The purpose of the natural resources engineer occupation is to provide professional engineering services for Ohio Department of Natural Resources' programs & development & maintenance of its facilities, or in the Ohio Department of Agriculture, to provide professional engineering services for concentrated animal feeding facilities, or in the Ohio Environmental Protection Agency, to provide professional engineering services for programs relating to Storm Water National Pollutio

The series purpose is to provide professional engineering services for Ohio Department of Natural Resources' programs & development & maintenance of its facilities, or in the Ohio Department of Agriculture, to provide professional engineering services for concentrated animal feeding facilities, or in the Ohio Environmental Protection Agency, to provide professional engineering services for programs relating to Storm Water National Pollution Discharge Elimination System (NPDES).

At the lower three levels, employees work as first, second or third line supervisors or staff specialists in a particular component of an assigned program function (e.g., electrical or mechanical design, hazardous waste disposal, mining or coastal engineering; inspection & operation of permitting concentrated animal feeding facilities; storm water & NPDES).

At the highest level, employee works as the assistant chief engineer of ODNR in overall administration of the office, program development & management & advice on engineering matters related to department administration.
engineering & architectural methods in order to manage one or more programs including construction management, planning & design, environmental engineering, coastal engineering, facility maintenance support, mining & reclamation projects, canal hydraulics operation & dam safety & supervise lower-level natural resources engineers & architects assigned to section; or in Division of Soil and Water Resources, Water Resources Section, administers programs such as water resources technical assistance, hydro geologic mapping, water inventory, water planning & development programs to include strategic planning, goal setting, performance measurement, budgeting & supervises program managers; or in Division of Soil and Water Resources, Water Management Section, administers programs such as canal hydraulics, coastal engineering, dam safety, floodplain management to include strategic planning, goal setting, performance measurement, budget & supervises program managers, OR in Office of Coastal Management, administers program involving the planning, design, review and inspection of coastal structures.

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<th>CLASS TITLE</th>
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<th>PAY RANGE</th>
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<td>Natural Resources Engineer 6</td>
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CLASS CONCEPT
The administrative level class works under administrative direction & requires extensive knowledge of managerial principles & engineering & architectural methods in order to assist division chief or chief of engineering in administration of division or office of chief engineer, administer overall construction, design & maintenance programs, participate in development of statewide program policies, implement statewide engineering field operations & supervise lower-level natural resources engineers & architects & technical or administrative personnel.
JOB DUTIES IN ORDER OF IMPORTANCE: (These duties are illustrative only. Incumbents may perform some or all of these duties or other job-related duties as assigned.)

Supervises lower-level natural resources engineers, design specialists & technical staff in plan development & field investigations, or acts as staff specialist in particular component of assigned function (e.g., mechanical or electrical design, coastal engineering, hazardous waste disposal, mining engineering), monitors district engineers in preparation of preliminary & final design plans & specifications for state, federal & forfeiture reclamation projects & monitors data entry & engineering analysis of permits for active mining operations;

OR

Provides work direction in implementation of canal hydraulic operations, dam permitting, dam safety, inspections, flood plain & water resources data analysis, coastal regulatory programs; reviews & approves technical reports & provides training for lower- level natural resources engineers; conducts review of coastal permit and lease applications reviews and approves technical reports of lower level engineers, including but not limited to reviews of coastal permit and lease applications.

Provides technical assistance to local units of government land owners & other interested parties; assists with developing local ordinances, resolutions, standards, and procedures for enforcement of permitting programs; assists in developing legislative and administrative rule initiatives as well as revising and updating the Ohio Coastal Program EIS/Program Document;

Assists with the development and implementation of procedures and policies of the coastal program; conducts meetings to discuss rules and operating procedures; performs public relations duties to facilitate awareness of and compliance with the permitting program; furnishes information and explains programs to the public; prepares and/or makes speeches and/or lectures; provides technical advice to aid in decision making concerning permitting, leasing, and other coastal initiatives; transmits directives; represents office at meetings, seminars, workshops and conferences.

Leads the development & implementation of a compliance monitoring & enforcement program for coastal regulatory programs; responds to public & internal reports of unauthorized activities; corresponds directly with private land owners, state agencies, cities, counties, developers, utility companies & others in performing all functions necessary to investigate reports of unauthorized activity; reviews compliance monitoring/enforcement reports completed by lower level engineers; conducts field investigations; reviews preliminary construction & as-built drawings; assesses impacts of structures neighboring properties & coastal processes: reviews reports of violations & makes recommendations on unauthorized activities; advises property owners of violations; prepares documents, reports & correspondence; reviews & responds to inquiries & complaints; prepares information for public meetings; coordinates & attends meetings as required.

OR

Acts as project manager for assigned projects, participates in selection of consultants to provide professional design services, develops scope of work & assists in negotiating consultant contracts, oversees consultant work in accordance with contracts, reviews reports, plans, specifications & cost estimates developed by consultants & coordinates approvals & implementation of projects with other divisions, state & local agencies;

OR

In Ohio Department of Agriculture, acts as project manager for assigned projects & conducts technical reviews of permits to install applications, permits to operate applications & reviews compliance certificates & National Pollution Discharge Elimination System (i.e., NPDES) permit applications for concentrated animal feeding facilities to ensure compliance with technical requirements for issuance, conducts inspections of livestock & manure facility design & construction (i.e., to include fabricated structural designs of concrete, steel, wood & masonry), inspects hydro-geological, geological, & soils designs involving manure holding ponds & manure treatment lagoons, provides technical assistance in design, review, installation & inspection of storm water, sediment & erosion control practices adjacent to applicable facilities & develops & reviews plans for utilization, treatment , & distribution of manure for reuse as crop nutrient or other processed product.

Plans & develops preliminary & final construction plans & specifications for agency owned facilities; maintains liaison between office & divisions or district offices on project planning & development; provides technical assistance & interprets policies & procedures for division; assists in implementation of & processing for Lake Erie shore erosion program & canal operation; conducts inspections of concentrated animal feeding facilities to ensure proper operation & maintenance;
maintains database information on permits, inspections, reports, compliance & enforcement.

OR

In Ohio Environmental Protection Agency, provides work direction and training to lower level personnel and the regulated community; reviews assigned projects, including detailed engineering designs and construction documents; works directly with consultants, coordinating implementation of project directly pertaining to permit compliance; acts as staff specialist in the design and implementation of Ohio Standards for Storm Water Management Controls; conducts technical review of detailed Storm Water Pollution Prevention Plans (SWPPP) as mandated by conditions in National Pollutant Discharge Elimination (NPDES) Permits; completes technical review of Permits to Install (PTI) and Land Application Management Plans (LAMP); provides technical assistance and outreach to regulated communities and interested parties relating to Storm Water NPDES permitting and compliance; works directly with regulated community ensuring compliance with Ohio EPA, NPDES, Storm Water Permits; provides technical assistance in design, review, installation & inspection of storm water sediment & erosion control, stream rehabilitation and enhancement practices and projects; develops models to predict potential changes resulting from implementation of practice projects; establishes necessary technical & engineering documentation; coordinates directly with consultants, public officials & private individuals regarding highway construction and land development; coordinates with other state agencies, local government and watershed entities in order to plan, design, or facilitate beneficial storm water practices; design, review, and evaluate various storm water criteria and support materials for state and local storm water programs; assists in the development of regulations, permits, and guidance documents to ensure compliance with all Ohio EPA Storm Water Permits.

**MAJOR WORKER CHARACTERISTICS:**
Knowledge of environmental, civil, coastal, agricultural, hydrologic, hydraulic, mechanical or electrical engineering; natural science (e.g., water quality, ecological, agronomy, animal science); field investigation techniques & methods; geographic information management systems; agency, state & federal engineering laws, rules & guidelines*; supervisory principles & techniques*; employee training & development. Skill in use of CADD & drafting equipment for preparation of construction drawings & blueprints. Ability to interpret extensive variety of technical material in books, journals & manuals; use geometry & trigonometry; review, prepare & edit specifications, construction plans & related engineering documents & prepare technical reports; cooperate with co-workers on group projects & establish friendly atmosphere as supervisor.

(*)Developed after employment.

**MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT:**
Certificate of registration as professional engineer issued by State Licensing Board; 12 mos. exp. as Natural Resources Engineer 2, 85742 or 12 mos. equivalent related engineering experience.

-Or equivalent of Minimum Class Qualifications for Employment noted above may be substituted for the experience required, but not for the mandated licensure.

**TRAINING AND DEVELOPMENT REQUIRED TO REMAIN IN THE CLASSIFICATION AFTER EMPLOYMENT:**
Renewal of certificate of registration as professional engineer as prescribed by law.

**UNUSUAL WORKING CONDITIONS:**
May be exposed to inclement weather & unsafe conditions during inspection of projects to include walking long and short distances, climbing & navigating rough terrain, steep slopes & embankments & spillways & ladders while carrying needed equipment; in Ohio Department of Agriculture, frequent contact with animals, manure, dust, & odors.
JOB DUTIES IN ORDER OF IMPORTANCE: (These duties are illustrative only. Incumbents may perform some or all of these duties or other job-related duties as assigned.)

Supervises lower-level natural resources engineers & technical personnel engaged in canal operations, dam safety, water resource engineering or engineering & design work for alteration, maintenance & construction of buildings, marinas, piers, bridges, fuel storage & dispensing, heating, ventilation & air conditioning systems, water or wastewater treatment systems or lighting systems at state parks, forests, nature preserves, fish hatcheries & related wildlife areas or for reclamation of abandoned mine land, forfeiture mine land or active mining operations or in conducting reviews of coastal applications (e.g., assigns & directs work, trains staff, evaluates performance, listens to employee grievances), or acts as staff specialist in particular component of assigned program function (e.g., plans & develops engineering projects with unique or controversial problems such as hazardous material removal & disposal, coastal structures & sand by passing or complex electrical or mechanical engineering designs, or advises chief in matters related to engineering and regulatory programs); acts as project manager for assigned projects; participates in the selection of consultants to provide professional design services; develops scope of work and assists with negotiating consulting contracts; oversees consultant work in accordance with contracts, reviews reports, plans specifications and cost estimates developed by consultants, and coordinates approvals and implementation of projects with other divisions, state and local agencies.

Administers the compliance monitoring & enforcement program for coastal regulatory programs; responds to public & internal reports of unauthorized activities; corresponds directly with private land owners, state agencies, cities, counties, developers, utility companies & others in performing all functions necessary to investigate reports of unauthorized activity; reviews compliance monitoring/enforcement reports completed by lower level engineers; conducts field investigations; reviews preliminary construction & as-built drawings; assesses impacts of structures neighboring properties & coastal processes; reviews reports of violations & makes recommendations on unauthorized activities; advises property owners of violations; prepares documents, reports & correspondence; reviews & responds to inquiries & complaints; prepares information for public meetings; coordinates & attends meetings as required.

Ensures section provides technical assistance to local units of government land owners & other interested parties; assists with developing local ordinances, resolutions, standards, and procedures for enforcement of coastal regulatory programs; assists in developing legislative and administrative rule initiatives as well as revising and updating the Ohio Coastal Program EIS/Program Document.

Develops and implements program procedures and policies; conducts meetings to discuss rules and operating procedures; performs public relations; furnishes information and explains programs to the public; prepares and/or makes speeches and/or lectures; provides technical advice to aid in decision making concerning permitting, leasing, and other coastal initiatives; transmits directives; represents office at meetings, seminars, workshops and conferences.

OR

In Ohio Department of Agriculture, supervises al lower-level natural resources engineers, inspectors & technical staff involved in planning, design, review, inspection & operation of permitting concentrated animal feeding facilities (i.e., CAFF), serves as staff specialist & reviews & approves engineering & design plans submitted for large livestock environmental permitting programs, oversees inspections of livestock & manure facility design & construction (i.e., to include fabricated structural designs of concrete, steel, wood & masonry), inspects hydro-geological, geological, & soils designs involving manure holding ponds & manure treatment lagoons, provides technical assistance in design, review, installation & inspection of storm water, sediment & erosion control practices adjacent to applicable facilities & develops & reviews plans for utilization, treatment, & distribution of manure for reuse as crop nutrient or other processed product.

Develops original designs for assigned projects, performs reconnaissance & research, prepare plans & writes specifications & participates in selection of consultants in accordance with applicable rules; assists in development of contracts & oversees consultant performance to include approval of pay requests; develops rules, inspects construction, operation & maintenance of facilities & prepares notices of violation; participates in public process to explain technical aspects of permits to permittee & general public.

Plans & administers operation of canal hydraulic systems & associated lands; establishes section goals, objectives & priorities; develops policies & procedures for implementing engineering, field & system operations & legal requirements; coordinates hydraulic operations with federal, state & local agencies; monitors preparation of technical & educational material on design, operation, maintenance & inspection of canals; represents division at & conducts meetings pertaining
to canal hydraulic operation programs; develops, oversees & maintains database of plans, design data, inspection reports, technical review documents & geographical information for each permitted facility; utilizes database information to prepare reports.

Implements departmental policies & guidelines applicable to unit activity or assigned program; attends & participates in meetings with other departmental division to coordinate project needs & funding; represents agency/section in meetings & seminars; provides training for staff.

**MAJOR WORKER CHARACTERISTICS:**

Knowledge of environmental, civil, coastal, agricultural, hydrologic, hydraulic, mechanical or electrical engineering; natural science (e.g., water quality, ecological, agronomy, animal science); field investigation techniques & methods; geographic information management systems; agency, state & federal engineering laws, rules & guidelines; supervisory principles & techniques; employee training & development. Skill in preparation of construction drawings &/or blueprints. Ability to interpret extensive variety of technical material in books, journals & manuals; use geometry & trigonometry; review, prepare & edit specifications, construction plans & related engineering documents & prepare technical reports; handle routine & sensitive contacts with government officials & general public; establish friendly atmosphere as supervisor or plan & develop engineering projects with unique or controversial problems &/or novel engineering related concepts & approaches.

(*) Developed after employment.

**MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT:**

Certificate of registration as professional engineer issued by State Licensing Board; 2 yrs. exp. as registered professional engineer of which 12 mos. was as Natural Resources Engineer 3, 85743 or 12 mos. equivalent related engineering experience.

- Or equivalent of Minimum Class Qualifications for Employment noted above may be substituted for the experience required, but not for the mandated licensure.

**TRAINING AND DEVELOPMENT REQUIRED TO REMAIN IN THE CLASSIFICATION AFTER EMPLOYMENT:**

Renewal of certificate of registration as professional engineer as prescribed by law.

**UNUSUAL WORKING CONDITIONS:**

May be exposed to inclement weather & unsafe conditions during inspections of projects to include walking long and short distances, climbing & navigating rough terrain, steep slopes & embankments & spillways & ladders while carrying needed equipment; in Ohio Department of Agriculture, frequent contact with animals, manure, dust, & odors.
JOB DUTIES IN ORDER OF IMPORTANCE: (These duties are illustrative only. Incumbents may perform some or all of these duties or other job-related duties as assigned.)

Administers overall staff & program activities of construction management, planning, design, facilities maintenance support & dam safety, water resources & canal hydraulic operations program (e.g., schedules & assigns work for design & construction management of agency capital improvement & maintenance projects; coordinates permit, inspection & dam repair activities & hydraulic operations with state, federal & local agencies; analyzes engineering & architectural field & support staff needs, conducts staff training, evaluates performance, hears employee grievances & initiates personnel actions; develops budget & authorizes appropriate expenditures; develops policies & procedures; establishes goals, objectives & priorities) & supervises lower-level natural resources engineers &/or architects assigned to section;

OR

In Division of Water, Water Resources Section, administers programs such as water resources technical assistance, hydrogeologic mapping, water inventory, water planning & development programs to include strategic planning, goal setting, performance measurement, budgeting & supervises program managers;

OR

In Division of Water, Water Management Section administers programs such as canal hydraulics, coastal engineering, dam safety, floodplain management to include strategic planning, goal setting, performance measurement, budget & supervises program managers.

Coordinates assignments of program managers; reviews & approves drafting of contracts, grants & cooperative agreements; directs implementation of hydrogeologic mapping, water data collection & technical assistance; analyzes & makes recommendations on development of water resource supplies, protection of ground water resources & resolution of ground water conflict problems; reviews & approves technical reports to assure compliance with statutory, contractual & regulatory requirements; coordinates development of water resources engineering related capital improvements programs.

Prepares & submits periodic progress reports; assists with legislative matters & participates in preparation of changes to administrative rules; establishes guidelines for coordination of Lake Erie shore erosion program, storm water permit program, Ohio Department of Transportation roadway maintenance program & U.S. geological survey cooperative water resource investigation program; assists chief with planning & administration of all technical programs.

Reviews & approves plans, specifications, analyses & technical reports & comments on compliance with statutory & regulatory requirements; participates in selection process & contract administration for work performed by consulting engineer & architect firms to include review of construction methods, shop drawings & progress schedules; coordinates development of capital improvement programs.

MAJOR WORKER CHARACTERISTICS:
Knowledge of civil or coastal engineering &/or architectural design; project site investigation techniques & methods; geographic information management systems; agency, state & federal engineering & architectural laws, rules & guidelines; construction methodology; management; budgeting; supervisory principles & techniques; employee training & development; public relations. Skill in preparation of construction drawings &/or blueprints. Ability to interpret extensive variety of technical material in books, journals & manuals; use calculus, geometry & trigonometry; review, prepare & edit specifications, construction plans & related engineering documents & prepare technical reports; handle sensitive contacts & establish friendly atmosphere as manager of section; exercise independent judgment to anticipate & solve unprecedented engineering & architectural problems, determine program objectives & requirements, organize projects & develop policy, standards & guides for diverse engineering &/or architectural activities.

(*)Developed after employment.
MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT:
Certificate of registration as professional engineer issued by State Licensing Board or certificate of registration as an architect issued by Ohio Board of Examiners of Architects; 3 yrs. exp. as registered professional engineer or architect, of which 24 mos. was as lead worker or supervisor or in administrative capacity.

- Or in Division of Water, requires certificate of registration as professional engineer issued by Ohio Board of Registration for Professional Engineers & Surveyors; 3 yrs exp. as registered professional engineer of which 2 yrs was lead worker or supervisor or in administrative capacity.

- Or equivalent of Minimum Class Qualifications for Employment noted above may be substituted for the experience required, but not for the mandated licensure.

TRAINING AND DEVELOPMENT REQUIRED TO REMAIN IN THE CLASSIFICATION AFTER EMPLOYMENT:
Renewal of certificate of registration as professional engineer or architect as prescribed by law.

UNUSUAL WORKING CONDITIONS:
May be exposed to inclement weather & unsafe conditions during inspection of projects to include walking long and short distances, climbing & navigating rough terrain, steep slopes & embankments & spillways & ladders while carrying needed equipment.
**CLASS TITLE**: Natural Resources Engineer 6  
**CLASS NUMBER**: 85746  
**B. U.**: EX  
**EFFECTIVE**: 07/01/2012  
**PAY RANGE**: 17

**JOB DUTIES IN ORDER OF IMPORTANCE:** (These duties are illustrative only. Incumbents may perform some or all of these duties or other job-related duties as assigned.)

Assists chief engineer in administration of office including planning & directing development, design, construction & maintenance of Ohio Department of Natural Resources recreational, water & wastewater treatment, roadway, canal & other natural resources facilities, supervises lower-level natural resources engineers & technical or administrative personnel, assists in developing policies & procedures for implementing technical field operations & legal requirements, coordinates with section administrators to assure engineering, architectural & other needs are met, their activities are implemented properly & any work problems are resolved & administers office in absence of division chief or chief engineer.

Oversees consultant selection procedures including scope of work development & review of consultant proposals for services; oversees capital improvements program development & management; reviews & comments on proposals for departmental joint project participation with other agencies & political subdivisions; prepares monthly, quarterly & annual progress reports; assists with operating budget development & management.

Coordinates with deputy chief for operations on payroll preparation & personnel operations for office & oversees all sensitive personnel-related matters; coordinates regulatory compliance & safety-related requirements.

Conducts meetings pertaining to office activities; represents office & department at meetings & conferences; assists with public hearings & legislative matters; assists attorneys with legal issues; prepares correspondence, reports, contracts, agreements & other documents; reviews draft documents for correctness of content, form & policies; assists & advises other offices, divisions & agencies & department administration on engineering & architectural matters; speaks to technical & general audiences; responds to sensitive inquiries & resolves complaints; performs other administrative & technical duties as assigned.

**MAJOR WORKER CHARACTERISTICS:**
Knowledge of civil engineering & architecture; project site investigation techniques & methods; agency, state & federal engineering & architectural laws, rules & guidelines*; work force planning; architecture; interviewing; human relations; construction methodology; management; budgeting; supervisory principles & techniques; employee training & development; public relations. Skill in preparation of construction drawings & blueprints. Ability to interpret extensive variety of technical material in books, journals & manuals; use calculus, geometry & trigonometry; review, prepare & edit specifications, construction plans & related engineering & architectural documents & prepare technical reports; negotiate critical & controversial issues with high-level engineers & officials of other organizations, governmental jurisdictions & companies; make authoritative decisions & recommendations having statewide impact on extensive engineering & architectural & related activities of department; prepare deeds, mortgages & contracts; use calculus.

(*)Developed after employment.

**MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT:**
Certificate of registration as professional engineer issued by State Licensing Board or certificate of registration as an architect as issued by Ohio Board of Examiners of Architects; 4–6 yrs. exp. as registered professional engineer or architect, 8 yrs. trg. or 8 yrs. exp. in supervisory/managerial role in a technical (e.g., engineering/architecture) organization.

-Or equivalent of Minimum Class Qualifications for Employment noted above may be substituted for the experience required, but not for the mandated licensure.

**TRAINING AND DEVELOPMENT REQUIRED TO REMAIN IN THE CLASSIFICATION AFTER EMPLOYMENT:**
Renewal of certificate of registration as professional engineer as prescribed by law.

**UNUSUAL WORKING CONDITIONS:**
May be exposed to inclement weather & unsafe conditions during inspections of projects, to include walking long and short distances, climbing & navigating rough terrain, steep slopes & embankments & spillways & ladders while carrying needed equipment.