

CONSERVATION PLAN FOR THE CITY OF GRAFTON

GENERAL

This conservation plan has been prepared for the City of Grafton as an application for authorization for incidental taking of the Great Plains Ratsnake (*Elaphe emoryi*) and the Timber Rattlesnake (*Croatalus horridus*) on construction and maintenance projects in the City of Grafton and surrounding area.

"Take" means, in reference to animals and animal products, to harm, hunt, shoot, pursue, lure, wound, kill, destroy, harass, gig, spear, ensnare, trap, capture, collect, or to attempt to engage in such conduct.

I. DESCRIPTION OF THE IMPACT AREA

A. Location

The City of Grafton is located in Jersey County, Illinois. This conservation plan will cover the City Limits of Grafton and all areas outside of the City limits where the City of Grafton must maintain existing utilities that serve the City of Grafton. This area includes Sections 1-4 and 9-16 in Quarry Township (T6N, R12W), and Sections 6-8, 16-18, and 20 in Elsah Township (T6N, R11W). Enclosed are maps of the area.

B. Affected Species

1. Great Plains Ratsnake (*Elaphe emoryi*)

Key Characters: Spear-shaped pattern on top of head; body scales keeled; anal plate divided.

Similar Species: Prairie kingsnake, milk snake, fox snake, rat snake.

Description: Moderately large (up to 120 cm TL), blotched snake with gray or light brown back sporting 25 to 50 black-bordered, nearly square, dark brown or red-brown blotches. Tail with 8-20 dark spots or bands. Belly checkered black and white.

Habitat: Rocky, wooded hillsides, hill prairies, bluffs, and adjacent brushy fields.

Natural History: This nocturnal snake mates in April or May and lays 3-30 eggs a few weeks later. The young, 30-35 cm TL, hatch in August. Diet includes mammals, birds, and bird eggs. Medium-sized mammals and raptors are the main predators.

Status: Threatened in Illinois. Found only along the Mississippi River bluffs from Jersey to Randolph counties, where its main threat is highway traffic.

2. Timber Rattlesnake (*Croatalus horridus*)

Key Characters: Small asymmetrical head scales; elliptical pupil; pit between eye and nostril; back with jagged dark bands; rattle or button on tail tip; back scales strongly keeled; anal scale not divided.

Similar Species: Massasauga.

Description: Large (up to 180 cm TL), stout-bodied venomous snake. Back gray, light yellow, or greenish white with 20-25 black, jagged crossbars or blotches. Sometimes an orange or rust stripe down midback. Head clearly larger than slender neck. Dark stripe behind each eye. Tail tip uniformly black in adults. Belly pink, white, cream, or gray, with dark stippling toward sides.

Habitat: Heavy forest along rocky outcrops and bluffs.

Natural History: Active April through October, often seen sunning on rock ledges near winter dens. Forages during summer in upland forests and some border and disturbed habitats where rodents are abundant. Diet mainly small mammals, such as mice, squirrels, and chipmunks. Usually mates July and August with 6-10 young born late summer or early autumn of following year. Newborn 25-35 cm TL. Predators of young include hawks, coyotes, skunks, foxes, and common kingsnakes. Most adult mortality caused by vehicles and wanton killing by humans.

Status: Threatened in Illinois. Relict elsewhere. Threats, besides indiscriminate killing by people, include vehicles and clearing of forest. Previously more widespread, now probably occurs in moderate numbers only in the Shawnee Hills.

C. Description of the Activities resulting in Incidental Take

The City of Grafton maintains the water and sewer system to serve the City. Improvements to the water and sanitary sewer system are necessary when the current system can no longer meet the demands of the system. This includes construction of new mains to replace aged or undersized mains, extensions of the existing system to serve growth, and other necessary improvements. The City of Grafton has also applied for permit to IEPA for the construction of a water transmission main from Principia College in Elsah to Grafton Hills to serve the City.

D. Anticipated Adverse Affects

Incidental take of these two species is a concern during the construction of main extensions in wooded or cleared areas adjacent to woods. Of particular concern is the presence of open trenches and the possibility of the species being trapped in the trench.

II. MEASURES TO MINIMIZE THE IMPACT AND RELATED FUNDING

A. Plans to Minimize Affected Area

The extensions of water and/or sewer mains are typically required to be within an existing right of way or easement. The typical construction by open trenching only disturbs approximately 15-20' in width. The number of species taken during construction should be minimal.

B. Plans for Management of the Area

Typical water main or sewer main construction requires that the existing grade be restored to its original condition. Therefore, the City intends to restore these areas to enable continued use of the areas by the affected species.

C. Measures to be implemented to minimize the effects

The specifications can include requirements limiting the amount of time a trench is left open. Typical construction practice would have the contractor backfill the trench as the pipe is constructed. Typically the pipe line is constructed faster than the backfill can be completed. At the end to the work day, the contractor utilizes the available equipment to complete the backfill. A requirement to the project specifications can be added requiring that backfill be completed prior to lunch break and at the end of the day, and the trench should be occasionally checked for species in the open trench.

Typical construction has the trench opened just ahead of the pipe being laid and backfilled during construction. It is anticipated that the trench length left open would be minimal (less than 15 feet).

These construction methods should minimize the concern of the species being trapped in the trench.

D. Monitoring the Effects of Construction Methods

It will be difficult to determine the impact of this method, as it is unlikely the species would be observed in trench by the operator backfilling the trench. The specifications for the project can require the contractor to occasionally observe the trenches prior to backfill to verify no take of the species has occurred. If a

take is observed the contractor can be required to cease all backfill operations until the proper agency is contacted.

E. Adaptive Management Practices

The primary concern during construction of the mains is the take of the species due to open trenches. Should the closing of trenches around midday and at the end of the work day not be sufficient, the contractor could be directed to complete the backfill at more frequent intervals.

F. Funding of Management Practices

The construction of these main extensions will be performed primarily through contracted work. These management practices will be included in the project specifications when necessary. The contract price for the work will include these management practices. The contractor on these projects is required to submit performance bonds to ensure that the work is completed as specified. These contract bonds will ensure the management practices are observed, or the contractor risks action taken against the bonds.

III. ALTERNATIVE ACTIONS TO THE PROJECT

A. No Action

The extension of the water and/or sewer mains serves the needs of the community. The City had determined that the "no action" option is not feasible. Water and sanitary service must be provided to the community users for safe potable water and waste water disposal.

B. Construction Schedule

To minimize the effects on these species, the work could be completed in the winter months. This must be considered on a project by project basis and the relative need for the project.

In particular, the proposed water main extension from Principia College to Elsah cannot be delayed until the winter months. The City is currently operating on a violation notice and compliance plan from the IEPA. The City of Grafton's water supply has been found to be contaminated. This project is necessary and needs to be completed as soon as possible. Likely much of the construction on the project will occur in the late fall/early winter, but starting the project in the winter is not feasible.

IV. INFORMATION INDICATING THE SURVIVAL OF THE SPECIES

The construction methods outlined in this conservation plan limit the at grade disturbance to open trenches. While these trenches are a concern, this plan addresses the concern of the open trenches by minimizing the time the trench is open and requiring monitoring of the trench. The activities covered in this project plan will be localized disturbances. Trenching operations will proceed along the route of construction with the concern of the open trench addressed as the contractor completes the work.

V. IMPLEMENTATION AGREEMENT

Whereas it has been determined the _____ (“project”) may have an impact on the above mentioned species; therefore be it resolved by the City of Grafton that this Conservation Plan and requirements within it shall be incorporated into the project specifications and be required of the contractor on this project.

Also, the contractor shall report to the City Engineer on a weekly basis on the effectiveness of the conservation plan and report on any incidental take that occurred and the contractor’s action after said take. The Engineer shall report on a monthly basis to IDNR a summary of the contractor’s activity and any modifications to the conservation plan that were encountered.

Should a take occur, the contractor shall contact Mr. John Tucker with the Illinois Historical Survey at (618) 466-9690.

The City of Grafton authorized the inclusion of this Conservation Plan on this project and authorize the Mayor of Grafton to oversee this Conservation Plan with the assistance of the City Engineer.

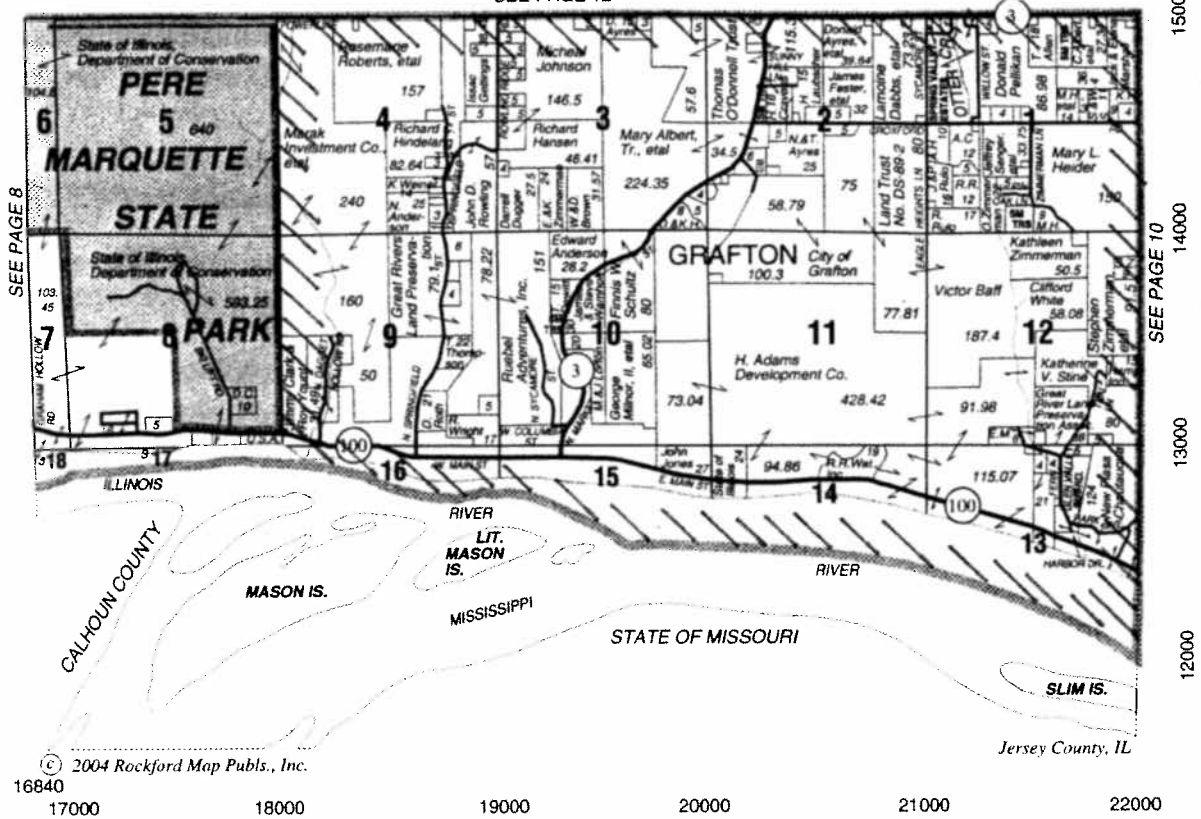
The City also requires that this Conservation Plan does not conflict with any federal, State, and local regulations.

The City has no final federal take authorizations on file.

Certified to be a true and accurate copy, passed and adopted on the above date.

Name:
Title: City Clerk

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T.6N.-R.11W.



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