

Subject Index

abatement costs 24
abatement subsidies 71
access 6
acid rain 1, 13
Aerosol 23
Afforestation 25, 27
agricultural chemicals 73
agricultural land 73
Agricultural management 43, 62
agricultural pollution 60, 18
Agricultural pollution---Government policy---United States 41
Agricultural pollution---United States 79
Agricultural Practices 10
agricultural production 4
agricultural runoff 60, 18
agriculture 57, 83
air pollution 5, 35
air quality 5
ambient permits system 11
animal wastes 18
Artificial Wetlands 16
Association 23
Asthma 23
atmosphere 35
Atmospheric Particles 23
Australia 25, 27
Banks 26
best management practices 60, 72, 73
biodiversity 2
Biological diversity 2
biological indicators 97
biological oxygen demand 74
Brackish water 3
Calibrations 26
Carbon 7, 10, 31, 35
Carbon cycle 25, 27
carbon sequestration 31, 35
case studies 11
Catchment hydrology 45
Charges 60
Chemical oxygen demand 32
Chesapeake Bay 47, 56
Children 23
Chile 17

China 32
clay fraction 35
Clean Water Act 47, 53, 54, 62, 85
Clean Water Action Plan 61
climatic change 13
Climatic Changes 16
coastal areas 57
Coastal Zone Resources and Management 3
college students 48
Colorado 51, 81
Comparability 19
comparisons 4, 105
compost 18
composting 18
Computable General Equilibrium 14
computer applications 27
Conservation 2
conservation tillage 35
Conservation, wildlife management and recreation 3
control 55, 71, 75, 81
Cost 20
Cost Analysis 10, 101
cost benefit analysis 6, 50, 17
cost control 9, 78
cost effectiveness analysis 9
cost functions 55
Costs 2, 4, 48, 60, 65, 24, 83, 28, 32, 38
crop residues 35
Cultivated Lands 10
Data Acquisition 10
Data Production Chain 19
decision making 3, 17, 28, 36, 39
Decomposition 25
Delaware 100
demand 17, 33
Design 16
detention basins 15
Development projects 26
Dillon Reservoir---Colorado 91
drainage 15, 75, 36
dynamic models 31
Economic analysis 2, 43
Economic Aspects 2, 26, 32
economic policy 54
Economics 1, 2, 46, 12, 60, 64, 69, 76, 77, 80, 83, 84, 90, 32, 92, 93, 94, 95, 96, 98, 102, 103

ecosystems 3
educational programs 87
Efficiency 5, 55, 31, 34, 38, 105
Effluents 69
Emergency 23
emission 1, 31, 35, 105
emissions 11
emissions permit system 11
Emissions Trading 7
Emissions trading OECD countries 63
Enforcement and Monitoring 29
enforcement uncertainty 65
Environment 39
Environmental action 2, 60, 18, 26, 32
environmental assessment 100
environmental degradation 42
Environmental economics 2, 26, 29, 32
Environmental fate 43, 98
environmental impact 12, 89
Environmental incentives 60
Environmental legislation 54, 26
environmental models 22
Environmental policies 76
Environmental Policy 2, 4, 46, 13, 14, 62, 64, 67, 71, 80, 85, 87, 88, 90, 93, 96, 102, 103, 104, 105
Environmental policy Economic aspects OECD countries 63
Environmental policy---Mathematical models 37
environmental pollution 71
Environmental programs 47, 50, 51, 53, 56, 59, 66, 69, 77, 94
environmental protection 2, 3, 60, 61, 63, 68, 85, 26, 31
Environmental restoration 2, 26
Equations 52, 55, 17, 30
erosion 55
erosion control 55
estuaries 42, 3, 11, 56
Eutrophication 82, 30
Evaluation process 2, 3, 26
experiments 48
externalities 5, 6, 48
Externality 28
farm inputs 17
farm management 36
feasibility 57
federal programs 52, 55, 61, 68, 75, 40
fertilizers 105
fishery management 5

flood control 15
Florida 15
Flow Discharge 16
forth estuary 11
Freshwater 26, 32
Freshwater pollution 39
Game Theory 29
General 39
General papers on resources 39
Global Pollution 14
Global Warming 10, 13, 31
Government policies 60
government programs 18
Government regulations 26
Great Lakes 59
Greenhouse Gases 14, 35
groundwater 4, 73
groundwater pollution 72, 73
Habitat 2
Habitat improvement (physical) 26
Habitats 2
Holston Basin 39
Holston River 39
hydraulic structures 15
hydrodynamics 15
Hydroelectric power plants 39
Hydrology 16, 39
Incentives 54, 60, 61, 71, 83, 29, 34
Industrial Emissions 19
industry 13
Infant Mortality 23
information 38
information services 38
interagency cooperation 3
international trade 67
investment 26, 40
Iowa 55
irrigation 12, 17
irrigation water 36
Lake Biwa 30
land banks 75
land development 40
land policy 75, 40
Land Use 16
Law and legislation 88
law enforcement 24

Laws and regulations 80, 85, 92
leaching 4, 72, 73, 75
Legislation 2
linear programming 9
literature reviews 73, 78
litter 33
losses from soil 55
low input agriculture 72
maize 35
Market development 77, 94
Marketable Permits 34
markets 48, 36
mathematical models 6, 55, 15, 16, 24, 26, 89, 105
mathematics 27
Michigan 45, 22
Model Studies 16, 26
Modeling 27
modelling 39
models 4, 17, 21, 84, 25, 27, 33
monitoring 5, 7, 19, 21, 22, 81, 38
Monterey pine 25
Nanpan River 32
Nature conservation 2, 12
nitrates 4
nitrogen 42
Non Point Source Pollution 20, 34
Nonpoint 20
nonpoint pollution 18, 34
nonpoint pollution sources 43, 60, 18
nonpoint source pollution 45, 50, 51, 57, 62, 66, 72, 73, 22, 76, 77, 80, 82, 85, 88, 28, 29, 92, 98
Nonpoint source pollution---United States 79
nonpoint sources 42, 65
North Carolina 42
Nutrient pollution of water---United States 58
nutrient sources 42
nutrients 42, 9, 18, 38
Ohio 97
opportunity costs 55
Optimization 26
Oregon 65
oxygen requirement 11
Particulate Air Pollution 23
Pennsylvania 50
Performance Evaluation 10
Permits 7, 48, 11, 18, 28, 31, 32

pesticide residues 72
pesticides 75
phosphorus 9, 21, 22, 82, 33, 38
Pinus radiata 25
Planning 94
Plantations 27
Point Non Point Effluent Trading 20
point source 74, 81
point source pollution 57
point sources 42, 57, 65
Policies 2, 26
policy 12, 83
Policy Making 2
pollutants 42, 9, 57, 65, 72, 73, 89, 33
pollution 1, 75
Pollution Abatement 20
pollution by agriculture 71, 74, 81
Pollution control 42, 46, 52, 11, 54, 57, 60, 61, 62, 65, 66, 68, 72, 73, 75, 24, 83, 87, 89, 28, 90, 31, 32, 93, 33, 95, 98, 102, 103, 38, 39, 105
Pollution legislation 60
Pollution load 77, 85, 88, 101
Pollution (Nonpoint sources) 60
Pollution prevention 59, 80
poultry 33
practice uncertainty 65
Prevention and control 32, 39
price uncertainty 65
prices 31
Pricing 60
probabilistic models 11
production costs 55
productivity 17
profitability 87
profits 6, 55
program evaluation 68, 87
Program planning 84
programs 71, 81
Protective measures and control 2, 60, 26
ratios 52, 24
Receiving Waters 32
reclamation 40
Reforestation 25
Regulation 65, 28
regulations 4, 100
Rehabilitation 26
Remote Sensing 10, 35

research programs 18
resource allocation 5
resource management 5
resource utilization 5, 17
resources management 2, 3
restoration 2, 40
risk 52, 39
risks 39
River 34
River basins 39
river water 74, 89
rivers 100
runoff 72, 73, 75, 105
Runoff (Agricultural) 60
rural communities 48
salinity 6
satellite imagery 35
Satellite Technology 10
Scotland 11
seasonal variation 89
sediment 75
Selenium 60
Sensitivity Analysis 26
Simulation 2, 7, 26, 105
simulation models 15, 74, 89, 95, 36, 101
social benefits 105
social costs 52
Soil 25, 27
soil conservation 55, 75
soil types 55
Soil water plant Relationships 16
Soils 16
Solver 30
Source Pollution Abatement 34
Sources and fate of pollution 18, 32, 39
Southern California 23
statistical analysis 35, 105
stochastic models 40
Stochastic Process 26
stochastic processes 52
Stream flow 16
structural design 15
subsidies 71
sulfur 1
support measures 61
surface water 73

suspended solids 9
sustainability 33
SWMM EXTRAN model 15
taxation 18
taxes 4
teaching methods 48
Tennessee 74
Texas 16, 89
Tillage 10, 35
Topographic features 16
Topography 16
total maximum daily load 21, 85
tradable permits 32
tradable pollution permits 11
trade 5, 6, 38
trading 24
Transaction Costs 34
Transferable Discharge Permits 71, 28, 30
transfers 100
trends 97
Trinity River 16
U.S. Environmental Protection Agency (EPA) 3
Uncertainty 7, 11, 65, 20, 24, 105
United Kingdom 69
United States 46, 52, 55, 57, 61, 16, 64, 68, 75, 78, 24, 83, 87, 93, 96, 36, 100, 39
United States, California 2, 60
United States Environmental Protection Agency---Auditing 99
USA 3
USDA 68, 75, 83
very large eddy simulation 30
Visits 23
VLES 30
Waste disposal 74, 32
Waste water 32, 39
waste water disposal 100
waste water treatment 74
Wastewater discharges 32
Wastewater Disposal 32
Wastewater treatment 82
water allocation 6, 12, 17, 36
Water authorities 39
Water budget 16
water composition and quality 81, 100
water flow 15
water management 100, 38
water policy 5, 17, 28, 36, 38

Subject Index

- water pollution** 43, 4, 46, 51, 11, 54, 57, 59, 65, 66, 68, 69, 71, 72, 73, 74, 75, 21, 22, 76, 78, 80, 81, 82, 83, 84, 85, 87, 88, 89, 93, 94, 95, 104, 38
- Water pollution control** 60, 18, 32, 39
- Water Pollution---Government policy---United States** 41, 99
- Water Pollution Sources** 32
- Water Pollution---United States---Prevention---Cost control** 99
- water quality** 42, 43, 46, 47, 50, 9, 51, 52, 53, 11, 56, 57, 59, 60, 61, 62, 64, 65, 66, 68, 20, 73, 21, 22, 77, 80, 24, 83, 84, 85, 87, 88, 89, 28, 90, 92, 93, 33, 94, 95, 96, 98, 36, 101, 102, 103, 104, 39
- Water Quality Control** 60
- Water quality management** 70
- Water quality management---Colorado---Dillon Reservoir** 91
- Water quality management---United States** 58, 79
- Water quality standards** 88, 98, 101, 104
- Water quality trading** 82
- water quality uncertainty** 65
- water reservoirs** 81
- water resources** 6, 39
- water supply** 6
- water use** 6
- water use efficiency** 17, 36
- Water & Wastewater Treatment** 32
- Watershed** 20
- watershed management** 42, 3, 9, 65, 70, 92, 33, 97, 104, 37, 38
- Watersheds** 45, 50, 53, 56, 57, 16, 76, 33, 97, 103, 104, 38, 39
- welfare economics** 5, 105
- Wetland conservation---Government policy** 37
- Wetland conservation---Government policy---United States** 8
- Wetland conservation---Mathematical models** 37
- Wetland mitigation banking---United States** 8
- wetlands** 2, 3, 12, 15, 16, 20, 26, 40
- Wetlands---Law and legislation---United States** 8
- wetlands mitigation banks** 26
- Wisconsin** 9, 21, 86
- Yunnan Province** 32