	Largemouth bass	D
Chordata	Actinopterygii	Perciformes	Percidae	<i>Etheostoma spectabile</i>	Orangethroat darter	G
Chordata	Actinopterygii	Perciformes	Percidae	<i>Sander vitreus</i>	Walleye	D
Chordata	Amphibia	Anura	Ranidae	<i>Rana pipiens</i>	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 3.2.5: Deletion process for the South Platte River ammonia site-specific database.

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

TABLE 3.2.5: Continued.

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

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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

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

TABLE 3.2.6: Continued.

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

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

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

TABLE 3.3.1: Continued.

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

TABLE 3.3.1: Continued.

Phylum	Class	Order	Family	Genus/Species	Common name	Code
Chordata	Actinopterygii	Perciformes	Percidae	<i>Etheostoma nigrum</i>	Johnny darter	D
Chordata	Actinopterygii	Perciformes	Percidae	<i>Etheostoma lepidum</i>	Greenthroat darter	D
Chordata	Actinopterygii	Perciformes	Percidae	<i>Etheostoma spectabile</i>	Orangethroat darter	D
Chordata	Actinopterygii	Perciformes	Percidae	<i>Etheostoma caeruleum</i>	Rainbow darter	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Salmo salar</i>	Atlantic salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Salvelinus fontinalis</i>	Brook trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Salvelinus confluentus</i>	Bull trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Thymallus arcticus</i>	Arctic grayling	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus gorbuscha</i>	Pink salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus apache</i>	Apache trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus mykiss</i>	Rainbow trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus tshawytscha</i>	Chinook salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus clarki</i>	Cutthroat trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus nerka</i>	Sockeye salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus kisutch</i>	Coho salmon	D
Chordata	Actinopterygii	Siluriformes	Ictaluridae	<i>Ictalurus punctatus</i>	Channel catfish	S
Chordata	Actinopterygii	Siluriformes	Ictaluridae	<i>Ictalurus nebulosus</i>	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	TUC
Bryozoa	Phylactolaemata	Plumatellida	Lophopodidae	<i>Lophopodella carteri</i>	Bryozoan	D	D
Bryozoa	Phylactolaemata	Plumatellida	Plumatellidae	<i>Plumatella emarginata</i>	Bryozoan	D	D
Bryozoa	Phylactolaemata	Plumatellida	Pectinatellidae	<i>Pectinatella magnifica</i>	Bryozoan	D	D
Annelida	Clitellata	Haplotaxida	Naididae	<i>Nais</i> sp.	Worm	F	F
Annelida	Clitellata	Haplotaxida	Tubificidae	<i>Limnodrilus hoffmeisteri</i>	Worm	F	F
Annelida	Clitellata	Haplotaxida	Tubificidae	<i>Tubifex tubifex</i>	Worm	F	F
Annelida	Clitellata	Lumbriculida	Lumbriculidae	<i>Lumbriculus variegatus</i>	Worm	F	D
Mollusca	Bivalvia	Veneroida	Corbiculidae	<i>Corbicula manilensis</i>	Asiatic clam	D	D
Mollusca	Bivalvia	Unionoida	Unionoidae	<i>Lampsilis teres</i>	Yellow sandshell	D	D
Mollusca	Bivalvia	Unionoida	Unionoidae	<i>Lampsilis claidornensis</i>	Freshwater mussel	D	D
Mollusca	Bivalvia	Unionoida	Unionoidae	<i>Utterbackia imbecilis</i>	Freshwater mussel	D	D
Mollusca	Bivalvia	Unionoida	Unionoidae	<i>Villosa vibex</i>	Rainbow mussel	D	D
Mollusca	Bivalvia	Unionoida	Unionoidae	<i>Villosa villosa</i>	Freshwater mussel	D	D
Mollusca	Bivalvia	Unionoida	Unionoidae	<i>Actinonaias pectorosa</i>	Freshwater mussel	D	D
Mollusca	Gastropoda	Architaenioglossa	Viviparidae	<i>Campeloma decisum</i>	Snail	D	D
Mollusca	Gastropoda	Basommatophora	Planorbidae	<i>Gyraulus circumstriatus</i>	Snail	O	D
Mollusca	Gastropoda	Basommatophora	Physidae	<i>Physa heterostropha</i>	Snail	G	D
Mollusca	Gastropoda	Basommatophora	Physidae	<i>Physa intergra</i>	Snail	G	D
Mollusca	Gastropoda	Basommatophora	Physidae	<i>Physella gyrina</i>	Snail	D	D
Mollusca	Gastropoda	Neotaenioglossa	Hydrobiidae	<i>Lithoglyphus virens</i>	Snail	D	D
Mollusca	Gastropoda	Neotaenioglossa	Hydrobiidae	<i>Ammicola</i> sp.	Snail	D	D
Mollusca	Gastropoda	Neotaenioglossa	Pleuroceridae	<i>Juga plicifera</i>	Snail	D	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Simocephalus vetulus</i>	Cladoceran	D	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Scapholeberis</i> sp.	Cladoceran	D	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Daphnia galeata</i>	Cladoceran	G*	G*
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Daphnia magna</i>	Cladoceran	G*	G*
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Daphnia pulex</i>	Cladoceran	G*	G*
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Daphnia pulicaria</i>	Cladoceran	G*	G*
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Ceriodaphnia reticulata</i>	Cladoceran	D	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Ceriodaphnia dubia</i>	Cladoceran	D	D
Arthropoda	Branchiopoda	Diplostraca	Chydoridae	<i>Chydorus sphaericus</i>	Cladoceran	O*	O*
Arthropoda	Branchiopoda	Diplostraca	Bosminidae	<i>Bosmina longirostris</i>	Cladoceran	O*	G*
Arthropoda	Maxillopoda	Cyclopoida	Cyclopidae	<i>Tropocyclops prasinus</i>	Copepod	D	D
Arthropoda	Malacostraca	Decapoda	Cambaridae	<i>Orconectes rusticus</i>	Rusty crayfish	R	R
Arthropoda	Malacostraca	Decapoda	Cambaridae	<i>Procambarus clarkii</i>	Red crayfish	R	R
Arthropoda	Malacostraca	Amphipoda	Crangonyctidae	<i>Crangonyx pseudogracilis</i>	Amphipod	D	D
Arthropoda	Malacostraca	Amphipoda	Gammaridae	<i>Gammarus pseudolimnaeus</i>	Amphipod	R	R

TABLE 3.3.2: Continued.

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

TABLE 3.3.2: Continued.

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

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

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

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D = deleted because this species does not satisfy any of the requirements for retaining species

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

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G = retained because there is a species in this genus that occurs at the site, but not in the national data set

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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

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

TABLE 3.5.1: Continued

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

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

TABLE 3.5.2 : Continued.

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

TABLE 3.5.2 : Continued.

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

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

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	<i>Lophopodella carteri</i>	Bryozoan	D
Bryozoa	Phylactolaemata	Plumatellida	Plumatellidae	<i>Plumatella emarginata</i>	Bryozoan	D
Bryozoa	Phylactolaemata	Plumatellida	Pectinatellidae	<i>Pectinatella magnifica</i>	Bryozoan	D
Platyhelminthes	Turbellaria	Tricladida	Planariidae	<i>Girardia tigrina</i>	Flatworm	C
Annelida	Clitellata	Haplotaxida	Naididae	<i>Nais</i> sp.	Worm	F
Annelida	Clitellata	Haplotaxida	Tubificidae	<i>Tubifex tubifex</i>	Worm	F
Annelida	Clitellata	Haplotaxida	Tubificidae	<i>Limnodrilus hoffmeisteri</i>	Worm	F
Annelida	Clitellata	Lumbriculidae	Lumbriculidae	<i>Lumbriculus variegatus</i>	Worm	D
Annelida	Polychaeta	Aeolosomatida	Aeolosomatidae	<i>Aeolosoma headleyi</i>	Worm	D
Mollusca	Bivalvia	Unionoida	Unionidae	<i>Anodonta imbecilis</i>	fw mussel	D
Mollusca	Bivalvia	Veneroida	Corbiculidae	<i>Corbicula fluminea</i>	Asiatic clam	D
Mollusca	Gastropoda	Basommatophora	Planorbidae	<i>Helisoma campanulatum</i>	Snail	D
Mollusca	Gastropoda	Basommatophora	Physidae	<i>Physa gyrina</i>	Snail	G
Mollusca	Gastropoda	Basommatophora	Physidae	<i>Physa heterostropha</i>	Snail	G
Mollusca	Gastropoda	Neotaenioglossa	Bithyniidae	<i>Ammicola</i> sp.	Snail	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Ceriodaphnia dubia</i>	Cladoceran	G*
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Ceriodaphnia reticulata</i>	Cladoceran	G*
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Daphnia magna</i>	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Daphnia pulex</i>	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Moinidae	<i>Moina irrasa</i>	Cladoceran	G*
Arthropoda	Branchiopoda	Diplostraca	Moinidae	<i>Moina macrocopa</i>	Cladoceran	G*
Arthropoda	Malacostraca	Amphipoda	Gammaridae	<i>Crangonyx pseudogracilis</i>	Amphipod	O
Arthropoda	Malacostraca	Amphipoda	Gammaridae	<i>Echinogammarus tibaldii</i>	Amphipod	O
Arthropoda	Malacostraca	Amphipoda	Gammaridae	<i>Gammarus</i> sp.	Amphipod	O
Arthropoda	Malacostraca	Amphipoda	Gammaridae	<i>Gammarus italicus</i>	Amphipod	O
Arthropoda	Malacostraca	Amphipoda	Hyalellidae	<i>Hyalella azteca</i>	Amphipod	O
Arthropoda	Malacostraca	Isopoda	Asellidae	<i>Asellus aquaticus</i>	Isopod	D
Arthropoda	Malacostraca	Isopoda	Asellidae	<i>Caecidotea bicrenata</i>	Isopod	D
Arthropoda	Malacostraca	Isopoda	Asellidae	<i>Caecidotea communis</i>	Isopod	D
Arthropoda	Malacostraca	Isopoda	Asellidae	<i>Lirceus alabamae</i>	Isopod	D
Arthropoda	Maxillopoda	Cyclopida	Cyclopidae	<i>Tropocyclops prasinus</i>	Copepod	D
Arthropoda	Maxillopoda	Cyclopida	Cyclopidae	<i>Mesocyclops hyalinus</i>	Copepod	D
Arthropoda	Maxillopoda	Harpacticoida	Canthocamptidae	<i>Bryocamptus zschokkei</i>	Copepod	D
Arthropoda	Maxillopoda	Calanoide	Diatomidae	<i>Heliodiaptomus viduus</i>	Copepod	D
Arthropoda	Ostracoda	Podocopida	Cyprididae	<i>Stenocypris malcomsoni</i>	Ostracod	D
Arthropoda	Ostracoda	Podocopida	Cyprididae	<i>Cypris</i> sp.	Ostracod	D
Arthropoda	Insecta	Diptera	Chironomidae	<i>Chironomus</i> sp.	Midge	G
Arthropoda	Insecta	Diptera	Chironomidae	<i>Chironomus plumosus</i>	Midge	G
Arthropoda	Insecta	Ephemeroptera	Ephemerellidae	<i>Drunella grandis</i>	Mayfly	O
Arthropoda	Insecta	Hemiptera	Nepidae	<i>Ranatra elongata</i>	Water scorpion	O
Arthropoda	Insecta	Odonata	Coenagrionidae	<i>Argia</i> sp.	Damselfly	G
Arthropoda	Insecta	Odonata (<i>Zygoptera</i>)--		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	Lepidostomatidae	<i>Lepidostoma</i> sp.	Caddisfly	O
Chordata	Actinopterygii	Anguilliformes	Anguillidae	<i>Anguilla rostrata</i>	American eel	D
Chordata	Actinopterygii	Cypiniformes	Catostomidae	<i>Catostomus latipinnis</i>	Flannelmouth sucker	S
Chordata	Actinopterygii	Cypiniformes	Catostomidae	<i>Catostomus commersonii</i>	White sucker	G
Chordata	Actinopterygii	Cypriniformes	Catostomidae	<i>Xyrauchen texanus</i>	Razorback sucker	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Agosia chrysogaster</i>	Longfin dace	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Carassius auratus</i>	Goldfish	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Cyprinus carpio</i>	Common carp	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Gila elegans</i>	Bonytail	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Notemigonus crysoleucus</i>	Golden shiner	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Pimephales promelas</i>	Fathead minnow	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Ptychocheilus lusius</i>	Colorado pikeminnow	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Ptychocheilus oregonensis</i>	Northern pikeminnow	F
Chordata	Actinopterygii	Cyprinodontiformes	Cyprinodontidae	<i>Jordanella floridae</i>	Flagfish	F
Chordata	Actinopterygii	Cyprinodontiformes	Fundulidae	<i>Fundulus diaphanus</i>	Banded killifish	D
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	<i>Gambusia affinis</i>	Mosquitofish	S
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	<i>Poecilia reticulata</i>	Guppy	G
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	<i>Xiphophorus maculatus</i>	Southern platyfish	G
Chordata	Actinopterygii	Perciformes	Centrarchidae	<i>Lepomis gibbosus</i>	Pumpkinseed	G
Chordata	Actinopterygii	Perciformes	Centrarchidae	<i>Lepomis macrochirus</i>	Bluegill	S
Chordata	Actinopterygii	Perciformes	Cichlidae	<i>Tilapia mossambica</i>	Mozambique tilapia	G
Chordata	Actinopterygii	Perciformes	Moronidae	<i>Morone saxatilis</i>	Striped bass	G
Chordata	Actinopterygii	Perciformes	Moronidae	<i>Morone americana</i>	White perch	G
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus mykiss</i>	Rainbow trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus kisutch</i>	Coho salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus nerka</i>	Sockeye salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus tshawytscha</i>	Chinook salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus clarki</i>	Cutthroat trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Salmo trutta</i>	Brown trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Salmo salar</i>	Atlantic salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Salvelinus fontinalis</i>	Brook trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Thymallus arcticus</i>	Arctic grayling	D
Chordata	Actinopterygii	Scorpaeniformes	Cottidae	<i>Cottus bairdi</i>	Mottled sculpin	D
Chordata	Amphibia	Anura	Pipidae	<i>Xenopus laevis</i>	African clawed frog	D

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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	<i>Lophopodella carteri</i>	Bryozoan	D
Bryozoa	Phylactolaemata	Plumatellida	Plumatellidae	<i>Plumatella emarginata</i>	Bryozoan	D
Bryozoa	Phylactolaemata	Plumatellida	Pectinatellidae	<i>Pectinatella magnifica</i>	Bryozoan	D
Platyhelminthes	Turbellaria	Tricladida	Planariidae	<i>Girardia tigrina</i>	Flatworm	S
Annelida	Clitellata	Haplotaxida	Naididae	<i>Nais</i> sp.	Worm	S
Annelida	Clitellata	Haplotaxida	Tubificidae	<i>Tubifex tubifex</i>	Worm	S
Annelida	Clitellata	Haplotaxida	Tubificidae	<i>Limnodrilus hoffmeisteri</i>	Worm	S
Annelida	Clitellata	Lumbriculidae	Lumbriculidae	<i>Lumbriculus variegatus</i>	Worm	S
Annelida	Polychaeta	Aeolosomatida	Aeolosomatidae	<i>Aeolosoma headleyi</i>	Worm	D
Mollusca	Bivalvia	Unionoidea	Unionidae	<i>Anodonta imbecilis</i>	fw mussel	D
Mollusca	Bivalvia	Veneroidea	Corbiculidae	<i>Corbicula fluminea</i>	Asiatic clam	D
Mollusca	Gastropoda	Basommatophora	Planorbidae	<i>Helisoma campanulatum</i>	Snail	O
Mollusca	Gastropoda	Basommatophora	Physidae	<i>Physa gyrina</i>	Snail	G
Mollusca	Gastropoda	Basommatophora	Physidae	<i>Physa heterostropha</i>	Snail	G
Mollusca	Gastropoda	Neotaenioglossa	Bithyniidae	<i>Ammicola</i> sp.	Snail	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Ceriodaphnia dubia</i>	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Ceriodaphnia reticulata</i>	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Daphnia magna</i>	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Daphnia pulex</i>	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Moinidae	<i>Moina irrasa</i>	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Moinidae	<i>Moina macrocopa</i>	Cladoceran	D
Arthropoda	Malacostraca	Amphipoda	Gammaridae	<i>Crangonyx pseudogracilis</i>	Amphipod	D
Arthropoda	Malacostraca	Amphipoda	Gammaridae	<i>Echinogammarus tibaldii</i>	Amphipod	D
Arthropoda	Malacostraca	Amphipoda	Gammaridae	<i>Gammarus</i> sp.	Amphipod	G
Arthropoda	Malacostraca	Amphipoda	Gammaridae	<i>Gammarus italicus</i>	Amphipod	G
Arthropoda	Malacostraca	Amphipoda	Hyalellidae	<i>Hyalella azteca</i>	Amphipod	S
Arthropoda	Malacostraca	Isopoda	Asellidae	<i>Asellus aquaticus</i>	Isopod	G
Arthropoda	Malacostraca	Isopoda	Asellidae	<i>Caecidotea bicrenata</i>	Isopod	G
Arthropoda	Malacostraca	Isopoda	Asellidae	<i>Caecidotea communis</i>	Isopod	S
Arthropoda	Malacostraca	Isopoda	Asellidae	<i>Lirceus alabamae</i>	Isopod	D
Arthropoda	Maxillopoda	Cyclopida	Cyclopidae	<i>Tropocyclops prasinus</i>	Copepod	D
Arthropoda	Maxillopoda	Cyclopida	Cyclopidae	<i>Mesocyclops hyalinus</i>	Copepod	D
Arthropoda	Maxillopoda	Harpacticoida	Canthocamptidae	<i>Bryocamptus zschokkei</i>	Copepod	D
Arthropoda	Maxillopoda	Calanoidea	Diatomidae	<i>Heliodiaptomus viduus</i>	Copepod	D
Arthropoda	Ostracoda	Podocopida	Cyprididae	<i>Stenocypris malcomsoni</i>	Ostracod	D
Arthropoda	Ostracoda	Podocopida	Cyprididae	<i>Cypris</i> sp.	Ostracod	D
Arthropoda	Insecta	Diptera	Chironomidae	<i>Chironomus</i> sp.	Midge	G
Arthropoda	Insecta	Diptera	Chironomidae	<i>Chironomus plumosus</i>	Midge	G
Arthropoda	Insecta	Ephemeroptera	Ephemerellidae	<i>Drunella grandis</i>	Mayfly	F
Arthropoda	Insecta	Hemiptera	Nepidae	<i>Ranatra elongata</i>	Water scorpion	O
Arthropoda	Insecta	Odonata	Coenagrionidae	<i>Argia</i> 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	<i>Isoperla</i> sp.	Stonefly	G
Arthropoda	Insecta	Trichoptera	--	sp.	Caddisfly	O
Arthropoda	Insecta	Trichoptera	Lepodostomatidae	<i>Lepidostoma</i> sp.	Caddisfly	O
Chordata	Actinopterygii	Anguilliformes	Anguillidae	<i>Anguilla rostrata</i>	American eel	D
Chordata	Actinopterygii	Cypiniformes	Catostomidae	<i>Catostomus latipinnis</i>	Flannelmouth sucker	G
Chordata	Actinopterygii	Cypiniformes	Catostomidae	<i>Catostomus commersonii</i>	White sucker	S
Chordata	Actinopterygii	Cypriniformes	Catostomidae	<i>Xyrauchen texanus</i>	Razorback sucker	D
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Agosia chrysogaster</i>	Longfin dace	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Carassius auratus</i>	Goldfish	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Cyprinus carpio</i>	Common carp	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Gila elegans</i>	Bonytail	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Notemigonus crysoleucus</i>	Golden shiner	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Pimephales promelas</i>	Fathead minnow	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Ptychocheilus lusius</i>	Colorado pikeminnow	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Ptychocheilus oregonensis</i>	Northern pikeminnow	F
Chordata	Actinopterygii	Cyprinodontiformes	Cyprinodontidae	<i>Jordanella floridae</i>	Flagfish	D
Chordata	Actinopterygii	Cyprinodontiformes	Fundulidae	<i>Fundulus diaphanus</i>	Banded killifish	G
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	<i>Gambusia affinis</i>	Mosquitofish	D
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	<i>Poecilia reticulata</i>	Guppy	D
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	<i>Xiphophorus maculatus</i>	Southern platyfish	D
Chordata	Actinopterygii	Perciformes	Centrarchidae	<i>Lepomis gibbosus</i>	Pumpkinseed	G
Chordata	Actinopterygii	Perciformes	Centrarchidae	<i>Lepomis macrochirus</i>	Bluegill	S
Chordata	Actinopterygii	Perciformes	Cichlidae	<i>Tilapia mossambica</i>	Mozambique tilapia	O
Chordata	Actinopterygii	Perciformes	Moronidae	<i>Morone saxatilis</i>	Striped bass	O
Chordata	Actinopterygii	Perciformes	Moronidae	<i>Morone americana</i>	White perch	O
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus mykiss</i>	Rainbow trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus kisutch</i>	Coho salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus nerka</i>	Sockeye salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus tshawytscha</i>	Chinook salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus clarki</i>	Cutthroat trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Salmo trutta</i>	Brown trout	S
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Salmo salar</i>	Atlantic salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Salvelinus fontinalis</i>	Brook trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Thymallus arcticus</i>	Arctic grayling	D
Chordata	Actinopterygii	Scorpaeniformes	Cottidae	<i>Cottus bairdi</i>	Mottled sculpin	D
Chordata	Amphibia	Anura	Pipidae	<i>Xenopus laevis</i>	African clawed frog	D

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G = retained because there is a species in this genus that occurs at the site, but not in the national data set

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

Phylum	Class	Order	Family	Genus/Species	Common Name	Code
Bryozoa	Phylactolaemata	Plumatellida	Lophopodidae	<i>Lophopodella carteri</i>	Bryozoan	D
Bryozoa	Phylactolaemata	Plumatellida	Plumatellidae	<i>Plumatella emarginata</i>	Bryozoan	D
Bryozoa	Phylactolaemata	Plumatellida	Pectinatellidae	<i>Pectinatella magnifica</i>	Bryozoan	D
Platyhelminthes	Turbellaria	Tricladida	Planariidae	<i>Girardia tigrina</i>	Flatworm	S
Annelida	Clitellata	Haplotaxida	Naididae	<i>Nais</i> sp.	Worm	G
Annelida	Clitellata	Haplotaxida	Tubificidae	<i>Tubifex tubifex</i>	Worm	G
Annelida	Clitellata	Haplotaxida	Tubificidae	<i>Limnodrilus hoffmeisteri</i>	Worm	S
Annelida	Clitellata	Lumbriculidae	Lumbriculidae	<i>Lumbriculus variegatus</i>	Worm	D
Annelida	Polychaeta	Aeolosomatida	Aeolosomatidae	<i>Aeolosoma headleyi</i>	Worm	D
Mollusca	Bivalvia	Unionoidea	Unionidae	<i>Anodonta imbecilis</i>	fw mussel	D
Mollusca	Bivalvia	Veneroidea	Corbiculidae	<i>Corbicula fluminea</i>	Asiatic clam	S
Mollusca	Gastropoda	Basommatophora	Planorbidae	<i>Helisoma campanulatum</i>	Snail	F
Mollusca	Gastropoda	Basommatophora	Physidae	<i>Physa gyrina</i>	Snail	G
Mollusca	Gastropoda	Basommatophora	Physidae	<i>Physa heterostropha</i>	Snail	G
Mollusca	Gastropoda	Neotaenioglossa	Bithyniidae	<i>Ammicola</i> sp.	Snail	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Ceriodaphnia dubia</i>	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Ceriodaphnia reticulata</i>	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Daphnia magna</i>	Cladoceran	G*
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Daphnia pulex</i>	Cladoceran	G*
Arthropoda	Branchiopoda	Diplostraca	Moinidae	<i>Moina irrasa</i>	Cladoceran	D
Arthropoda	Branchiopoda	Diplostraca	Moinidae	<i>Moina macrocopa</i>	Cladoceran	D
Arthropoda	Malacostraca	Amphipoda	Gammaridae	<i>Crangonyx pseudogracilis</i>	Amphipod	D
Arthropoda	Malacostraca	Amphipoda	Gammaridae	<i>Echinogammarus tibaldii</i>	Amphipod	D
Arthropoda	Malacostraca	Amphipoda	Gammaridae	<i>Gammarus</i> sp.	Amphipod	G
Arthropoda	Malacostraca	Amphipoda	Gammaridae	<i>Gammarus italicus</i>	Amphipod	G
Arthropoda	Malacostraca	Amphipoda	Hyalellidae	<i>Hyalella azteca</i>	Amphipod	S
Arthropoda	Malacostraca	Isopoda	Asellidae	<i>Asellus aquaticus</i>	Isopod	G
Arthropoda	Malacostraca	Isopoda	Asellidae	<i>Caecidotea bicrenata</i>	Isopod	G
Arthropoda	Malacostraca	Isopoda	Asellidae	<i>Caecidotea communis</i>	Isopod	G
Arthropoda	Malacostraca	Isopoda	Asellidae	<i>Lirceus alabamae</i>	Isopod	D
Arthropoda	Maxillopoda	Cyclopida	Cyclopidae	<i>Tropocyclops prasinus</i>	Copepod	D
Arthropoda	Maxillopoda	Cyclopida	Cyclopidae	<i>Mesocyclops hyalinus</i>	Copepod	D
Arthropoda	Maxillopoda	Harpacticoida	Canthocamptidae	<i>Bryocamptus zschokkei</i>	Copepod	D
Arthropoda	Maxillopoda	Calanoidea	Diatomidae	<i>Heliodiaptomus viduus</i>	Copepod	D
Arthropoda	Ostracoda	Podocopida	Cyprididae	<i>Stenocypris malcomsoni</i>	Ostracod	D
Arthropoda	Ostracoda	Podocopida	Cyprididae	<i>Cypris</i> sp.	Ostracod	D
Arthropoda	Insecta	Diptera	Chironomidae	<i>Chironomus</i> sp.	Midge	G
Arthropoda	Insecta	Diptera	Chironomidae	<i>Chironomus plumosus</i>	Midge	G
Arthropoda	Insecta	Ephemeroptera	Ephemerellidae	<i>Drunella grandis</i>	Mayfly	O
Arthropoda	Insecta	Hemiptera	Nepidae	<i>Ranatra elongata</i>	Water scorpion	O
Arthropoda	Insecta	Odonata	Coenagrionidae	<i>Argia</i> 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	<i>Isoperla</i> sp.	Stonefly	F
Arthropoda	Insecta	Trichoptera	--	sp.	Caddisfly	O
Arthropoda	Insecta	Trichoptera	Lepodostomatidae	<i>Lepidostoma</i> sp.	Caddisfly	O
Chordata	Actinopterygii	Anguilliformes	Anguillidae	<i>Anguilla rostrata</i>	American eel	D
Chordata	Actinopterygii	Cypiniformes	Catostomidae	<i>Catostomus latipinnis</i>	Flannelmouth sucker	G
Chordata	Actinopterygii	Cypiniformes	Catostomidae	<i>Catostomus commersonii</i>	White sucker	S
Chordata	Actinopterygii	Cypriniformes	Catostomidae	<i>Xyrauchen texanus</i>	Razorback sucker	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Agosia chrysogaster</i>	Longfin dace	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Carassius auratus</i>	Goldfish	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Cyprinus carpio</i>	Common carp	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Gila elegans</i>	Bonytail	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Notemigonus crysoleucus</i>	Golden shiner	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Pimephales promelas</i>	Fathead minnow	S
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Ptychocheilus lusius</i>	Colorado pikeminnow	F
Chordata	Actinopterygii	Cypriniformes	Cyprinidae	<i>Ptychocheilus oregonensis</i>	Northern pikeminnow	F
Chordata	Actinopterygii	Cyprinodontiformes	Cyprinodontidae	<i>Jordanella floridae</i>	Flagfish	D
Chordata	Actinopterygii	Cyprinodontiformes	Fundulidae	<i>Fundulus diaphanus</i>	Banded killifish	G
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	<i>Gambusia affinis</i>	Mosquitofish	S
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	<i>Poecilia reticulata</i>	Guppy	D
Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	<i>Xiphophorus maculatus</i>	Southern platyfish	D
Chordata	Actinopterygii	Perciformes	Centrarchidae	<i>Lepomis gibbosus</i>	Pumpkinseed	S
Chordata	Actinopterygii	Perciformes	Centrarchidae	<i>Lepomis macrochirus</i>	Bluegill	S
Chordata	Actinopterygii	Perciformes	Cichlidae	<i>Tilapia mossambica</i>	Mozambique tilapia	O
Chordata	Actinopterygii	Perciformes	Moronidae	<i>Morone saxatilis</i>	Striped bass	O
Chordata	Actinopterygii	Perciformes	Moronidae	<i>Morone americana</i>	White perch	O
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus mykiss</i>	Rainbow trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus kisutch</i>	Coho salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus nerka</i>	Sockeye salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus tshawytscha</i>	Chinook salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Oncorhynchus clarki</i>	Cutthroat trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Salmo trutta</i>	Brown trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Salmo salar</i>	Atlantic salmon	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Salvelinus fontinalis</i>	Brook trout	D
Chordata	Actinopterygii	Salmoniformes	Salmonidae	<i>Thymallus arcticus</i>	Arctic grayling	D
Chordata	Actinopterygii	Scorpaeniformes	Cottidae	<i>Cottus bairdi</i>	Mottled sculpin	D
Chordata	Amphibia	Anura	Pipidae	<i>Xenopus laevis</i>	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 3.5.6: 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	HP
Bryozoa	Phylactolaemata	Plumatellida	Lophopodidae	<i>Lophopodella carteri</i>	Bryozoan	P	D
Bryozoa	Phylactolaemata	Plumatellida	Plumatellidae	<i>Plumatella emarginata</i>	Bryozoan	P	D
Bryozoa	Phylactolaemata	Plumatellida	Pectinatelidae	<i>Pectinatella magnifica</i>	Bryozoan	P	D
Platyhelminthes	Turbellaria	Tricladida	Planariidae	<i>Girardia tigrina</i>	Flatworm	G	S
Annelida	Clitellata	Haplotaxida	Naididae	<i>Nais</i> sp.	Worm	G	S
Annelida	Clitellata	Haplotaxida	Tubificidae	<i>Tubifex tubifex</i>	Worm	F	S
Annelida	Clitellata	Haplotaxida	Tubificidae	<i>Limnodrilus hoffmeisteri</i>	Worm	G	S
Annelida	Clitellata	Lumbriculidae	Lumbriculidae	<i>Lumbriculus variegatus</i>	Worm	S	S
Annelida	Polychaeta	Aeolosomatida	Aeolosomatidae	<i>Aeolosoma headleyi</i>	Worm	G	D
Mollusca	Bivalvia	Unionoidea	Unionidae	<i>Anodonta imbecilis</i>	fw mussel	D	D
Mollusca	Bivalvia	Veneroidea	Corbiculidae	<i>Corbicula fluminea</i>	Asiatic clam	S	S
Mollusca	Gastropoda	Basommatophora	Planorbidae	<i>Helisoma campanulatum</i>	Snail	F	F
Mollusca	Gastropoda	Basommatophora	Physidae	<i>Physa gyrina</i>	Snail	G	G
Mollusca	Gastropoda	Basommatophora	Physidae	<i>Physa heterostropha</i>	Snail	G	G
Mollusca	Gastropoda	Neotaenioglossa	Bithyniidae	<i>Ammicola</i> sp.	Snail	D	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Ceriodaphnia dubia</i>	Cladoceran	G*	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Ceriodaphnia reticulata</i>	Cladoceran	G*	D
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Daphnia magna</i>	Cladoceran	G*	G*
Arthropoda	Branchiopoda	Diplostraca	Daphniidae	<i>Daphnia pulex</i>	Cladoceran	G*	G*
Arthropoda	Branchiopoda	Diplostraca	Moinidae	<i>Moina irrasa</i>	Cladoceran	G*	D
Arthropoda	Branchiopoda	Diplostraca	Moinidae	<i>Moina macrocopa</i>	Cladoceran	G*	D
Arthropoda	Malacostraca	Amphipoda	Gammaridae	<i>Crangonyx pseudogracilis</i>	Amphipod	D	D
Arthropoda	Malacostraca	Amphipoda	Gammaridae	<i>Echinogammarus tibaldii</i>	Amphipod	D	D
Arthropoda	Malacostraca	Amphipoda	Gammaridae	<i>Gammarus</i> sp.	Amphipod	G	G
Arthropoda	Malacostraca	Amphipoda	Gammaridae	<i>Gammarus italicus</i>	Amphipod	G	G
Arthropoda	Malacostraca	Amphipoda	Hyaellidae	<i>Hyaella azteca</i>	Amphipod	S	S
Arthropoda	Malacostraca	Isopoda	Asellidae	<i>Asellus aquaticus</i>	Isopod	D	G
Arthropoda	Malacostraca	Isopoda	Asellidae	<i>Caecidotea bicrenata</i>	Isopod	G	G
Arthropoda	Malacostraca	Isopoda	Asellidae	<i>Caecidotea communis</i>	Isopod	G	S
Arthropoda	Malacostraca	Isopoda	Asellidae	<i>Lirceus alabamiae</i>	Isopod	D	D
Arthropoda	Maxillopoda	Cyclopida	Cyclopidae	<i>Tropocyclops prasinus</i>	Copepod	D	D
Arthropoda	Maxillopoda	Cyclopida	Cyclopidae	<i>Mesocyclops hyalinus</i>	Copepod	D	D
Arthropoda	Maxillopoda	Harpacticoida	Canthocamptidae	<i>Bryocamptus zschokkei</i>	Copepod	D	D
Arthropoda	Maxillopoda	Calanoidea	Diatomidae	<i>Heliodiaptomus viduus</i>	Copepod	D	D
Arthropoda	Ostracoda	Podocopida	Cyprididae	<i>Stenocypris malcomsoni</i>	Ostracod	D	D
Arthropoda	Ostracoda	Podocopida	Cyprididae	<i>Cypris</i> sp.	Ostracod	D	D
Arthropoda	Insecta	Diptera	Chironomidae	<i>Chironomus</i> sp.	Midge	G	G
Arthropoda	Insecta	Diptera	Chironomidae	<i>Chironomus plumosus</i>	Midge	G	G
Arthropoda	Insecta	Ephemeroptera	Ephemerellidae	<i>Drunella grandis</i>	Mayfly	O	F
Arthropoda	Insecta	Hemiptera	Nepidae	<i>Ranatra elongata</i>	Water scorpion	O	O
Arthropoda	Insecta	Odonata	Coenagrionidae	<i>Argia</i> sp.	Damselfly	O	G

TABLE 3.5.6: Continued.

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

TABLE 3.5.6: Continued.

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

- S = retained because this species occurs at the site
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