

Illinois Environmental & Permit Programs Guidebook for the Mining Industry



**Black Diamond Golf Course—Old Rock Quarry
Lecante, Florida**

**Illinois Association of Aggregate Producers
Environmental Committee
2021**

DEDICATION

This guidebook is dedicated to all of those who work to extract and process aggregates and other minerals which are needed to build and maintain our homes, the Nation's infrastructure and other facilities we use every day. We appreciate the work you do while protecting our environment at the same time. In all that you do, stay safe!

The materials presented in this document have been prepared to assist you in increasing your knowledge of topics related to working on a mine site. They are not intended as a full discussion of the rules and regulations interpreting the law. These materials are not a substitute for thorough research of any questions you may have regarding environmental matters that may arise during your employment. If you have questions regarding the law or any of its regulations, you should contact your Environmental Manager or other employer representative knowledgeable of the law.

We hope you find this information helpful. Please feel free to contact IAAP, at any time, if you have any questions or comments about the materials contained herein or if we can be of any assistance to you.

Illinois Environmental & Permit Programs Guidebook for the Mining Industry

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Preface

Over the past fifty years, environmental matters and compliance have come to the forefront of the aggregates mining and production industry. Companies who fail to recognize their importance will ultimately come to know their Local, County, State and Federal regulatory officials. We must understand the importance of “doing the right thing” when it comes to environmental matters. If a company cannot get the environmental permits it needs to operate, it will simply go away.

When it comes to environmental compliance, whether we are front-line workers and supervisors or senior managers, we all have the same goal. None of us wants to see or do anything which might have a negative impact on the environment. Working to ensure we “do the right things”, when it comes to environmental compliance, should be a high priority both at work and home. Taking time to identify and eliminate potential environmental issues, related to any task we undertake, is a fundamental piece of environmental compliance. When doing daily site safety examinations, we should also check environmental areas. If we are going to develop a strong “environmental culture”, we must step up and become more responsible for environmental matters. We should also ensure our co-workers and families do all of the “right things” when the potential for damage to the environment or non-compliance could occur.

This guidebook was put together by your Illinois Association of Aggregates Producer’s Environmental Committee. The booklet, which focuses on water, air quality and several other areas related to protecting the environment, was developed as a tool to give workers a better understanding of environmental matters. By learning more about environmental rules, regulations and permits, we will be better prepared to identify potential problems and take action to prevent them from becoming an expensive non-compliance. When environmental matters are involved in what we do... we all need to step-up, become leaders, work as a team and communicate frequently and clearly with one another.

Illinois Environmental & Permit Programs Guidebook for the Mining Industry

Illinois Mining Permits

Permitting, Bonding, Reclamation, and Reporting

Aggregate mining is regulated under the Surface-mined Land Conservation and Reclamation Act (SMLCRA) and covers all operators engaging in non-coal surface mining. Surface mining is defined as removing overburden lying above natural deposits and mining minerals directly from them. Minerals include stone, clay, sand, gravel, peat, silica and other materials surface mined, except for coal. Active operators must register with the Explosives and Aggregate Division (EAD) and are subject to annual fees. Before beginning any surface mining activity, operators should contact:

**Illinois Department of Natural Resources
Office of Mines and Minerals
Explosives and Aggregate Division
One Natural Resources Way
Springfield, IL 62702-1271**

The IDNR will make an initial determination to verify a surface mining permit is required. An IDNR field representative is available to discuss site conditions and to provide guidance for questions about the application.

- A permit is required if the overburden is greater than 10 feet deep or where the operation will affect more than 10 acres in a fiscal year (July 1st to June 30th).
- Yearly affected acreage is defined as the total of the areas from which overburden is removed and deposited. It does not include previously disturbed areas from other years.
- Unmined surface areas, used for mineral processing or storage are not considered affected acreage under the Act.
- An applicant must complete five (5) copies of the required forms. A completed application is required to be filed, in duplicate, with the County Clerk in the county where the operation is located. In addition, the application, along with a receipt signed by the County Clerk as proof of filing, must be submitted in triplicate to the Office of Mines and Minerals.
- A County Board may request a public hearing or submit comments on the proposed reclamation plan within 45 days after the filing of an application. The application is also forwarded to the Department's endangered species coordinator for evaluation unless the operator has previously undergone a review. Site descriptions may be submitted for endangered species evaluation up to three years prior to submittal of a surface mining application.
- The Department may not act on an application prior to 60 days after filing, and must take action within 120 days, unless written notice is given to the applicant to extend the review period. If the application is approved, the applicant must post a suitable reclamation

bond, letter of credit, or certificate of deposit to insure adequate reclamation of the site. Reclamation bonds range from \$600 to \$10,000 per acre.

- Permit fees are \$150 per acre. The permit term is for a maximum of ten years to affect the overburden removal but does not limit the time for mineral extraction.
- Permittees are required to obtain a separate permit for all areas used for disposal of waste material (refuse) that are directly connected with the cleaning and preparation of minerals removed by surface mining.
- Annual registration fees are charged for the previous year's activity, regardless of whether a site is permitted or not. Operators will be billed on July 1st of each year. Annual fees are:
 - \$475 per operator
 - \$175 per active site
 - \$375 per active site which conducts blasting operations

Threatened and Endangered Species (T&E) and Critical Habitats

When permitting for mines in Illinois, the law requires an assessment of threatened and endangered species and their critical habitats as well as a cultural resources evaluation. Based on these assessments, the mining permit may contain conditions that affect operations. The conditions can be written in the documents described here.

Prior to beginning operations, the Illinois Department of Natural Resources (the Department) and/or United States Fish and Wildlife Service (USFWS) must review properties, called a "consultation", for possible T&E species existence or their habitat. After the T&E species review, there will be a "termination of consultation" letter, from the Department, stating if there are any T&E species present and conditions that affect operations. A common condition, if any listed species are found, will require operations to cease until the Department can make a determination. T&E species re-location programs, that may be conditions of the termination letter, are less likely to affect operations unless they are close-by.

Both Illinois and Federal rules dictate how a T&E species may affect operations. Each agency has different lists of protected species, but Federally-listed species are automatically State-listed by rule in Illinois. In Illinois, the rights to T&E plant species are considered to belong to the owner who is free to decide that no protection of the state-listed plant species is required. If the plant is listed on the federal T&E plant list (for example White-fringed Prairie Orchid), then coordination with the USFWS is required. All T&E animal species are protected by the Department or USFWS depending on which list that species is on.

If T&E species are present and impacting them (called a "taking") is a possibility, an Incidental Take (IT) permit may be obtained. Technically, there is no Take for plants, only animals. The IT permit may also have conditions that affect operations. Know those conditions.

If the size of a mine requires a Mining Permit from the County, copies of the application are forwarded to the Department's endangered species (T&E) coordinator for consultation. If the

mine discharges storm water runoff to Waters, an NPDES permit (for example ILG84 for discharges from non-coal mines) authorizing those discharges will trigger T&E species consultation by the state. NPDES permit conditions themselves certainly will affect daily operations (see the Water Permits section).

State Historic Preservation Officer (SHPO)

By Federal rule, every state has a State Historic Preservation Officer (SHPO). In Illinois, formerly known as the Illinois Historic Preservation Agency or IHPA, it is now the Historic Preservation Division of the Department of Natural Resources. The termination of consultation letter from the SHPO may contain conditions that affect daily operations. The discovery of a structure, artifacts such as pottery, or human remains could trigger a shutdown of all operations. If human remains are discovered, the coroner's office must be contacted.

Consultation with SHPO is required to evaluate historic, architectural, and archaeological resources. Applications for mining, NPDES, or USACE wetland permit applications will trigger a SHPO consultation. If there are any Federal permits associated with the mine (for example US Army Corps wetland permit), the federal agency must submit the consultation requests to SHPO.

Reclamation Requirements

The Illinois Department of Natural Resources, Office of Mines and Minerals Explosives and Aggregate Division defines reclamation as *"the reasonable rehabilitation of the affected land to useful purposes, while keeping to a minimum the impact on the surrounding areas"*. A mining permit must contain a reclamation plan that outlines the process to be followed in restoring the affected land to a condition suitable for its future use. Final grading of areas, to the required slopes, and revegetation must be completed within three years after mining operations are concluded on the land. Common examples of uses for reclaimed land include pastures, forests, wildlife areas, and residential, recreational, and industrial sites.

The reclamation bond is held by the EAD until final grading and revegetation has been completed. If the mine operator fails to complete reclamation, EAD may issue a citation and seize the bond. The State will then finish any uncompleted reclamation.

A permit issued under the Act does not relieve the permittee from his/her duty to comply with other applicable state and local laws regulating the location, commencement and operation of surface mining facilities. The regulation of blasting is a sole function of the state and cannot be pre-empted by local governmental agencies.

For more information on mining permit regulations, details and requirements or to get answers to specific questions, contact the: Illinois Department of Natural Resources, Office of Mines and Minerals Explosives and Aggregate Division

Special, Conditional or Exceptional Use Permits

In addition to obtaining an aggregate mining permit from the Illinois Department of Natural Resources, many counties and cities have zoning or land use regulations which may also require permits to mine and process aggregates or similar materials. The application process to grant permits for mining and processing of materials tends to vary from filing a simple application, to requirements asking the applicant to provide very detailed site operation and reclamation plans. Given the sometimes-controversial nature of these permit applications, it may take several months or longer for these permit applications to be reviewed and granted.

Before county or city officials can grant a Special, Conditional or Exceptional Use Permit, public hearings are held. After comments are received, county or city officials vote to approve or deny the permit, or they may grant it with conditions. Permit conditions may deal with such things as hours of operation, lighting, or number of site entrances. It is always a good practice to meet with your county and/or city governmental representatives to determine if any "local land use" permits are required.

Explosive License Requirements

The Illinois Explosives Act was written to promote the safe handling, transportation, storage and use of explosive materials. An explosive license is required for any individual who acquires, possesses, transports, uses or otherwise handles explosives. Any individual issued an explosive license is required to keep the license on his/her person at all times when explosives are being acquired, possessed, transported, used or otherwise handled.

- An explosive license is valid for three years
- Permits may be renewed after a background check and submission of the required fee
- Temporary licenses are available for non-residents who intend to use, possess, purchase or transfer explosive materials in Illinois on a limited basis.
- Temporary licenses are issued for three months.

The Loss of an explosive license requires immediate notification to the Explosives and Aggregate Division (EAD).

Explosive Storage Certificates

Any company that intends to store explosive materials is required to obtain a storage certificate from the EAD. The procedures for getting an explosive storage certificate, are the same as those required for obtaining an explosive license, with the exception of the written examination. To ensure safety, an application for a storage certificate must designate a person or persons who are responsible for explosive inventory, transaction records, security and maintenance of the magazine and surrounding area. The theft of explosives from a magazine requires immediate

notification to the EAD. A storage certificate is valid for one year (March 1 through the last day of February) and is renewable upon a site inspection and submission of the required fee.

Air Permitting

Air Quality Permits

Based on emission levels for their site, aggregates producers must obtain an Air Quality Permit. In Illinois, there are four types of air permits from which they may choose. These permits are based on the emission levels of Criteria Air Pollutants (Volatile Organic Material, Nitrogen Oxides, Sulfur Dioxide, Carbon Monoxide, and Particulate Matter) and Hazardous Air Pollutants (HAPs). The permit options are as follows:

- **Registration of Smaller Sources Permit (ROSS):** To qualify for this permit, the combined actual emissions of Criteria Air Pollutants and combined actual emissions of Hazardous Air Pollutants must be less than 0.5 tons per year. [Registration of Smaller Sources \(ROSS Permit\)](http://bit.ly/rosspermit) <http://bit.ly/rosspermit>.
- **Lifetime Operating Permit:** To qualify for this permit, the potential emissions for each Criteria Air Pollutant must be less than major source thresholds. In addition, potential emissions for each single HAP must be less than 10 tons per year and the combined potential emissions for all HAPs must be less than 25 tons per year. [Lifetime Operating Permit](http://bit.ly/lifetimepermit) <http://bit.ly/lifetimepermit>
 - **Note:** The Major Source Threshold for each air pollutant is 100 tons per year, except for nitrous oxides and volatile organic material emissions in Cook, Lake, DuPage, Kane, Grundy, Kendall, McHenry, and Will Counties where they are limited to 50 tons per year.
- **Federally Enforceable Standard Operating Permit (FESOP):** To qualify for this permit, the potential emissions for each Criteria Air Pollutant must be greater than major source thresholds, but the actual emissions are less than major source thresholds. Actual emissions can be lower than potential emissions if the permit contains federally enforceable limits, such as restrictions in operating hours, material process rates, or the use of control devices. FESOP's are sent for public comment and U.S. Environmental Protection Agency (USEPA) for review. If there is enough public interest, a public hearing may be held to discuss the permit. [Federally Enforceable Standard Operating Permit \(FESOP\)](http://bit.ly/fesoppermit) <http://bit.ly/fesoppermit>
- **Clean Air Act Permit Program (CAAPP):** Producers must apply for this permit if both their potential and actual emissions, for each Criteria Air Pollutant, exceed major source thresholds. These permits are sent for public comment and U.S.EPA review. If there is enough public interest, a public hearing may be held to discuss the permit. [Clean Air Act Permit Program \(CAAPP\)](http://bit.ly/caapermit) <http://bit.ly/caapermit>

Calculations for exempt emission units are not included in the sums for potential and actual Emissions. To determine if a source is exempt, refer to Appendix #2 in Illinois EPA's guidance for [Air Pollution Control Permits](http://bit.ly/apcpguide) <http://bit.ly/apcpguide>

Fugitive Dust Plan

Illinois EPA requires a Fugitive Dust Plan for all permitted sites to address emission sources, including, but not limited to:

- Dust from unpaved and paved roads
- Crushing operations
- Grinding Operations
- Material transport operations

A Fugitive Dust Plan, that includes a list of all dust generating sources and applicable monitoring methods, must be submitted as part of the permit application. For details or more information on Fugitive Dust Plans, go to: [Fugitive Dust Plan](http://bit.ly/fugdp) <http://bit.ly/fugdp>

Additional Air Quality Considerations

Potential emissions are based on the manufacturer's rated capacity of the equipment. Illinois EPA usually define maximum operating hours 24 hours per day, 7 days per week for 52 weeks per year or 8,760 hours of continuous operation. If potential emissions are calculated using fewer hours, the permittee must show that the equipment operation is restricted by federally enforceable limitations. For example, the hours of shut down for required maintenance and repairs of the equipment would reduce the potentials emissions.

Calculating potential emissions, when using control devices, can be considered if the control devices are necessary for proper use of the equipment or form a bottleneck. For example, baghouses are necessary for proper operation of silos, therefore, potential emissions from silos are usually calculated using the baghouse throughput or control efficiency.

The emissions from unpaved and paved roads are considered as fugitive dust and are not included in the calculation of actual and potential emissions. If the site is subject to a Prevention of Significant Deterioration (PSD) or New Source Performance Review (NSPS), these emissions are calculated in the potential emissions. For further clarification of the rule, click [HERE](http://bit.ly/majss) <http://bit.ly/majss> or, more details regarding the PSD/NSR Program can be found [HERE](http://bit.ly/prevsd) <http://bit.ly/prevsd>

New Source Performance Standards (NSPS) Subpart OOO

NSPS Subpart OOO applies to aggregate operations where rock crushing or grinding takes place. This is not a permit, but rather an outline of opacity requirements which must be met and requires notification, testing and record keeping of specific "affected" facilities (crushers, screens, conveyors, storage bins, bucket elevators, bagging operations, and enclosed truck or railcar loading stations).

NSPS Subpart 000, which became effective on August 31, 1983, was amended in April 2008 and applies to affected facilities constructed, reconstructed or modified after those dates. U.S. EPA define:

- **Construction:** means “the fabrication, erection or installation of an “affected” facility”.
- **Reconstruction:** applies if “replacement of components of an existing facility, to such an extent, that the fixed capital cost of the new components exceeds 50% of the fixed capital cost that would be required to construct of a comparable entirely new facility”
- **Modification** means “any physical change, or change in the method of operation of an existing facility which increases the amount of any air pollutant emitted into the atmosphere or results in the emission of any air pollutant not previously released to the atmosphere”.

For aggregate producers, all testing, notification, and record keeping requirements for aggregate crushing plants “affected” facilities are outlined in Subpart A. Notification of scheduled opacity testing dates must be provided to the Illinois DNR and/or U.S. EPA.

Concrete and Asphalt Recycling

Air Quality

Air Quality Permits, from various agencies in Illinois, are required for stationary and portable crushing plants. Depending on the amount of particulate matter (PM) produced from crushing, screening and transfer points, Illinois EPA requires producers obtain:

- Lifetime Operating Permit for sources that emit more than five (5) tons of PM per year.
- Registration of Smaller Sources Permit (ROSS) if under five (5) tons of PM per year.

(See previous Air Quality Permits section in this document for more information on these permits.)

In addition to State air quality regulations, some counties and municipalities may have permitting requirements. These requirements will vary from county-to-county and city-to-city, so it is prudent to check with your local regulatory authorities to ensure you comply with any air quality permitting rules and conditions they may have.

To ensure compliance with Air Quality Regulations, Illinois Environmental Protection Agency (IEPA) requires opacity testing to be conducted on all newly permitted crushers, screening units and conveyors. For more information on Illinois Air Quality Permitting and Compliance [HERE](https://bit.ly/rosspermit) <https://bit.ly/rosspermit> and [HERE](http://bit.ly/epamethod9) <http://bit.ly/epamethod9>

Both recycled asphalt and concrete are used in Illinois Department of Transportation (IDOT) and commercial projects.

IDOT Approved Material: Meets all IDOT quality testing requirements and is produced in accordance with Illinois Aggregate Gradation Control System (IAGCS).

IDOT regulates stockpiles of broken concrete and asphalt which may be approved for its projects. Producers seeking approval of their materials must ensure:

- Incoming broken concrete and broken asphalt is not contaminated with soil or foreign matter.
- Rebar is only allowed to protrude 4 inches from the concrete.
- A small amount of soil embedded in the base of the concrete slab is acceptable and a small amount of RAP leftover from milling is also acceptable.
- No excavated stone, tile, soil, bricks, slabs of HMA pavement, leftover wet concrete or washout from mixer trucks are allowed. More information [HERE](http://bit.ly/idotapp) <http://bit.ly/idotapp>

Commercial Recycled Material: Is used on private projects and is not IDOT certified.

- Check with your local county and municipality as to whether authorization is needed to receive asphalt and concrete and if there are any restrictions on stockpiling material for future use.
- If material is not sold and a CCDD facility is located on the same property, the recycled material is allowed to go into the CCDD.

Water Permits

National Pollutant Discharge Elimination System (NPDES) Permit

A National Pollutant Discharge Elimination System (NPDES) permit is required for the discharge of water, which potentially contains pollutant(s), from a site. The General NPDES Permit (No. ILG84 for non-coal mines) covers operations that mine and process construction sand, gravel, crushed stone or industrial sand. NPDES Permits establish conditions under which a water discharge may occur and outlines effluent limitations, monitoring, record keeping and reporting requirements. A General NPDES Permit contains a list 33 Special Conditions, however, not all of them will apply to every aggregate operation.

General Permit ILG85 generally covers industrial storm water discharges (IRL00) and construction storm water permit (CGP). These types of storm water coverage may be required if an Individual NPDES permit is required.

In order to receive an authorization to discharge for new mines or modifications of existing site permits, owners or operators must:

- Submit a Notice of Intent (NOI) or a permit application to be authorized to discharge under the ILG84 general permit.
- Complete and submit Forms 1 and 2C and Form WPC-PS-MW with Schedules MA through ME to the Illinois Environmental Protection Agency.
- Non-coal mines, with concrete mixing or hot mix asphalt plants located on them, shall complete form 2F in addition to the aforementioned forms.

Storm Water Pollution Prevention Plans (SWPPP)

As required by Special Condition 19, a NPDES Permit (ILG84) application must include a Storm Water Pollution Prevention Plan (SWPPP). A SWPPP shall be developed for surface runoff from each mining site covered by this special condition and must:

- Be prepared in accordance with good engineering practices.
- Identify potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges associated with industrial activity at a mining site.
- Describe and ensure the implementation of practices which will be used to reduce the pollutants in storm water discharges associated with industrial activity at a mining site and to ensure compliance with the terms and conditions of the permit.

Facilities must implement the provisions of the storm water pollution prevention plan required under this part as a condition of this permit.

Discharge Limitations

The discharge limits allowed under ILG84 permit from non-coal outlets monitored are limited at all times as follows:

	Monthly Average	Daily Maximum
Flow (MGD)	---	---
Total Suspended Solids	35	70
Total Suspended Solids (for Industrial Sand operations only)	25	45
pH	Shall be in the range of 6.5 to 9 std units	

The General Permit covers all areas of the State of Illinois discharging to surface Waters of the United States. For more information contact: **Illinois Environmental Protection Agency; Bureau of Water, Division of Water Pollution Control, Springfield, Illinois 62794 (217) 782-0610**

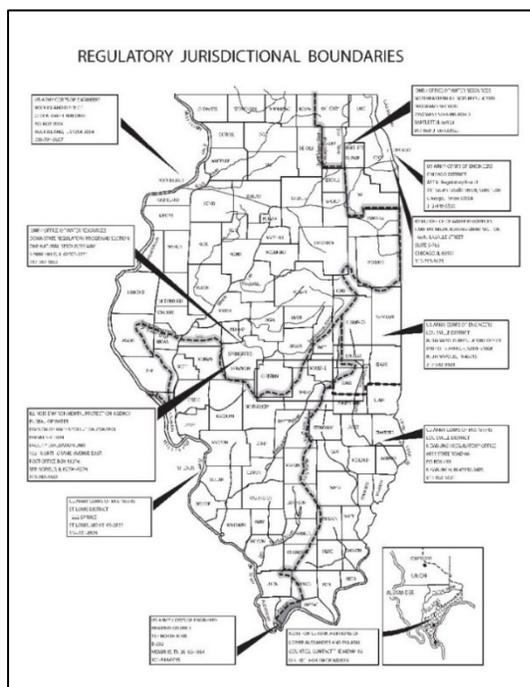
Construction in Wetlands, Waterways and Floodplains

Construction activities occurring in Illinois waterways, floodplains and wetlands often require both State and Federal authorization. A stream and/or wetland delineation must be conducted to determine whether construction activities will have any impacts to jurisdictional waters. The findings are submitted to the Army Corps of Engineers as part of a Jurisdictional Determination.

The U.S. Army Corps of Engineer's requires a permit to locate a structure, discharge dredged materials or put fill material in wetlands or navigable waters of the United States. The Corps Regulatory Divisions evaluates permit applications for essentially all work that occurs in "waters of the United States (U.S.)" that are regulated by the Corps pursuant to Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act. Examples of regulated activities are materials placed in a waterway or wetland for any purpose including commercial, industrial or

recreational construction; road fills and causeways where portions of the construction are in waters or wetlands; dams and dikes; and protection devices such as levees, groins, riprap and other bank stabilization. There are three types of Corps permits:

- **Individual Permit:** A Clean Water Act (CWA) Section 404 Individual Permit may be issued following a full public interest review of an individual application. The Corps must conclude that the project is consistent with the Section 404(b)(1) Guidelines and that it is not contrary to the public interest.
- **A Nationwide Permit (NWP):** This is a form of General Permit authorizing certain activities throughout the United States. These permits are valid only if their terms and conditions are met but, if they cannot be met, a Regional General Permit or Individual Permit is required. There are approximately 52 NWP's that authorize a wide variety of activities such as mooring buoys, residential developments, utility lines, road crossings, mining activities, wetland and stream restoration activities, and commercial shellfish aquaculture activities. The Corps is required to reauthorize the NWP's every 5 years. On January 13, 2021, the U.S. Army Corps of Engineers (Corps) published a final rule modifying the Corps' Nationwide Permit (NWP) program (the Final Rule). Once effective, any modified or new NWPs will remain subject to further restrictive terms and conditions imposed by the Corps district offices, State agencies, and Indian Tribes to ensure that activities authorized by the NWPs result in no more than minimal individual and cumulative adverse environmental effects.
- **Regional General Permits:** These permits are issued by the District Engineer for a general category of fill activities when:
 - The activities are similar in nature and cause minimal environmental impact
 - The regional permit reduces duplication of regulatory control by State and Federal agencies.



The state of Illinois is divided into 4 different U.S. Corps of Engineers Districts: Chicago, Rock Island, Louisville and St. Louis. Some areas fall under the jurisdiction of the Memphis District.

Note #1: Quite often, U.S. Corps of Engineers permits require coordination with various federal and state agencies such as U.S. Fish and Wildlife and/or State Historic Preservation Offices.

Note #2: A Corps 404 permit and a state 401 water quality certification may require more than a year to obtain.

Note #3: Several counties and municipalities in Illinois have wetland and waterway protections under County Ordinances, especially in Northeastern Illinois.

Septic Systems

The Illinois Department of Public Health (IDPH) regulates the installation of all private sewage disposal systems that have no surface discharge (such as septic tanks and seepage fields) as well as those that discharge treated effluent up to 1,500 gallons per day to the ground surface (such as sand filters and aerobic treatment systems). The IDPH must review and approve plans for private sewage disposal systems and alternatives to them before construction can begin. There are approximately 90 City or County Health Agencies in Illinois that are authorized, by the IDPH or local ordinances, to review sewage disposal system construction plans. All private sewage disposal systems must be installed by a certified sewage disposal contractor licensed by the IDPH.

Water Wells

Water wells in Illinois are regulated under *77 IAC Parts 915, 920, & 925*. All water supply wells are permitted by the Illinois Department of Public Health (IDPH) and must be drilled and installed by a Licensed Water Well Contractor. It is usually a good idea to find a water well contractor who is familiar with the local area and regional aquifers. The contractor will typically take care of the permitting process and will design the well based on the aquifer, intended use and anticipated number of users. Companies should also:

- Take out of service water wells not in use or abandoned and have them sealed by a licensed water well driller.
- Be aware that water well permitting fees and requirements may vary from county-to-county.
- Understand monitoring wells, used for scientific studies or to monitor groundwater quality, are not required to be installed by a licensed water well contractor in Illinois, but the well must be constructed according to *77 IAC Part 920.170*.
- Know water wells designed for the sole purpose of dewatering may be subject to special requirements, depending on certain factors.

Learn more about the IDPH regulations on water wells [HERE](http://bit.ly/idphwaterwell) <http://bit.ly/idphwaterwell>; for guidance on designing water wells for dewatering can be found at the IDPH website [HERE](http://bit.ly/idphdwater) <http://bit.ly/idphdwater>; the IDPH provides a licensed Illinois water well contractor search [HERE](http://bit.ly/idphwwcs) <http://bit.ly/idphwwcs>.

Storage of Hazardous Materials

Underground Storage Tanks (USTs)

Underground Petroleum Storage Tanks (UST's) with a capacity of 110 gallons or more are regulated by the Office of the State Fire Marshall (OSFM) under *41 IAC Parts 174-177*. The OSFM must approve all permit applications and requires a fee of \$200.00 for any UST activity (installation, repair, decommissioning and so on). All companies with permitted UST's are required to:

- Use only tanks with double-walled construction, including any buried pipes.
- Undergo regular inspections, leak tests, and maintain required records and documentation.
- Have insurance or other financial assurance mechanisms to cover environmental contamination issues.
- Have a periodic test conducted by a certified tester ensure the cathodic protection system is adequately protecting the UST system. These tests must be conducted at the following intervals:
 - Within six months of installation
 - At least every three years after the previous test
 - Within six months of any repair to the UST system
- Have walkthrough inspections conducted to check the following:
 - Spill prevention equipment
 - Release detection equipment
 - Containment sumps
 - Handheld release detection equipment

Aboveground Storage Tanks (ASTs)

Mining sites are allowed to have two tanks up to 12,000 gallons each. Additionally, there are specific installation restrictions for these larger tanks, which would be approved during the application process with the OSFM and the local fire protection district. New installation and relocating an AST on your property requires approval and inspection by the OSFM, prior to use.

Companies who have above ground fuel tanks with an excess of 1,100 gallons must ensure they are designed in compliance with recommendations outlined in National Fire Protection Association guidelines (NFPA 30) and the storage facility must be approved by the Illinois Office of State Fire Marshall. In addition, companies who store Liquefied Petroleum Gas (LP gas) in excess of 2,000 gallons are required to submit plans to the State Fire Marshall.

Spill Prevention Control and Countermeasures (SPCC)

A Spill Prevention Control and Countermeasures (SPCC) plan is required for facilities which store 1,320 gallons or more of petroleum products above ground or underground tanks with a capacity of 42,000 gallons or more. All containers holding 55 gallons or more must be included when determining the 1,320 gallons threshold.

When total site petroleum storage exceeds 10,000 gallons or a single tank has a capacity of more than 5,000 gallons, SPCC Plans must be certified by a registered professional engineer. If neither of these two limits are exceeded, the SPCC plan may be self-certified by the operator. SPCC plans must also be revised and recertified within six months if changes, which affect fuel storage volume, contents or location, are made at the facility. Major changes to the fuel storage facility

must be reviewed, approved and signed by a Registered Professional Engineer (PE). At a minimum each SPCC plan must contain the following:

- General site information
- Oil handling operations at the facility
- A prediction of expected spill volume and direction of flow
- Summary of containment structures for each aboveground storage tank (AST)
- Spill prevention practices
- Discharge or drainage controls
- Personnel, equipment, and resources at the facility used to prevent oil spills
- Summary of containment structures for each aboveground storage tank (AST),
- Inspection frequency and procedures
- Personnel training, including oil handling personnel
- Site security measures
- Spill prevention measures
- Spill clean-up process
- Record keeping and documentation
- SPCC plan 5-year review

Used, Spent or Waste Materials

Typical used, spent or waste materials generated by aggregate facilities include Universal, Special and Municipal Waste.

Universal Waste

Current regulations streamline the hazardous waste management standards for certain categories of hazardous waste that are commonly generated by a wide variety of industries. The most common Universal Waste generated by the mining industry consists of fluorescent bulbs/lamps, batteries and mercury containing equipment. Examples of universal wastes and proper handling are summarized below:

- **Fluorescent Bulbs:** Fluorescent bulbs contain mercury and should be placed in a cardboard container provided by a waste vendor. The container should be labeled with the contents and accumulation start date (the day the first bulb was placed in the container).
- **Batteries:** Small batteries (alkaline, lithium ion, nickel cadmium and so on) should be stored in a plastic bucket provided by a waste vendor. The bucket should be labeled with the contents and accumulation start date. Larger equipment batteries can be exchanged through a battery vendor or, if needed, stored indoors, on an impervious surface and be kept off of the floor to prevent corrosion.
- **Mercury Containing Equipment:** Disposal of outdated or non-functioning electronics can often be handled through the company IT department or waste vendors may also have ability to dispose of these as well. Electronics and mercury containing equipment should

be stored indoors, on an impervious surface and be kept off the floor to prevent corrosion.

Special Waste

Oil-soaked rags, absorbents, contaminated gravel, used paint containers, aerosol cans, used oil, spent antifreeze, and other chemicals are considered to be Special Waste. Some examples of Special Wastes and proper ways to manage them are described below:

- **Used Rags/Absorbents and Contaminated Gravel:** To dispose of soiled rags, used absorbents and sand contaminated with oil, place them in a properly labeled, metal, 55-gallon drum provided by a waste vendor. If all liquids in the drum are completely absorbed, the materials can be placed in the general refuse dumpster.
- **Used Paint:** Empty, dry paint cans can be disposed in municipal trash. If there is any paint remaining in the can, soak it up with oil-dry, let it dry completely and then it can be discarded in a municipal trash container.
- **Spray Paint and Aerosol Cans:** Dispose of empty aerosol cans with municipal trash. Non-empty aerosol cans should be placed in a metal 55-gallon drum for disposal by a waste vendor. The drum should be labeled with contents.
- **Used Oil:** Used oil is most often generated, at aggregate sites, during equipment maintenance. Used oil can be stored in approved drums or larger tanks and picked up by an approved used oil vendor. Storage containers or tanks should be labeled as "Used Oil." It may be transported to registered collection centers in self-owned vehicles, as long as the total volume during transport is less than 55 gallons. Never mix other products, like spent solvent or anti-freeze, with used oil.
- **In Illinois:** Companies can burn used oil in furnaces if:
 - The furnace burns only used oil generated on site or from a household "do it yourselfer"
 - The heater has a maximum capacity of 0.5 million British thermal units (Btus) per hour
 - The combustion gases are vented directly to the outside air.
- **Used Oil Filters:** Used oil filters should be properly drained after use by allowing the filter to drain for at least 12 hours. Drained filters can then either be disposed of as scrap metal or placed in a container provided by an approved waste vendor for removal.
- **Used Antifreeze:** Similar to used oil, antifreeze is generated at aggregate sites during equipment maintenance. Antifreeze should be stored in approved drums or larger tanks and picked up by an approved waste vendor. Spent antifreeze containers should be labeled as "Used Antifreeze."
- **Parts Cleaners/Solvents:** Aggregate sites use parts washers containing solvent for equipment maintenance. When used, the solvent becomes contaminated with metals and other chemicals. The most efficient way to handle used solvents is to have a parts washer with a solvent capacity of 30 gallons or less and have an approved vendor service it on a routine basis. When not using the parts washer, the lid should remain closed to

limit air emissions. Vendor will provide a hazardous waste manifest which must be kept for 3 years.

- **Used Tires:** Used tires, at aggregate sites, include heavy mobile equipment and light duty vehicle tires. When possible, used tires should be exchanged with the vendor when new tires are purchased. When this cannot be done, used tires should be stored in a designated area; however, storing more than 50 tires at a location may require it to be registered as a used tire storage facility.

Municipal Waste

Included in Municipal Waste are all used, spent and other discarded materials that are picked up by a contracted waste vendor and accepted at a landfill. It is a good practice to keep trash can and dumpster lids closed at all times to prevent water accumulation inside of waste containers.

Aggregate sites should also utilize scrap metal and other collection bins for recyclable materials generated on site.