INDEX

AERIAL CACHE SURVEYS 60
AGGRADATION 7
AGRICULTURE 33
AIRPHOTO INTERPRETATION 14
AIRPHOTOS 13
AIRPHOTOS SCALE LARGE 14
ALASKA RIPARIAN ECOSYSTEMS 5
ALTITUDINAL CLINE 37
AMPHIBIANS 39
AQUATIC COMMUNITIES 30
AQUATIC ECOSYSTEMS 31
AQUATIC HABITAT 47
AQUATIC INVERTEBRATES 36
ASPEN 15
ASPEN FOREST TYPE 15
AVIAN COMMUNITY 29
BEAVER 36, 45
BEAVER POND ECOSYSTEMS 25
BEAVER-TROUT RELATIONSHIPS 4
BEDLOAD 27
BEST MANAGEMENT PRACTICES 1
BIG SACATON BIOMASS 11
BIOFUEL PRODUCTION 17
BIRD DISTRIBUTION 22
BIRD POPULATIONS 20
BLM POLICY 2
BOTANICAL COMPOSITION 57
BREEDING BIRDS 37
BUFFER ZONE 65
BUFFERSTRIPS 40
CANOPY FACTORS 25
CATTLE GRAZING 46
CATTLE USE 49
CHANNEL STABILITY 27
CHAPARRAL 15
CLASSIFICATION 68
COASTAL ECOSYSTEMS 3
COTTONWOOD 20
COTTONWOOD FREMONT 21
COTTONWOOD NARROWLEAF 60
COTTONWOOD REGENERATION 21
COTTONWOOD RIO GRANDE 60
DEEPWATER HABITATS 11
DESERT WASHES 65
DESERTS 20
DEWATERING 16
DISTURBANCE 63
DOWNCUTTING 45
ECONOMICS 54
ENDANGERED SPECIES HABITAT 31
EPHEMERAL STREAM DEVELOPMENT 61
EVAPOTRANSPIRATION 18

FEDERAL LAND MANAGEMENT POLICY 10
FENCING 58
FISH 47
FISH ANADROMOUS 55
FISH HABITAT 42
FISH HABITAT MANAGEMENT UNIT 23
FISHERIES 35, 39, 51, 54
FISHERIES, SPORTFISHING ECONOMIC VALUE, RECREATION 51
FISHERY HABITAT STRUCTURE 55
FLOOD CONTROL STRUCTURE 61
FLOODING 7, 48
FLOODPLAIN 31
FLPMA 1
FOOTHILLS RIPARIAN ZONE 40
FOREST 3, 12, 23, 55
FOREST RIPARIAN AREAS 64
FORESTS 4
FORESTS STREAMSIDE 65
GARTER SNAKE 61
GAS 59
GRASSLAND 39
GRAZED RIPARIAN 48
GRAZING 11, 24, 35, 40, 48
GRAZING IMPACT 17, 24, 28, 41
GRAZING IMPACTS 10, 19, 33, 34, 35, 36
GRAZING MANAGEMENT 39
GRAZING STRATEGY 46
GRAZING SYSTEMS 8
GRAZING-FISHERY INTERACTIONS 47
GROUNDWATER 24, 25
GULLY EROSION 26
HABITAT IMPROVEMENT 14, 42, 56
HABITAT RECOVERY 65
HABITAT RESTORATION 3
HERPETOFAUNA 30, 66
HYDRIC SOILS 11
HYDROELECTRIC PROJECTS 26, 59
HYDROLOGY 27, 29, 54
HYDROPHYTES 11
INDUSTRIAL SITING 19
INSTREAM FLOW 26
INVENTORY 1, 13, 47
INVENTORY OF PUBLIC LANDS 38
LAND MANAGEMENT POLICY 1
LAND USE PLANS 1
LAW 54
LINEAR INTERVAL 10
LIVESTOCK EXCLUSION 14
LIVESTOCK GRAZING 14, 19, 38, 43, 49
LIZARDS 34
LOGGING 40
LOGGING IMPACT 9
LOGGING IMPACTS 23, 55
LOGGING STUDY 9

LOGS IN STREAMS 27
MAMMALS SMALL 12, 55
MANAGEMENT TECHNIQUES 10
MICROHABITATS 34
MICROMETEORLOGICAL 18
MINING 59
MODELLING 39
MONITORING 13
MULE DEER 37
MULTIPLE USE 23, 59
MULTIPLE-USE 25
MULTIVARIATE STATISTICAL METHODS 57
NATIVE TROUT 5
NATURAL ECOSYSTEMS 30
OBLIGATE RIPARIAN SPECIES 39
OIL 59
OIL AND GAS DEVELOPMENT 19
OVERFLOW CHANNELS 7
OVERTHRUST BELT 19
OWENS VALLEY 18
PALM OASIS 65
PATHOGENIC BACTERIA 33
PERTURBATIONS 12
PHOTOGRAPHY COLOR INFRARED 13
PHOTOGRAPHY INFRARED COLOR 13
PHREATOPHYTES 16, 25, 28
PHYSICAL CHARACTERISTICS 7
PLANNING 9
POLLUTION NONPOINT SOURCE 43
POTENTIAL VEGETATION 12
PREDICTIVE MODELS 2
PRODUCTION 8
PUBLIC USERS 10
RANGE MANAGEMENT 42
RECREATION 6, 27, 33, 35,41
RED WILLOW 36
REGULATED WATER FLOWS 21
REMOTE SENSING 13, 14
REPTILES 39
RESEARCH 48
RESEARCH NEEDS 50
RESTORATION 29
REVEGETATION 42
RIPARIAN 50
RIPARIAN BIRDS 22
RIPARIAN COMMUNITIES 41
RIPARIAN COMMUNITY 34, 39
RIPARIAN COMMUNITY STRUCTURE 17
RIPARIAN CONDITION 59
RIPARIAN COVER 66
RIPARIAN ECOLOGY 32
RIPARIAN EXCLOSURES 10
RIPARIAN FENCING 35
RIPARIAN GALLERY FORESTS 7

RIPARIAN HABITAT 10
RIPARIAN HABITATS 54
RIPARIAN IMPROVEMENT 51
RIPARIAN INVENTORY 39
RIPARIAN MANAGEMENT POLICY 38
RIPARIAN MEADOWS 24
RIPARIAN PASTURE 50
RIPARIAN REHABILITATION 64
RIPARIAN VEGETATION 36, 37, 40
RIPARIAN WOODLAND PLANT SPECIES 67
RIPARIAN ZONE 41
RIPARIAN ZONE FUNCTION 44
RIPARIN BIRDS 32
RIVERINE FLOODPLAINS 65
RODENT ABUNDANCE 39
RODENTS 39
ROOT DENSITY 25
SAGEBRUSH COMMUNITY 39
SALT CEDAR 29
SEASON OF USE 24
SEASONAL FEEDING PATTERNS IN RIPARIAN AREAS 40
SEED GERMINATION 20
SHEEP GRAZING 46
SHOREBIRD 44
SHRUB CONTROL 15
SHRUB-WILLOW RIPARIAN SYSTEMS 38
SOIL 7
SOIL MOISTURE 41
SOUTHWESTERN DESERT 29
SPORTFISHING ECONOMIC VALUE 51
STORM EVENTS 48
STREAM CHANNEL 29
STREAM CHANNEL EROSION 67
STREAM CLASSIFICATION 52
STREAM CORRIDOR EVALUATION 22
STREAM DISCHARGE 26
STREAM ECOSYSTEMS 36
STREAM EPHEMERAL 53
STREAM EXCLOSURE 19
STREAM EXCLOSURES 57
STREAM HABITAT 13, 49
STREAM IMPROVEMENT 23, 49, 51, 62
STREAM INCREASED SUMMER FLOW 56
STREAM INVENTORY 39
STREAM MANAGEMENT 45
STREAM ORGANISMS 40
STREAM PROTECTION 23
STREAM SALMONID 9
STREAM SEDIMENT 40
STREAM SURVEY 18
STREAM-CHANNEL MORPHOLOGY 53
STREAMBANK STABILITY 24
STREAMBANK STABILIZATION 53
STREAMBANKS 34

STREAMBANKS TITAL 67
STREAMS 47
STREAMSIDE MANAGEMENT 16, 35
STREAMSIDE MANAGEMENT UNITS 58
STREAMSIDE VEGETATION 23, 49
SYCAMORE, WRIGHT'S 6
TAMARIX 29
TIMBER 63
TIMBER OLD GROWTH 55
TRAMPLING 41
TRANSPIRATION 25
TREE PLANTING 67
TROUT HABITAT PREFERENCE 35
TROUT STREAM 28
TROUT STREAMS 66
UNFENCED RIPARIAN AREAS 58
UNGRAZED RIPARIAN 48
VEGETATION 24, 28, 30
VEGETATION ALTERATION 43
VEGETATION COMPOSITION 16
VISITOR SATISFACTION 27
WADING BIRDS 44
WARM DESERTS 32
WATER QUALITY 27, 33, 43
WATER YIELD IMPROVEMENT 28
WATERBIRD 44
WATERFOWL 4
WATERSHED MANAGEMENT 64
WET MEADOWS 65
WETLAND GRAZING 56
WETLAND HABITATS 25
WETLANDS 31, 59
WETLANDS CLASSIFICATION 11
WILDERNESS 27
WILDLIFE 2, 4, 10, 30, 35, 54
WILDLIFE HABITAT ENHANCEMENT 17
WILDLIFE HABITAT STRUCTURE 54
WILDLIFE LIVESTOCK USE 33
WILLOW 8
WILLOW FIELD GUIDE 8
WILLOW GOODING 60
WILLOW PLANTING 42
WOODY DEBRIS 9
XERORIPARIAN 32
XERORIPARIAN SYSTEMS 37
ASPEN FOREST TYPE 15
AVIAN COMMUNITY 29
BEAVER 36, 45
BEAVER POND ECOSYSTEMS 25
BEAVER-TROUT RELATIONSHIPS 4
BEDLOAD 27
BEST MANAGEMENT PRACTICES 1
BIG SACATON BIOMASS 11
BIOFUEL PRODUCTION 17

BIRD DISTRIBUTION 22
BIRD POPULATIONS 20
BLM POLICY 2
BOTANICAL COMPOSITION 57
BREEDING BIRDS 37
BUFFER ZONE 65
BUFFERSTRIPS 40
CANOPY FACTORS 25
CATTLE GRAZING 46
CATTLE USE 49
CHANNEL STABILITY 27
CHAPARRAL 15
CLASSIFICATION 68
COASTAL ECOSYSTEMS 3
COTTONWOOD 20
COTTONWOOD FREMONT 21
COTTONWOOD NARROWLEAF 60
COTTONWOOD REGENERATION 21
COTTONWOOD RIO GRANDE 60
DEEPWATER HABITATS 11
DESERT WASHES 65
DESERTS 20
DEWATERING 16
DISTURBANCE 63
DOWNCUTTING 45
ECONOMICS 54
ENDANGERED SPECIES HABITAT 31
EPHEMERAL STREAM DEVELOPMENT 61
EVAPOTRANSPIRATION 18
FEDERAL LAND MANAGEMENT POLICY 10
FENCING 58
FISH 47
FISH ANADROMOUS 55
FISH HABITAT 42
FISH HABITAT MANAGEMENT UNIT 23
FISHERIES 35, 39, 51, 54
FISHERIES, SPORTFISHING ECONOMIC VALUE, RECREATION 51
FISHERY HABITAT STRUCTURE 55
FLOOD CONTROL STRUCTURE 61
FLOODING 7, 48
FLOODPLAIN 31
FLPMA 1
FOOTHILLS RIPARIAN ZONE 40
FOREST 3, 12, 23, 55
FOREST RIPARIAN AREAS 64
FORESTS 4
FORESTS STREAMSIDE 65
GARTER SNAKE 61
GAS 59
GRASSLAND 39
GRAZED RIPARIAN 48
GRAZING 11, 24, 35, 40, 48
GRAZING IMPACT 17, 24, 28, 41
GRAZING IMPACTS 10, 19, 33, 34, 35, 36

GRAZING MANAGEMENT 39
GRAZING STRATEGY 46
GRAZING SYSTEMS 8
GRAZING-FISHERY INTERACTIONS 47
GROUNDWATER 24, 25
GULLY EROSION 26
HABITAT IMPROVEMENT 14, 42, 56
HABITAT RECOVERY 65
HABITAT RESTORATION 3
HERPETOFAUNA 30, 66
HYDRIC SOILS 11
HYDROELECTRIC PROJECTS 26, 59
HYDROLOGY 27, 29, 54
HYDROPHYTES 11
INDUSTRIAL SITING 19
INSTREAM FLOW 26
INVENTORY 1, 13, 47
INVENTORY OF PUBLIC LANDS 38
LAND MANAGEMENT POLICY 1
LAND USE PLANS 1
LAW 54
LINEAR INTERVAL 10
LIVESTOCK EXCLUSION 14
LIVESTOCK GRAZING 14, 19, 38, 43, 49
LIZARDS 34
LOGGING 40
LOGGING IMPACT 9
LOGGING IMPACTS 23, 55
LOGGING STUDY 9
LOGS IN STREAMS 27
MAMMALS SMALL 12, 55
MANAGEMENT TECHNIQUES 10
MICROHABITATS 34
MICROMETEORLOGICAL 18
MINING 59
MODELLING 39
MONITORING 13
MULE DEER 37
MULTIPLE USE 23, 59
MULTIPLE-USE 25
MULTIVARIATE STATISTICAL METHODS 57
NATIVE TROUT 5
NATURAL ECOSYSTEMS 30
OBLIGATE RIPARIAN SPECIES 39
OIL 59
OIL AND GAS DEVELOPMENT 19
OVERFLOW CHANNELS 7
OVERTHRUST BELT 19
OWENS VALLEY 18
PALM OASIS 65
PATHOGENIC BACTERIA 33
PERTURBATIONS 12
PHOTOGRAPHY COLOR INFRARED 13
PHOTOGRAPHY INFRARED COLOR 13

PHREATOPHYTES 16, 25, 28
PHYSICAL CHARACTERISTICS 7
PLANNING 9
POLLUTION NONPOINT SOURCE 43
POTENTIAL VEGETATION 12
PREDICTIVE MODELS 2
PRODUCTION 8
PUBLIC USERS 10
RANGE MANAGEMENT 42
RECREATION 6, 27, 33, 35,41
RED WILLOW 36
REGULATED WATER FLOWS 21
REMOTE SENSING 13, 14
REPTILES 39
RESEARCH 48
RESEARCH NEEDS 50
RESTORATION 29
REVEGETATION 42
RIPARIAN 50
RIPARIAN BIRDS 22
RIPARIAN COMMUNITIES 41
RIPARIAN COMMUNITY 34, 39
RIPARIAN COMMUNITY STRUCTURE 17
RIPARIAN CONDITION 59
RIPARIAN COVER 66
RIPARIAN ECOLOGY 32
RIPARIAN EXCLOSURES 10
RIPARIAN FENCING 35
RIPARIAN GALLERY FORESTS 7
RIPARIAN HABITAT 10
RIPARIAN HABITATS 54
RIPARIAN IMPROVEMENT 51
RIPARIAN INVENTORY 39
RIPARIAN MANAGEMENT POLICY 38
RIPARIAN MEADOWS 24
RIPARIAN PASTURE 50
RIPARIAN REHABILITATION 64
RIPARIAN VEGETATION 36, 37, 40
RIPARIAN WOODLAND PLANT SPECIES 67
RIPARIAN ZONE 41
RIPARIAN ZONE FUNCTION 44
RIPARIN BIRDS 32
RIVERINE FLOODPLAINS 65
RODENT ABUNDANCE 39
RODENTS 39
ROOT DENSITY 25
SAGEBRUSH COMMUNITY 39
SALT CEDAR 29
SEASON OF USE 24
SEASONAL FEEDING PATTERNS IN RIPARIAN AREAS 40
SEED GERMINATION 20
SHEEP GRAZING 46
SHOREBIRD 44
SHRUB CONTROL 15

SHRUB-WILLOW RIPARIAN SYSTEMS 38
SOIL 7
SOIL MOISTURE 41
SOUTHWESTERN DESERT 29
SPORTFISHING ECONOMIC VALUE 51
STORM EVENTS 48
STREAM CHANNEL 29
STREAM CHANNEL EROSION 67
STREAM CLASSIFICATION 52
STREAM CORRIDOR EVALUATION 22
STREAM DISCHARGE 26
STREAM ECOSYSTEMS 36
STREAM EPHEMERAL 53
STREAM EXCLOSURE 19
STREAM EXCLOSURES 57
STREAM HABITAT 13, 49
STREAM IMPROVEMENT 23, 49, 51, 62
STREAM INCREASED SUMMER FLOW 56
STREAM INVENTORY 39
STREAM MANAGEMENT 45
STREAM ORGANISMS 40
STREAM PROTECTION 23
STREAM SALMONID 9
STREAM SEDIMENT 40
STREAM SURVEY 18
STREAM-CHANNEL MORPHOLOGY 53
STREAMBANK STABILITY 24
STREAMBANK STABILIZATION 53
STREAMBANKS 34
STREAMBANKS TITAL 67
STREAMS 47
STREAMSIDE MANAGEMENT 16, 35
STREAMSIDE MANAGEMENT UNITS 58
STREAMSIDE VEGETATION 23, 49
SYCAMORE, WRIGHT'S 6
TAMARIX 29
TIMBER 63
TIMBER OLD GROWTH 55
TRAMPLING 41
TRANSPIRATION 25
TREE PLANTING 67
TROUT HABITAT PREFERENCE 35
TROUT STREAM 28
TROUT STREAMS 66
UNFENCED RIPARIAN AREAS 58
UNGRAZED RIPARIAN 48
VEGETATION . . . . . 24 , 28, 30
VEGETATION ALTERATION 43
VEGETATION COMPOSITION 16
VISITOR SATISFACTION 27
WADING BIRDS 44
WARM DESERTS 32
WATER QUALITY 27, 33, 43
WATER YIELD IMPROVEMENT 28

WATERBIRD 44
WATERFOWL 4
WATERSHED MANAGEMENT 64
WET MEADOWS 65
WETLAND GRAZING 56
WETLAND HABITATS 25
WETLANDS 31, 59
WETLANDS CLASSIFICATION 11
WILDERNESS 27
WILDLIFE 2, 4, 10, 30, 35, 54
WILDLIFE HABITAT ENHANCEMENT 17
WILDLIFE HABITAT STRUCTURE 54
WILDLIFE LIVESTOCK USE 33
WILLOW 8
WILLOW FIELD GUIDE 8
WILLOW GOODING 60
WILLOW PLANTING 42
WOODY DEBRIS 9
XERORIPARIAN 32
XERORIPARIAN SYSTEMS 37

*U.S. GOVERNMENT PRINTING OFFICE: 1990--773-003/12010

SHRUB-WILLOW RIPARIAN SYSTEMS 38
SOIL 7
SOIL MOISTURE 41
SOUTHWESTERN DESERT 29
SPORTFISHING ECONOMIC VALUE 51
STORM EVENTS 48
STREAM CHANNEL 29
STREAM CHANNEL EROSION 67
STREAM CLASSIFICATION 52
STREAM CORRIDOR EVALUATION 22
STREAM DISCHARGE 26
STREAM ECOSYSTEMS 36
STREAM EPHEMERAL 53
STREAM EXCLOSURE 19
STREAM EXCLOSURES 57
STREAM HABITAT 13, 49
STREAM IMPROVEMENT 23, 49, 51, 62
STREAM INCREASED SUMMER FLOW 56
STREAM INVENTORY 39
STREAM MANAGEMENT 45
STREAM ORGANISMS 40
STREAM PROTECTION 23
STREAM SALMONID 9
STREAM SEDIMENT 40
STREAM SURVEY 18
STREAM-CHANNEL MORPHOLOGY 53
STREAMBANK STABILITY 24
STREAMBANK STABILIZATION 53
STREAMBANKS 34
STREAMBANKS TITAL 67
STREAMS 47
STREAMSIDE MANAGEMENT 16, 35
STREAMSIDE MANAGEMENT UNITS 58
STREAMSIDE VEGETATION 23, 49
SYCAMORE, WRIGHT'S 6
TAMARIX 29
TIMBER 63
TIMBER OLD GROWTH 55
TRAMPLING 41
TRANSPIRATION 25
TREE PLANTING 67
TROUT HABITAT PREFERENCE 35
TROUT STREAM 28
TROUT STREAMS 66
UNFENCED RIPARIAN AREAS 58
UNGRAZED RIPARIAN 48
VEGETATION . . . . . 24 , 28, 30
VEGETATION ALTERATION 43
VEGETATION COMPOSITION 16
VISITOR SATISFACTION 27
WADING BIRDS 44
WARM DESERTS 32
WATER QUALITY 27, 33, 43
WATER YIELD IMPROVEMENT 28

WATERBIRD 44
WATERFOWL 4
WATERSHED MANAGEMENT 64
WET MEADOWS 65
WETLAND GRAZING 56
WETLAND HABITATS 25
WETLANDS 31, 59
WETLANDS CLASSIFICATION 11
WILDERNESS 27
WILDLIFE 2, 4, 10, 30, 35, 54
WILDLIFE HABITAT ENHANCEMENT 17
WILDLIFE HABITAT STRUCTURE 54
WILDLIFE LIVESTOCK USE 33
WILLOW 8
WILLOW FIELD GUIDE 8
WILLOW GOODING 60
WILLOW PLANTING 42
WOODY DEBRIS 9
XERORIPARIAN 32
XERORIPARIAN SYSTEMS 37

*U.S. GOVERNMENT PRINTING OFFICE: 1990--773-003/12010