

**STATE OF OHIO (DAS)**CLASSIFICATION  
SPECIFICATION**CLASSIFICATION SERIES**

Natural Resources Engineer

**SERIES NUMBER**

8574

**MAJOR AGENCIES**

Ohio Department of Agriculture, Ohio Department of Natural Resources

**EFFECTIVE**

08/20/2006

**SERIES PURPOSE**

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.

At the three lower levels, incumbents make engineering analyses or conduct field investigations & inspections under supervision from a higher-level engineer, with assignments increasing in the degree of complexity & independence as an employee progresses through the levels.

At the middle 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).

At the highest level, employee works as the assistant chief engineer in overall administration of the office, program development & management & advice on engineering matters related to department administration.

**CLASS TITLE**

Natural Resources Engineer Intern

**CLASS NUMBER**

85740

**PAY RANGE**

31

**EFFECTIVE**

01/23/1994

**CLASS CONCEPT**

The first developmental level class works under very close supervision from higher-level engineer & requires working knowledge of engineering methods in order to make engineering analysis of water resources data & existing & proposed dams, dikes & levees to include general & detailed hydrologic, hydraulic, stability investigations or conduct field investigations of proposed projects at state parks, state forests, wildlife areas, nature preserves or abandoned mine lands.

**CLASS TITLE**

Natural Resources Engineer 1

**CLASS NUMBER**

85741

**PAY RANGE**

32

**EFFECTIVE**

01/23/1994

**CLASS CONCEPT**

The second developmental level class works under supervision from a higher-level engineer & requires considerable knowledge of engineering methods in order to conduct field investigations to gather & analyze data to define scope of work for projects at state parks, state forests, wildlife areas, nature preserves, canals or abandoned mine lands or conduct field investigations of floods, water resources data, dams, dikes & levees which are under construction or already exist to ensure compliance with state regulations.

**CLASS TITLE**

Natural Resources Engineer 2

**CLASS NUMBER**

85742

**PAY RANGE**

33

**EFFECTIVE**

08/24/2003

**CLASS CONCEPT**

The full performance level class works under supervision from a higher-level engineer & requires considerable knowledge of engineering methods in order to perform design calculations & prepare construction plans for water & water treatment plants, mining & reclamation projects, golf course irrigation, boat ramps, marinas, fishing piers, campgrounds, canal structures, dams & parking facilities, or make engineering analysis & inspection of dams, dikes, levees, canal structures, floods, flood flows &/or water resource projects, OR in Department of Agriculture, conducts technical reviews of permits to install applications, permits to operate applications & review 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 & performs technical assistance in livestock & manure facility design, hydrogeological, & soils design involving manure holding ponds & manure treatment lagoons.

<u>CLASS TITLE</u>	<u>CLASS NUMBER</u>	<u>PAY RANGE</u>	<u>EFFECTIVE</u>
Natural Resources Engineer 3	85743	14	08/20/2006

**CLASS CONCEPT**

The advanced/first supervisory level class works under general supervision & requires thorough knowledge of engineering methods in order to provide work direction & training to lower-level natural resources engineers, or act as project manager for assigned projects to include selection of consultants, negotiation of consultant contracts, monitoring of consultants' work & coordinating implementation of projects, or act as staff specialist in particular component of assigned program function (e.g., electrical or mechanical design, hazardous waste disposal, mining or coal engineering), OR in Ohio Department of Agriculture, act as project manager, conducts technical reviews of permits to install applications, permits to operate applications & review 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 & performs technical assistance in livestock & manure facility design, hydro-geological, & soils design involving manure holding ponds & manure treatment lagoons.

<u>CLASS TITLE</u>	<u>CLASS NUMBER</u>	<u>PAY RANGE</u>	<u>EFFECTIVE</u>
Natural Resources Engineer 4	85744	15	08/20/2006

**CLASS CONCEPT**

The second supervisory level class works under direction & requires thorough knowledge of supervisory principles & engineering methods in order to supervise unit of lower-level natural resources engineers &/or act as staff specialist in particular component of assigned program function (i.e., plan & develop engineering projects with unique or controversial problems such as hazardous material removal, coastal erosion control or complex electrical or mechanical designs), or administer operation of canal hydraulic systems & associated lands, OR in Ohio Department of Agriculture, supervise lower-level natural resources engineers involved in planning, design, review, inspection & operation of permitting concentrated animal feeding facilities (i.e., CAFF).

<u>CLASS TITLE</u>	<u>CLASS NUMBER</u>	<u>PAY RANGE</u>	<u>EFFECTIVE</u>
Natural Resources Engineer 5	85745	16	11/25/2001

**CLASS CONCEPT**

The third supervisory level class works under direction & requires thorough knowledge of supervisory principles & engineering & architectural methods in order to manage one or more programs including construction management, planning & design, environmental 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 Water, 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 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.

<u>CLASS TITLE</u>	<u>CLASS NUMBER</u>	<u>PAY RANGE</u>	<u>EFFECTIVE</u>
Natural Resources Engineer 6	85746	17	08/20/2006

**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.

<u>CLASS TITLE</u>	<u>CLASS NUMBER</u>	<u>B. U.</u>	<u>EFFECTIVE</u>	<u>PAY RANGE</u>
Natural Resources Engineer Intern	85740	013	01/23/1994	31

**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.)**

Under close supervision from higher level engineer, makes engineering analysis of existing & proposed projects (e.g., dams, dikes, canals, flood & water resources data) to include general & detailed hydrologic, hydraulic, stability investigations & determination of hazard potential;

OR

Under close supervision from higher-level engineer, conducts field investigations of proposed projects at state parks, state forests, state canals, wildlife areas, nature preserves or abandoned mine lands, gathers data & researches related projects & prepares preliminary & final construction drawings for small projects or for parts of larger projects.

Assists in inventory of dams & identification of dams to be inspected; tabulates pertinent data; makes periodic field inspections & investigations of dams, dikes & levees which are under construction or already exist.

Assists in review of construction drawings & specifications prepared by others & prepares reports of findings & recommendations; assists in field observation of construction projects to ensure work is in compliance with plans & specifications; maintains project log or diary of assigned construction projects; checks contractors' submittals (e.g., schedules, shop drawings, pay estimates) & submits for processing with appropriate recommendations.

Attends & participates in meetings, seminars, training sessions & conferences to improve technical knowledge; reviews literature on pertinent technical matter; assists supervisor in meetings with government agency personnel, land owners, utilities & other ODNR divisions to coordinate & inform about projects.

**MAJOR WORKER CHARACTERISTICS:**

Knowledge of civil or agricultural engineering; field investigation techniques & methods; agency, state & federal engineering laws, rules & guidelines. Skill in use of CADD & drafting equipment for 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.

(\*)Developed after employment.

**MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT:**

Engineering degree from recognized school or college which has been accredited by accreditation board for engineering & technology; completed application for admission for examination to obtain valid certificate as engineer-in-training issued by Ohio Board of Registration for Professional Engineers & Surveyors.

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

Not applicable.

**UNUSUAL WORKING CONDITIONS:**

May be exposed to inclement weather & unsafe conditions during inspections of projects.

<u>CLASS TITLE</u>	<u>CLASS NUMBER</u>	<u>B. U.</u>	<u>EFFECTIVE</u>	<u>PAY RANGE</u>
Natural Resources Engineer 1	85741	013	01/23/1994	32

**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.)**

Under supervision of higher-level engineer, conducts field investigations to gather & analyze field data to define scope of work for projects at state parks, state forests, wildlife areas, nature preserves or abandoned mine areas & prepares preliminary reports & designs for site work, drainage structures, utilities, roads, parking areas or recreational facilities;

OR

Under supervision of higher-level engineer, conducts periodic field investigations of dams, dikes, levees & canal structures which are under construction or already exist to ensure compliance with state regulations, inspects earth embankments & spillways, prepares reports of inspections, reviews plans for remedial work to existing structures & monitors repair & reconstruction work to ensure compliance to plans & analyzes flood & water resources data.

Reviews construction plans; checks quantity calculations; monitors & observes survey engineering work pertaining to control & inspection of projects; maintains project log or diary; reviews contractor submittals to include shop drawings & pay estimates & forwards for processing; assists in inventory of dams & identification of dams to be inspected; performs routine surveying; tabulates pertinent data; answers questions about programs & specific items of work; attends & participates in meetings, seminars & training sessions; meets with government agencies & general public.

Attends & participates in meetings, seminars, training sessions & conferences to improve technical knowledge; reviews literature on pertinent technical matter; assists supervisor in meetings with government agency personnel, land owners, utilities & other ODNR divisions to coordinate & inform about projects.

**MAJOR WORKER CHARACTERISTICS:**

Knowledge of civil or agricultural engineering; field investigation techniques & methods; agency, state & federal engineering laws, rules & guidelines. Skill in use of CADD & drafting equipment for 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.

(\*)Developed after employment.

**MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT:**

Engineering degree from recognized school or college which has been accredited by accreditation board for engineering & technology; valid certificate as engineer-in-training issued by Ohio Board of Registration for Professional Engineers & Surveyors; 1 yr. engineering related experience.

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

Not applicable.

**UNUSUAL WORKING CONDITIONS:**

May be exposed to inclement weather & unsafe conditions during inspections of projects.

<u>CLASS TITLE</u>	<u>CLASS NUMBER</u>	<u>B. U.</u>	<u>EFFECTIVE</u>	<u>PAY RANGE</u>
Natural Resources Engineer 2	85742	013	08/24/2003	33

**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.)**

Under general supervision from exempt engineer, performs design calculations & prepares construction plans for water & wastewater treatment plants, mining & reclamation projects, golf course irrigation, boat ramps, marinas, fishing piers, campgrounds, dams & parking facilities;

OR

Under general supervision from exempt engineer, makes detailed engineering analysis & inspections of dams, dikes & levees, canal structures, water resource projects, flood flows, performs hydrologic, hydraulic & stability analyses of embankments to include construction inspections, spillways, foundations & other appurtenances to evaluate their integrity & safety, determines hazard potential of dams, dikes & levees & prepares detailed reports of dams inspected & studied to include summaries of field observations & engineering analyses & specific recommendations for modification & remedial work;

OR

In Ohio Department of Agriculture, under general supervision from exempt engineer, 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, performs technical assistance in livestock & manure facility design & construction (i.e., to include fabricated structural designs of concrete, steel, wood & masonry, 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.

Design, review, installation & inspection of storm water, sediment & erosion control practices adjacent to facilities, & develops & reviews plans for utilization, treatment, & distribution of manure for reuse as crop nutrient or other processed product.

Reviews detailed plans & specifications, reports & coal mining permit applications to determine accuracy & compliance with state & federal laws & regulations; negotiates consulting engineer contracts; review in-house & contract designs for mining reclamation projects & for water, wastewater, road paving & boat ramps; assists in construction inspection of agency owned facilities & active coal mining operations; reviews construction plans for dams, dikes & levees; inspects earth embankments, spillways, outlet works & other appurtenances; assists in collection of flood & water resource data; assists in inventory of dams; answers requests about assigned projects & programs; meets with public & government officials; participates in meetings & seminars on dam safety, water & wastewater treatment, erosion control & other technical subjects pertaining to job duties; conducts inspections of concentrated animal feeding facilities to ensure proper operation & maintenance; completes inspection reports & prepares technical compliance & enforcement documents.

Attends & participates in meetings, seminars, training sessions & conferences to improve technical knowledge; reviews literature on pertinent technical matter; assists supervisor in meetings with government agency personnel, land owners, utilities & other ODNR divisions to coordinate & inform about projects.

**MAJOR WORKER CHARACTERISTICS:**

Knowledge of environmental, civil, agricultural, hydrologic, hydraulic, mechanical or electrical engineering; natural science (e.g., water quality, ecological, agronomy, animal science); field investigation techniques & methods; agency, state & federal engineering laws, rules & guidelines\*; employee training & development\*. Skill in use of CADD & drafting equipment for 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.

(\*)Developed after employment.

**MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT:**

Engineering degree from recognized school or college which has been accredited by accreditation board for engineering & technology; valid certificate as engineer-in-training issued by Ohio Board of Registration for Professional Engineers &

Surveyors; 2 yrs. engineering related experience.

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

Not applicable.

**UNUSUAL WORKING CONDITIONS:**

May be exposed to inclement weather & unsafe conditions during inspections of projects; in Ohio Department of Agriculture, frequent contact with animals, manure, dust, & odors.

<u>CLASS TITLE</u>	<u>CLASS NUMBER</u>	<u>B. U.</u>	<u>EFFECTIVE</u>	<u>PAY RANGE</u>
Natural Resources Engineer 3	85743	EX	08/20/2006	14

**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, reviews & approves technical reports & provides training for lower- level natural resources engineers;

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.

**MAJOR WORKER CHARACTERISTICS:**

Knowledge of environmental, civil, agricultural, hydrologic, hydraulic, mechanical or electrical engineering; natural science (e.g., water quality, ecological, agronomy, animal science); field investigation techniques & methods; 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 &/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; cooperate with co-workers on group projects &/or establish friendly atmosphere as supervisor.

(\*)Developed after employment.

**MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT:**

Certificate of registration as professional engineer issued by Ohio Board of Registration for Professional Engineers & Surveyors; 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; in Ohio Department of Agriculture, frequent contact with animals, manure, dust, & odors.

<u>CLASS TITLE</u>	<u>CLASS NUMBER</u>	<u>B. U.</u>	<u>EFFECTIVE</u>	<u>PAY RANGE</u>
Natural Resources Engineer 4	85744	EX	08/20/2006	15

**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 (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 erosion control & sand bypassing or complex electrical or mechanical engineering designs);

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, agricultural, hydrologic, hydraulic, mechanical or electrical engineering; natural science (e.g., water quality, ecological, agronomy, animal science); field investigation techniques & methods; 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 Ohio Board of Registration for Professional Engineers & Surveyors; 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; in Ohio Department of Agriculture, frequent contact with animals, manure, dust, & odors.

<u>CLASS TITLE</u>	<u>CLASS NUMBER</u>	<u>B. U.</u>	<u>EFFECTIVE</u>	<u>PAY RANGE</u>
Natural Resources Engineer 5	85745	EX	11/25/2001	16

**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, 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 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 hydro geologic 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 engineering &/or architectural design; project site investigation techniques & methods; 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.

**MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT:**

Certificate of registration as professional engineer issued by Ohio Board of Registration for Professional Engineers & Surveyors 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.

<u>CLASS TITLE</u>	<u>CLASS NUMBER</u>	<u>B. U.</u>	<u>EFFECTIVE</u>	<u>PAY RANGE</u>
Natural Resources Engineer 6	85746	EX	08/20/2006	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 &/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 & 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.

**MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT:**

Certificate of registration as professional engineer issued by Ohio Board of Registration for Professional Engineers & Surveyors 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.