Civil and Environmental Engineering, MS

Graduate study in civil and environmental engineering prepares students for professional careers and further study. The principal concentration areas are environmental engineering and science; hydraulics and water resources; structures, mechanics, and materials; and transportation. Cross-cutting areas of study are in resilient infrastructure systems and sustainable water development.

Research and Study Areas

Infrastructure Engineering

The infrastructure engineering graduate program focuses on fundamental and applied aspects of engineering for the built environment to enhance the sustainability and resilience of infrastructure systems. The infrastructure engineering program offers opportunities for study and research on contemporary problems in infrastructure systems. There are three areas of specialization: resilient infrastructure systems; structures, mechanics, and materials; transportation engineering.

The resilient infrastructure system curriculum is focused on creating engineering professionals with a focus on building and restoring infrastructure to enhance its sustainability and resilience to hazards from natural or human activities. The cross-cutting curriculum combines depth in civil engineering technical areas with breadth in sustainable development.

The structures, mechanics, and materials curriculum is designed for students who wish to gain knowledge and skill in the mechanics of solids and structures that they can apply to civil infrastructure systems and other fields. The program concentrates on developing appropriate methodologies for tackling broad, complex issues related to civil infrastructure systems, and on educating engineers in the implementation and application of methodologies to actual engineering projects. Faculty members have expertise in structural engineering, design optimization, solid mechanics, and computational methods.

The transportation engineering curriculum is geared toward students interested in developing specialized knowledge and skills applicable to the diverse set of issues associated with transportation. Faculty members have expertise in traffic engineering, infrastructure management systems, pavement engineering, advanced construction materials, dynamic load and pavement simulation, optimal design, winter highway maintenance, real-time simulation, human factors, intelligent sensors, nondestructive testing, transportation planning, and travel demand modeling.

Water and the Environment

The water and the environment graduate program focuses on both fundamental and applied aspects of environmental systems and processes across a range of scales. The water and the environment program offers unique opportunities for students to actively participate in the research, analysis, and design aspects of real-world problems. There are three areas of specialization: environmental engineering and science; hydraulics, hydrology, and water resources; and sustainable water development.

The environmental engineering and science curriculum provides a comprehensive base of coursework and research in the areas of air and water quality management; environmental chemistry and microbiology; natural systems modeling; and processes for water supply, pollution control, and solid and hazardous waste management.

The hydraulics, hydrology, and water resources curriculum is associated with IIHR—Hydroscience and Engineering, a world-renowned research institute, where senior staff members of the institute are professors in the program. IIHR offers unique curriculum opportunities in laboratory and field-scale experimentation and in mathematical modeling with IIHR's high-speed computer facilities.

The sustainable water development curriculum is focused on training interdisciplinary professional engineers, researchers, educators, and those who are ready to meet the water development challenges of communities most in need. Community service and professional development experiences complement innovative research at the food, energy, and water nexus.

Across all specialization areas within water and the environment, interdisciplinary research and study are conducted with programs including the Center for Global and Regional Environmental Research, the Center for Health Effects of Environmental Contamination, the Center for Hydrologic Development, IIHR—Hydroscience and Engineering, the Iowa Flood Center, the Iowa Superfund Research Program, the Iowa Wastewater and Waste to Energy Program, the Hazardous Substances Research Center, and the Center for Biocatalysis and Bioprocessing; the departments of Chemical and Biochemical Engineering (College of Engineering), Microbiology and Immunology (Carver College of Medicine), and Occupational and Environmental Health (College of Public Health); the School of Earth, Environment, and Sustainability (College of Liberal Arts and Sciences); and the School of Planning and Public Affairs (Graduate College). Other areas of interdisciplinary focus include groundwater contamination, biotechnology, global climate change, and hazardous substances.

Learning Outcomes

Students will gain the ability to:

- apply principles of engineering and science for problem solving to meet societal needs;
- communicate effectively with a range of audiences;
- make ethical and professional judgments that consider the global, economic, environmental, and societal contexts of their decisions and proposed engineering solutions; and
- conduct research through the use of modern research tools and methodologies (thesis students only).

Requirements

The Master of Science in civil and environmental engineering requires a minimum of 30 s.h. of graduate credit with thesis and 31 s.h. without thesis. Students are required to complete one of the following subprograms for the degree: environmental engineering and science; hydraulics and water resources; resilient infrastructure systems; structures, mechanics, and materials; sustainable water development; or transportation. Students completing a thesis also complete a final exam; students not completing a thesis do not complete

a final exam. Students must maintain a UI cumulative grade-point average (GPA) of at least 2.75.

All full-time students are required to register for and participate in CEE:5099 Civil and Environmental Engineering Graduate Seminar in the section offered for their respective program of study.

Common Required Courses

Students in all subprograms are required to take ENGR:7270 Engineering Ethics (1 s.h.) in their first semester.

Students in all subprograms are also required to complete one of these technical communications courses taken on an A–F graded basis.

Course #	Title	Hours
One of these:		
CEE:5225/ GRAD:5225/ SDG:5225	Communicating Data Through Stories	3
RHET:7500	Science Communication in the Digital Age	3
RHET:7930	Writing in the Disciplines	3
RHET:7940	Public Speaking for Academics	3

Students completing a thesis are required to take 5 s.h. of CEE:5999 Research: Civil and Environmental Engineering MS Thesis for an S/U grade.

With the approval of their advisor, students develop a study plan that satisfies the requirements of their chosen program of study. When a course is cross-referenced, students are strongly encouraged to enroll under the prefix CEE whenever possible.

Subprograms

Environmental Engineering and Science

In addition to the common required courses, the environmental engineering and science subprogram requires the following coursework taken on an A–F graded basis.

Environmental Engineering and Science Core Courses

Course #	Title	Hours
Both of these:		
CEE:5380	Fluid Flows in Environmental Systems	3
CEE:5440	Foundations of Environmental Chemistry and Microbiology	3

Environmental Engineering and Science focus courses

Course #	Title	Hours
Three of these:		
CEE:4107/CBE:4410	Sustainable Systems	3
CEE:4157	Environmental Engineering Design	3
CEE:4159/ CBE:4459/IGPI:4159	Air Pollution Control Technology	3
CEE:5310/ IGPI:5311/URP:5310	Informatics for Sustainable Systems	3
CEE:5350	Watershed Hydrology and Ecosystem Processes	3
CEE:5460	Water Quality and Flow	3
CEE:6250	Environmental Biotechnology	3

Environmental Engineering and Science technical electives

Students completing a thesis take 6 s.h. of technical electives. Students not completing a thesis take 12 s.h. of technical electives. For all students, a minimum of 3 s.h. must be from courses with the prefix CEE.

See the following section titled CEE Technical Electives for course options.

Hydraulics and Water Resources

In addition to the common required courses, the hydraulics and water resources subprogram requires the following coursework taken on an A–F graded basis.

Hydraulics and Water Resources Focus Courses

Course #	Title	Hours
Five of these:		
CEE:4370	Open Channel Flow and Sediment Transport	3
CEE:4374	Water Resource Design	3
CEE:5310/ IGPI:5311/URP:5310	Informatics for Sustainable Systems	3
CEE:5350	Watershed Hydrology and Ecosystem Processes	3
CEE:5355	Advanced Hydrology	3
CEE:5380	Fluid Flows in Environmental Systems	3
CEE:5460	Water Quality and Flow	3

Hydraulics and Water Resources Technical Electives

Students completing a thesis take 6 s.h. of technical electives. Students not completing a thesis take 12 s.h. of technical electives. For all students, a minimum of 3 s.h. must be from courses with the prefix CEE.

See the following section titled CEE Technical Electives for course options.

Resilient Infrastructure Systems

In addition to the common required courses, the resilient infrastructure systems subprogram requires the following coursework taken on an A–F graded basis.

Resilient Infrastructure Systems Core Courses

Course #	Title	Hours
All of these:		
CEE:4107/CBE:4410	Sustainable Systems	3
CEE:4512/ME:4112	Engineering Design Optimization	3
CEE:5310/ IGPI:5311/URP:5310	Informatics for Sustainable Systems	3

Resilient Infrastructure Systems Sustainable Development Course

Course #	Title	Hours
One of these:		
SDG:4000/ SEES:4000	The United Nations Sustainable Development Goals: A Blueprint for a Sustainable Future	3
SDG:5100/ CEE:5151	Building Future Leaders in Sustainable Development	3

Resilient Infrastructure Systems Focus Courses

Course #	Title	Hours
Two of these:		
CEE:4135/ BME:4135/ME:4235	Health Monitoring of Structural and Mechanical Systems	3
CEE:4157	Environmental Engineering Design	3
CEE:4160	Introduction to Bridge Engineering	3
CEE:4162	Structural Systems for Buildings	3
CEE:4164	Design of Wood Structures	3
CEE:4176/URP:4262	Transportation Research Methods and Analysis	3
CEE:4370	Open Channel Flow and Sediment Transport	3
CEE:4374	Water Resource Design	3
CEE:4506	Design of Concrete Structures	3
CEE:4533/IGPI:4115	Finite Element I	3
CEE:4535	Design of Steel Structures	3
CEE:4539	Foundations of Structures	3
CEE:4560	Pavement Engineering	3
CEE:4730	Transportation Infrastructure Construction and Management	3
CEE:4762	Design of Transportation Systems	3
CEE:4763	Traffic Engineering	3
CEE:5236/ BME:5720	Optimization of Structural Systems	3
CEE:5350	Watershed Hydrology and Ecosystem Processes	3
CEE:5355	Advanced Hydrology	3
CEE:5380	Fluid Flows in Environmental Systems	3
CEE:5440	Foundations of Environmental Chemistry and Microbiology	3
CEE:5549/ME:5159	Fracture Mechanics	3
CEE:5678/URP:5678	Application Simulation to Transportation	3

Resilient Infrastructure Systems Technical Electives

Students completing a thesis take 3 s.h. of technical electives. Students not completing a thesis take 9 s.h. of technical electives. For all students, a minimum of 3 s.h. must be from courses with the prefix CEE.

See the following section titled CEE Technical Electives for course options.

Structures, Mechanics and Materials

In addition to the common required courses, the structures, mechanics, and materials subprogram requires the following coursework taken on an A–F graded basis.

Structures, Mechanics, and Materials Core Courses

Students completing a thesis take five of these core courses (15 s.h.). Students not completing a thesis take four of these core courses (12 s.h.).

Course #	Title	Hours
CEE:4512/ME:4112	Engineering Design Optimization	3
CEE:4533/IGPI:4115	Finite Element I	3
CEE:5179/ME:5179	Continuum Mechanics	3
CEE:5310/ IGPI:5311/URP:5310	Informatics for Sustainable Systems	3
CEE:5513/ CBE:5140/ME:5113	Mathematical Methods in Engineering	3
CEE:5540/ME:5150	Intermediate Mechanics of Deformable Bodies	3

Structures, Mechanics, and Materials Focus Courses

Students completing a thesis take two of these focus courses (6 s.h.). Students not completing a thesis take four of these focus courses (12 s.h.).

Students select courses numbered 4000 or above from the following list.

Course #	Title	Hours
Civil and environmental engineering		
Civil and environmental engineering (prefix CEE) excluding CEE:5998, CEE:5999, and CEE:7999		
Biomedical engineering		
Biomedical engineering (prefix BME) excluding BME:5998, BME:5999, and BME:7999		
Chemical and biomedical engineering		
Chemical and biomedical engineering (prefix CBE) excluding CBE:5000, CBE:5100, CBE:5390, CBE:5998, CBE:5999, CBE:7999		
College of Engineering		
College of Engineering (prefix ENGR) excluding ENGR:4000,ENGR:4001		
Electrical and computer engineering		
Electrical and computer engineering (prefix ECE) excluding ECE:5998, ECE:5999, ECE:7999		
Industrial systems engineering		
Industrial systems engineering (prefix ISE) excluding ISE:5000, ISE:5998, ISE:5999, ISE:7999		
Mechanical engineering		
Mechanical engineering (prefix ME) excluding ME:4098, ME:6191, ME:6198, ME:6199, ME:7299		

While they may count any of the preceding courses toward the requirement, students are strongly encouraged to select from the following courses.

Course #	Title	Hours
CEE:4135/ BME:4135/ME:4235	Health Monitoring of Structural and Mechanical Systems	3
CEE:4160	Introduction to Bridge Engineering	3
CEE:4162	Structural Systems for Buildings	3
CEE:4164	Design of Wood Structures	3
CEE:4506	Design of Concrete Structures	3
CEE:4511/ME:4111	Scientific Computing and Machine Learning	3
CEE:4515/ME:4110	Computer-Aided Engineering	3
CEE:4532/ME:4153	Fundamentals of Vibrations	3
CEE:4535	Design of Steel Structures	3
CEE:4539	Foundations of Structures	3
CEE:5236/ BME:5720	Optimization of Structural Systems	3
CEE:5549/ME:5159	Fracture Mechanics	3

Structures, Mechanics, and Materials Practica

Students not completing a thesis are required to take both CEE:5990 Structural Engineering Practicum A (2 s.h.) and CEE:5991 Structural Engineering Practicum B (1 s.h.). Students completing a thesis are not required to complete a practicum.

Sustainable Water Development

In addition to the common required courses, the sustainable water development subprogram requires the following coursework taken on an A–F graded basis.

Sustainable Water Development Core Courses

Course #	Title	Hours
All of these:		
CEE:5310/ IGPI:5311/URP:5310	Informatics for Sustainable Systems	3
CEE:5350	Watershed Hydrology and Ecosystem Processes	3
CEE:5380	Fluid Flows in Environmental Systems	3
CEE:5440	Foundations of Environmental Chemistry and Microbiology	3

Sustainable Water Development Focus Courses

Course #	Title	Hours
One of these:		
CEE:4107/CBE:4410	Sustainable Systems	3
SDG:4000/ SEES:4000	The United Nations Sustainable Development Goals: A Blueprint for a Sustainable Future	3
SDG:5100/ CEE:5151	Building Future Leaders in Sustainable Development	3

Sustainable Water Development Technical Electives

Students completing a thesis take 6 s.h. of technical electives with a minimum of 3 s.h. from courses with the prefix CEE. Students not completing a thesis take 12 s.h. of technical electives with a minimum of 9 s.h. from courses with the prefix CEE.

See the following section titled CEE Technical Electives for course options.

Transportation

In addition to the common required courses, the transportation subprogram requires the following coursework taken on an A–F graded basis.

Transportation Core Courses

Students completing a thesis take four of these courses (12 s.h.). Students not completing a thesis take five of these courses (15 s.h.).

Course #	Title	Hours
CEE:4560	Pavement Engineering	3
CEE:4730	Transportation Infrastructure Construction and Management	3
CEE:5310/ IGPI:5311/URP:5310	Informatics for Sustainable Systems	3
CEE:5678/URP:5678	Application Simulation to Transportation	3
STAT:4100/ IGPI:4100	Statistical Inference I	3
STAT:4200/ IGPI:4200	Statistical Methods and Computing	3

Transportation Focus Courses

Students completing a thesis take three of these courses (9 s.h.). Students not completing a thesis take four of these courses (12 s.h.).

Students select courses numbered 4000 or above from the following list.

Course #	Title	Hours
Civil and environmental engineering		
Civil and environmental engineering (prefix CEE) excluding CEE:5998, CEE:5999, and CEE:7999		
Biomedical engineering		
Biomedical engineering (prefix BME) excluding BME:5998, BME:5999, and BME:7999		
Chemical and biochemical engineering		
Chemical and biochemical engineering (prefix CBE) excluding CBE:5000, CBE:5100, CBE:5390, CBE:5998, CBE:5999, CBE:7999		
College of Engineering		
College of Engineering (prefix ENGR) excluding ENGR:4000, ENGR:4001		
Electrical and computer engineering		
Electrical and computer engineering (prefix ECE) excluding ECE:5998, ECE:5999, ECE:7999		
Industrial systems engineering		
Industrial systems engineering (prefix ISE) excluding ISE:5000, ISE:5998, ISE:5999, ISE:7999		
Mechanical engineering		

Mechanical engineering (prefix ME) excluding ME:4098, ME:6191, ME:6198, ME:6199, ME:7299	

Students may also select from CEE:3790 Resilient Infrastructure and Emergency Response, CS:4440 Web Mining, CS:4630 Mobile Computing, ECON:5800 Econometrics, and ECON:5810 Applied Econometrics.

While they may count any of the preceding courses toward the requirement, transportation students are strongly encouraged to select from the following courses.

Course #	Title	Hours
CEE:3790	Resilient Infrastructure and Emergency Response	3
CEE:4160	Introduction to Bridge Engineering	3
CEE:4176/URP:4262	Transportation Research Methods and Analysis	3
CEE:4762	Design of Transportation Systems	3
CEE:4763	Traffic Engineering	3
CEE:5549/ME:5159	Fracture Mechanics	3
CS:4400	Database Systems	3
CS:4630	Mobile Computing	3
ECE:5480/IGPI:5480	Digital Image Processing	3
ECON:5800	Econometrics	3
ECON:5810	Applied Econometrics	3
ISE:6480	Unmanned Aircraft Systems	3
ISE:6600/ BAIS:6600/ IGPI:6600	Linear Programming	3

CEE Technical Electives

Students in the environmental engineering and science, hydraulics and water resources, resilient infrastructure systems, and sustainable water development subprograms fulfill the technical electives requirement according to the minimum specifications previously listed for their chosen subprogram. All electives are chosen in conjunction with the student's advisor.

Students select technical electives from courses numbered 4000 or above from the following list.

Course #	Title	Hours
Civil and environmental engineering		
Civil and environmental engineering (prefix CEE) excluding CEE:5998, CEE:5999, and CEE:7999		
Biomedical engineering		
Biomedical engineering (prefix BME) excluding BME:5998, BME:5999, and BME:7999		
Chemical and biomedical engineering		
Chemical and biomedical engineering (prefix CBE) excluding CBE:5000, CBE:5100, CBE:5390, CBE:5998, CBE:5999, CBE:7999		
College of Engineering		
College of Engineering (prefix ENGR) excluding ENGR:4000, ENGR:4001		
Electrical and computer engineering		
Electrical and computer engineering (prefix ECE) excluding ECE:5998, ECE:5999, ECE:7999		
Industrial systems engineering		
Industrial systems engineering (prefix ISE) excluding ISE:5000, ISE:5998, ISE:5999, ISE:7999		
Mechanical engineering		
Mechanical engineering (prefix ME) excluding ME:4098, ME:6191, ME:6198, ME:6199, ME:7299		

Students in the environmental engineering and science, hydraulics and water resources, and sustainable water development subprograms may also select from courses numbered 4000 or above from the following areas outside of the College of Engineering: biology (prefix BIOL); biostatistics (prefix BIOS); business analytics and information systems (prefix BAIS); chemistry (prefix CHEM); computer science (prefix CS); earth, environment, and sustainability (prefix SEES); Graduate College (prefix GRAD); mathematics (prefix MATH); microbiology (prefix MICR); occupational and environmental health (prefix OEH); public affairs (prefix PBAF); statistics (prefix STAT); and urban and regional planning (prefix URP).

Students in the resilient infrastructure systems subprogram may select from courses numbered 4000 or above from the following areas outside of the College of Engineering: sustainable development goals (prefix SDG) and urban and regional planning (prefix URP). They may also complete SEES:3920/URP:3001 Planning Livable Cities, SEES:3940/ECON:3750/URP:3350 Transportation Economics, and SEES:4210 Sustainability as a System Science.

While they may count the preceding courses toward the requirement, students are strongly encouraged to select from the following courses to create depth of knowledge within their chosen subprogram.

Course #	Title	Hours
Environmental Engineering and Science		
CEE:4102	Groundwater	3
CEE:4119	Hydrology	3
CEE:4150/CBE:4420	Environmental Chemistry	3
CEE:4158/ OEH:4920	Solid and Hazardous Wastes	3
CEE:4159/ CBE:4459/IGPI:4159	Air Pollution Control Technology	3
CEE:4370	Open Channel Flow and Sediment Transport	3
CEE:4371	Water Resources Engineering	3
CEE:4374	Water Resource Design	3
CEE:5151/ SDG:5100	Building Future Leaders in Sustainable Development	3
CEE:5355	Advanced Hydrology	3
Hydraulics and Water Resources		
CEE:4107/CBE:4410	Sustainable Systems	3
CEE:4371	Water Resources Engineering	3
SDG:4000/ SEES:4000	The United Nations Sustainable Development Goals: A Blueprint for a Sustainable Future	3
SDG:5100/ CEE:5151	Building Future Leaders in Sustainable Development	3
Resilient Infrastructure Systems		
SEES:3920/ URP:3001	Planning Livable Cities	3
SEES:3940/ ECON:3750/ URP:3350	Transportation Economics	3

SEES:4210	Sustainability as a System Science	3
Sustainable Water Development		
CEE:4102	Groundwater	3
CEE:4119	Hydrology	3
CEE:4150/CBE:4420	Environmental Chemistry	3
CEE:4158/ OEH:4920	Solid and Hazardous Wastes	3
CEE:4159/ CBE:4459/IGPI:4159	Air Pollution Control Technology	3
CEE:4370	Open Channel Flow and Sediment Transport	3
CEE:4371	Water Resources Engineering	3
CEE:4374	Water Resource Design	3
CEE:5151/ SDG:5100	Building Future Leaders in Sustainable Development	3
CEE:5355	Advanced Hydrology	3

Combined Programs

MS (Sustainable Water Development Subprogram)/MS in Urban and Regional Planning

The Department of Civil and Environmental Engineering and the School of Planning and Public Affairs collaborate to offer a combined Master of Science in civil and environmental engineering with a sustainable water development subprogram/Master of Science in urban and regional planning.

Separate application to each degree program is required. Applicants must be admitted to both programs before they may be admitted to the combined degree program. For more information, see the MS in urban and regional planning (Graduate College) in the catalog.

Graduate Education

Graduate education prepares students with advanced knowledge and skills in specialized fields. At the University of Iowa, the Graduate College advocates for student-centered graduate education and supports equitable application of rules and policies across graduate programs.

Academics

University of Iowa graduate credentials are regulated by policies and requirements found in the Graduate College Manual of Rules and Regulations. This includes minimum grade-point average (GPA) requirements for academic standing and degree conferral. The Graduate College sets the minimum requirement. Individual graduate programs may establish higher GPA requirements.

Admissions

Graduate student applicants must meet admission requirements for both the Graduate College and the program to which they have applied. University of Iowa graduate admission requirements are published by the Graduate College and on the Graduate Admissions website.

Financial Support

Graduate students might be eligible for financial support. Several contingencies apply, including degree program and award type, satisfactory progress toward degree, satisfactory completion of all duties related to an appointment, and availability of funding. Graduate students should inquire directly with their program for more information about funding availability. The Graduate Student Employment Standards govern the employment relationship between the University of Iowa and all graduate teaching and research assistants in all matters except wages, which are covered by an existing collective bargaining agreement or the conditions of an applicable federal grant.

Admission

Applicants must meet the admission requirements of the Graduate College; see the Manual of Rules and Regulations on the Graduate College website.

Each of the program's curricula is flexible; students may be admitted from all disciplines of engineering as well as from the mathematical and basic sciences.

Applicants should have a cumulative undergraduate grade-point average (GPA) of at least 3.00. Those with GPAs slightly lower should contact the department.

Graduate Record Examination (GRE) General Test scores are not required.

Career Advancement

Current and projected demand for MS graduates is excellent. Graduates are placed in advanced technical positions in industry, consulting firms, or government, or they may continue their graduate study. On average, 93–98% of graduates are employed in their field of study or pursuing advanced education within seven months of graduation.

Engineering Career Services develops and promotes experiential education and professional opportunities for students in the College of Engineering. Professional staff coordinate the college's co-op and internship program, engage in employer outreach, and provide opportunities for students to network with employers, including engineering career fairs and other programming related to career development.

Engineering Career Services offers individual advising and class presentations on résumé and cover letter preparation, job and internship search strategies, interviewing skills, job offer evaluation, and much more. Engineering Career Services partners with the Pomerantz Career Center to facilitate on-campus interviewing, postgraduation outcome collection, and the university's online recruiting system, Handshake.

Academic Plans

Sample Plans of Study

Sample plans represent one way to complete a program of study. Actual course selection and sequence will vary and should be discussed with an academic advisor. For additional sample plans, see MyUI.

Civil and Environmental Engineering, MS

- Environmental Engineering Subprogram
- Environmental Science Subprogram
- Hydraulics Subprogram
- Structures, Mechanics and Materials Subprogram
- Sustainable Water Development Subprogram
- Transportation Subprogram
- Water Resources Subprogram

Environmental Engineering Subprogram

This sample plan is currently being reviewed and will be added at a later date.

Environmental Science Subprogram

This sample plan is currently being reviewed and will be added at a later date.

Hydraulics Subprogram

This sample plan is currently being reviewed and will be added at a later date.

Structures, Mechanics and Materials Subprogram

This sample plan is currently being reviewed and will be added at a later date.

Sustainable Water Development Subprogram

This sample plan is currently being reviewed and will be added at a later date.

Transportation Subprogram

This sample plan is currently being reviewed and will be added at a later date.

Water Resources Subprogram

This sample plan is currently being reviewed and will be added at a later date.