PRELIMINARY PERMIT APPLICATION

For

WILD FLOWER WATER PUMPED STORAGE HYDROELECTRIC PROJECT

(Docket # P-13842-000)

Pursuant to

18 CFR §4.81

For

License for Major Unconstructed Project

Before the

FEDERAL ENERGY REGULATORY COMMISSION

Ву

Wild Flower Water, LLC 4265 Kellway Circle Addison, Texas 75004

Prepared by

Halff Associates, Inc 1201 North Bowser Road Richardson, Texas 75081

September 2010

(revised March 2010)

INITIAL STATEMENT

1. WILD FLOWER WATER, LLC. applies to the Federal Energy Regulatory Commission for a preliminary permit for the proposed WILD FLOWER WATER PUMPED STORAGE HYDROELECTRIC PROJECT, as described in the attached exhibits. This application is made in order that the applicant may secure and maintain priority of application for a license for the project under Part I of the Federal Power Act while obtaining the data and performing the acts required to determine the feasibility of the project and to support an application for a license.

2. The location of the proposed project is:

State or territory: Oklahoma

County: Pushmataha County

Township or nearby town: 13.5 miles east of Clayton, OK (pop. 719)

Latitude/Longitude of Power House: 34.619° N, 95.122° W

Stream or other body of water: Upper Reservoir: Long Creek

Lower Reservoir: None

Diversion Weir or off-channel wet well: Kiamichi River

3. The exact name, business address, and telephone number of the applicant are:

Business name: Wild Flower Water, LLC.
Mailing address: 4265 Kellway Circle

Addison, TX 75001

Phone: (972) 239-0707

Alternate Contact: Fred Brown, P.E. (Agent)
Mailing address: 4265 Kellway Circle

Addison, TX 75001

Phone: (972) 239-0707

Email address: fbrown@tomlininvestments.com

Alternate Contact: Russell Killen, P.E. (Engineer)
Mailing address: 4000 Fossil Creek Blvd.

Fort Worth, TX 76137

Phone: (817) 847-1422
Email address: RKillen@halff.com

- **4.** Wild Flower Water, LLC. is a domestic corporation and is not claiming municipal preference under section 7(a) of the Federal Power Act.
- **5.** The proposed term of the requested permit is 36 months.

6. There is no existing dam or project facility. A new dam will be constructed across Long Creek to form the Upper Reservoir. An off-channel dam will be constructed south of the Kiamichi River to form the impoundment for the lower reservoir. An in-channel weir approximately 2 to 5 feet high will be constructed across the Kiamichi River to form a pool from where water can be diverted to a wet well and pumped to fill the lower reservoir to provide make up water lost due to evaporation and percolation. However, in the design phase the weir may be eliminated and only an off channel wet well may be constructed to avoid disturbing the pool elevation of the river in order to avoid impacting the flow regimes in the river and to protect mussels found along the river bed. Flow regimes will be monitored and pumping will only be done when there is sufficient water flow that the base flow, downstream of the diversion point, that is required for the survival of the mussels is maintained.

7. Contact information for all federal, state, local political entities and facilities identified, and affected Indian tribes (§4.32(a)(2)

a. Every county in which any part of the project, and any Federal facilities that would be used by the project, would be located;

Pushmataha County, Oklahoma 203 SW 3Rd St County Courthouse Antlers, OK 74523

Phone: (580)298-2512

- b. Every city, town, or similar local political subdivision:
 - i. In which any part of the project, and any Federal facilities that would be used by the project, would be located;
 - ii. That has a population of 5,000 or more people and is located within 15 miles of the project dam;

The project is located in an unincorporated area of Pushmataha County and not located within any city/town limits. There are no cities or towns with a population of 5,000 or more within 15 miles of the project dam. The closest town is Clayton, OK, 13.5 miles to the west of the site, with a population of 719 (2009 Census).

- c. Every irrigation district, drainage district, or similar special purpose political subdivision:
 - i. In which any part of the project, and any Federal facilities that would be used by the project, would be located; or
 - ii. That owns, operates, maintains, or uses any project facilities or any Federal facilities that would be used by the project;

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Pushmataha Co. Rural Water District #1 Pushmataha Co. RWD #5 Manager: Jerry Buchanon Manager: Larry Freeman Phone: (918) 569-4326 Phone: (918) 755-4545 Supply Type: **Purchase Water** Supply Type: Supplied Supply Source: Surface water Supply Source: Surface water

Pushmataha Co. Rural Water District #2 Pushmataha Antlers Public Works Authority

Manager: Orville Dighton Manager: Larry Ellison

Phone: (918) 563-4314 Phone: (580) 298-2315 2500

Supply Type: Purchase Water Supply Type: Supplied Supply Source: Surface water Supply Source: Ground water

Pushmataha Pushmataha Co. RWD #3 Pushmataha Clayton Public Works Authority

Manager:Buster BellManager:Thomas HendershotPhone:(580) 298-3312Phone:(918) 569-4135Supply Type:SuppliedSupply Type:SuppliedSupply Source:Surface waterSupply Source:Surface water

d. Every other political subdivision in the general area of the project that there is reason to believe would likely be interested in, or affected by, the application;

US Army Corps of Engineers, Sardis Lake NRCS - Pushmataha County

HC 60 Box 4195 510 N. Highway 271 Clayton, Oklahoma 74536 Antlers, OK 74523-0190 Phone: (918) 569-4131 Telephone: 580-298-3281

Oklahoma Water Resources Board – City of Antlers Kiamichi River Basin Working Group 100 SE 2nd Street

Duane A. Smith, Executive Director Antlers, OK 74523-4000 3800 N. Classen Telephone: (580)298-3756

Oklahoma City, OK 73118 Fax: (580)298-2760

(405)530-8800

Pushmataha Conservation District Town of Albion P.O. Box 190 P.O. Box 42

Antlers, OK 74523-0190 Albion, OK 74521-0009 Phone: 580/298-3668 Telephone: None

e. All Indian tribes that may be affected by the project.

Choctaw Nation of Oklahoma Chickasaw Nation of Oklahoma

P.O. Box 1210 P.O. Box 1548 Durant, OK 74702-1210 Ada, OK 74821 1-800-522-6170 (580) 436-7259

1. The number, physical composition, dimensions, general configuration and, where applicable, age and condition of any:

Dams

Upper Dam across Long Creek

Type: Earth Embankment

Composition: Earth
Height: 85 feet
Base Length (feet): 850 feet
Crest Length (feet): 800 feet

Latitude/Longitude: 34.596° N, 95.133° W

Lower Dam

Type: Earth Embankment

Composition: Earth
Height: 50 feet
Base Length (feet): 500 feet
Crest Length (feet): 10,500 feet

Latitude/Longitude: 34.627° N, 95.122° W

Diversion Weir Across the Kiamichi River

Type: Overflow weir

Composition: Reinforced Concrete

Height: 2 to 5 feet
Base Length (feet): 3 feet
Crest Length (feet): 200 feet

Latitude/Longitude: 34.626° N, 95.125° W

Spillways

Both the upper and lower reservoirs will have emergency spillways.

Penstocks

Length: 7,500 feet Diameter: 2-28 feet

Composition: Steel and Reinforced Concrete

Powerhouses

Number of units: 4

Proposed capacity: 4-275 MW for a total of 1100 MW

Latitude/Longitude: 34.619° N, 95.122° W

Tailraces

Four of variable size.

Description of Other Project Structures

The project will consist of two, approximately 10,000 acre-feet reservoirs, two 28-ft diameter, 7,500-ftlong steel and reinforced concrete tunneled penstock, connecting to 4 generating pump/turbine units located in a 250-ft x 120-ft x 80-ft tall powerhouse. A third in-channel weir will be constructed across the Kiamichi River to create an impoundment from where water to fill the lower reservoir can be pumped. A duplex pump station (2-6000 GPM) and 24 inch diameter water conveyance pipe will deliver the initial fill-up water and make up water when needed. Approximately 12000 acre feet will be required for the initial fill-up and 3000 acre feet per year will be required to provide makeup water for water losses due to evaporation. Water losses due to percolation have not been estimated yet. The upper and lower lakes should yield sufficient water to make up all the losses. Occasionally water from the Kiamichi will be pumped to supplement water captured by the two reservoirs.

2. The estimated number, surface area, storage capacity, and normal maximum surface elevation (mean sea level) of any reservoirs, whether existing or proposed, that would be part of the project:

Upper Reservoir

Surface area: 220 acres

Watershed area 2.50 Square miles Estimated yield 2250 acre feet Storage capacity: 8000 acre-feet Normal maximum 1545 msl

surface elevation:

Latitude/Longitude: 34.597° N, 95.127° W

Lower Reservoir

Surface area: 300 acres

Watershed area 2.1 square miles Estimated yield 1900 acre feet Storage capacity: 8400 acre-feet

Normal maximum 645 msl

surface elevation:

Latitude/Longitude: 34.625° N, 95.116° W

Diversion Weir across the Kiamichi River

Surface area: 50 acres
Storage capacity: 100 acre-feet
Normal maximum 580 msl

surface elevation:

Latitude/Longitude: 34.627° N, 95.127° W

3. The estimated number, length, voltage, interconnections, and, where applicable, age and condition, of any primary transmission lines whether existing or proposed, that would be part of the project:

The location and connection point (s) to the grid will be established by SPP after a grid study is complete.

4. The total estimated average annual energy production and installed capacity (provide only one energy and capacity value), the hydraulic head for estimating capacity and energy output, and the estimated number, rated capacity, and, where applicable, the age and condition, of any turbines and generators, whether existing or proposed, that would be part of the project works:

Estimated average annual energy output: 7 hours of generation, 7 days a week will

produce approximately 2,810,000 MWhs

annually

Number of generating units: 4

Turbine ratings per unit: 4325 CFS
Generator rating per unit: 275 MW
Single capacity rating per generating unit: 275 MW

Existing and/or proposed generating equipment: The four 275 MW generating units are

proposed

Hydraulic head: Max: 900 feet

Min: 875 feet

5. All lands of the United States that are enclosed within the proposed project boundary described and shown in Exhibit 4 (3) of this document, identified and tabulated on a separate sheet by legal subdivisions of a public land survey of the affected area, if available. If the project boundary includes lands of the United States, such lands must be identified on a completed land description form, provided by the Commission. The project location must identify any Federal reservation, Federal tracts, and townships of the public land surveys (or official protractions thereof if unsurveyed). A copy of the form must also be sent to the Bureau of Land Management state office where the project is located.

There are no Federal lands located within the proposed project area.

Any other information demonstrating in what manner the proposed project would develop, conserve, and utilize in the public interest the water resources of the region.

Upon approval, the proposed Pump Storage Hydroelectric Project will generate electric power during peak demand periods thereby reducing the need for standby power generating units. The facility will absorb and store excess power from the supply system, and in particular will increase the reliability of wind generated power in the central United States. The facility will

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contribute needed relief to the current national energy crisis. Regarding water use, the lower lake, with a volume of 10,000 acre-feet, is proposed to be initially filled from the nearby Kiamichi River. After initial fill-up, the only additional water needed will be make-up water for evaporation and percolation losses. During rainfall events, the proposed upper and lower lakes will capture an estimated 4150 acre feet year which would satisfy the gross evaporation losses of approximately 2900 acre feet per year. The Kiamichi weir and pump station will remain in standby to provide make up water if needed.

1. General requirements

- i. Any studies, investigations, tests, or surveys that are proposed to be carried out, and any that have already taken place, for the purposes of determining the technical, economic, and financial feasibility of the proposed project, taking into consideration its environmental impacts, and of preparing an application for a license for the project.
 - Groundwater studies
 - Energy production studies
 - Environmental impact studies
 - Water quality studies

- Engineering studies, including soil studies, test pits and core holes.
- Study on energy needs
- Hydrologic and hydraulic studies
- Water rights studies
- Additional studies may be required as issues arise
- ii. The approximate locations and nature of any new roads that would be built for the purpose of conducting the studies.

There will be approximately 2.0 miles of new roads (unimproved surface) required for the purposes of conducting studies described in this exhibit and access to the two reservoirs. The entire site is on private property with some county roads and forest trails in the area. The lower reservoir site is on ranch land, and will be accessed from gravel roads and some unimproved ranch roads in the area; The upper reservoir site is on forested land, also private property. The site will be accessed via K Trail, a forest road connecting to Indian Highway to the east of the site. Some private trails exist branching off K Trail into the reservoir site. Other trails may need to be established to provide access to geotechnical drilling sites.

2. Work plan for new dam construction

i. A description, including the approximate location, of any field study, test, or other activity that may alter or disturb lands or waters in the vicinity of the proposed project, including floodplains and wetlands; measures that would be taken to minimize any such disturbance; and measures that would be taken to restore the altered or disturbed areas.

A limited geotechnical investigation is proposed to initially determine the subsurface conditions at the project site, including the reservoir sites, the penstock route and the powerhouse site. No floodplains or wetlands are proposed to be disturbed. Access will be available via existing and new roads as described in Item 1 (ii) above.

- ii. A proposed schedule (a chart or graph may be used), the total duration of which does not exceed the proposed term of the permit, showing the intervals at which the studies, investigations, tests, and surveys, identified under this paragraph are proposed to be completed.
 - It is the intent of the applicant to file a PAD/NOI during the 3 year duration of the permit. The applicant will then follow the ILP schedule for studies, unless the applicant deems necessary to request the Traditional Licensing Process.
- 3. The Commission may waive the requirements of Exhibit 2, Part 2, upon a showing by the applicant that the field studies, tests, and other activities to be conducted under the permit would not adversely affect cultural resources or endangered species and would cause only minor alterations or disturbances of lands and waters, and that any land altered or disturbed would be adequately restored.

It is not anticipated that preliminary studies will adversely impact cultural resources, endangered species or federally owned lands. Therefore the applicant requests waiver of requirements in 18 CFR §4.81 (c) (2) [Exhibit 2, Part 2 of this document] pursuant to 18 CFR §385.207.

1. The estimated costs of carrying out or preparing the studies, investigations, tests, surveys, maps, plans or specifications identified under Exhibit 2 of this document.

The cost to complete the proposed studies during the requested three year period is estimated at \$8,000,000 to \$10,000,000.

2. The expected sources and extent of financing available to the applicant to carry out or prepare the studies, investigations, tests, surveys, maps, plans, or specifications identified Exhibit 2 of this document.

These costs will be funded by private investors and the applicant.

- 3. A description of the proposed market for the power generated at the project, including:
 - i. The identity of the proposed purchaser(s) of the power, and any information that is available concerning the revenues to be derived from the sale of the power.

Power will be marketed to local utilities and providers in the SPP service area.

ii. The size of the applicant's power system, system peak demand and annual energy requirements, and the number of customers served by the applicant.

The applicant has no power system.

Maps prepared on a United States Geological Survey topographic quadrangle sheet showing:

1. The location of the project as a whole with reference to the affected stream or other body of water and, if possible, to a nearby town or any permanent monuments or objects that can be noted on the maps and recognized in the field.

Please see Figures 1 & 2.

2. The relative locations and physical interrelationships of the principal project features identified in Exhibit 1 of this document.

Please see Figure 2

- 3. A proposed boundary for the project, enclosing:
 - i. All principal project features identified in Exhibit 1 of this document including but not limited to any dam, reservoir, water conveyance facilities, power plant, transmission lines, and other appurtenances; if the project is located at an existing Federal dam, the Federal dam and impoundment must be shown, but may not be included within the project boundary;

Please see Figures 1 & 2.

ii. Any non-Federal lands and any public lands or reservations of the United States [see 16 U.S.C. 796 (1) and (2)] necessary for the purposes of the project. To the extent that those public lands or reservations are covered by a public land survey, the project boundary must enclose each of and only the smallest legal subdivisions (quarter-quarter section, lots, or other subdivisions, identified on the map by subdivision) that may be occupied in whole or in part by the project.

There are no non-Federal or Public lands in the proposed project area

4. Areas within or in the vicinity of the proposed project boundary which are included in or have been designated for study for inclusion in the National Wild and Scenic Rivers System.

There are no National Wild and Scenic Rivers in the vicinity of the project.

- 5. Areas within the project boundary that, under the provisions of the Wilderness Act, have been:
 - i. Designated as wilderness area;

There are no areas within the proposed project area that are designated as wilderness areas.

ii. Recommended for designation as wilderness area;Not known

iii. Designated as wilderness study area.

Not known

APPLICATION VERIFICATION LETTER

Wild Flower Water LLC, 4265 Kellway Circle, Addis	exas, County of Dallas by: Fred Brown, PE (Name) of son, TX 75001 (Address), being duly sworn, depose(s) sc.) are true to the best of (his or her) knowledge or
	e (application, etc.) this day of March, 2011. vn, PE, Subscribed and sworn to before me, a [Notary ate to notarize documents, as appropriate] of the
	Fred Brown, PE, Wild Flower Water LLP
	Date
	Notary Public
	Date

Figure 1: Wild Flower Water Pumped Storage - Project Location Map

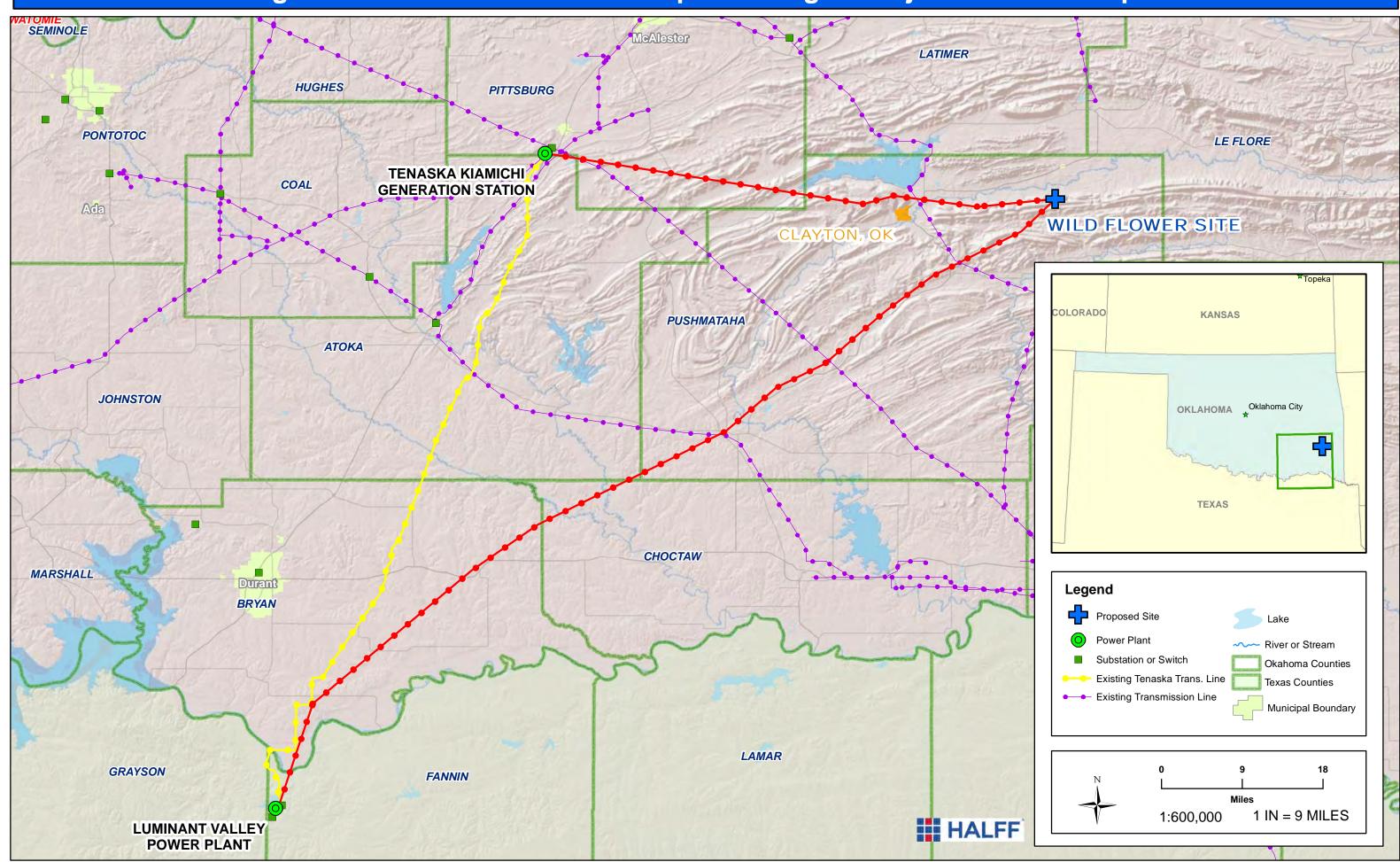
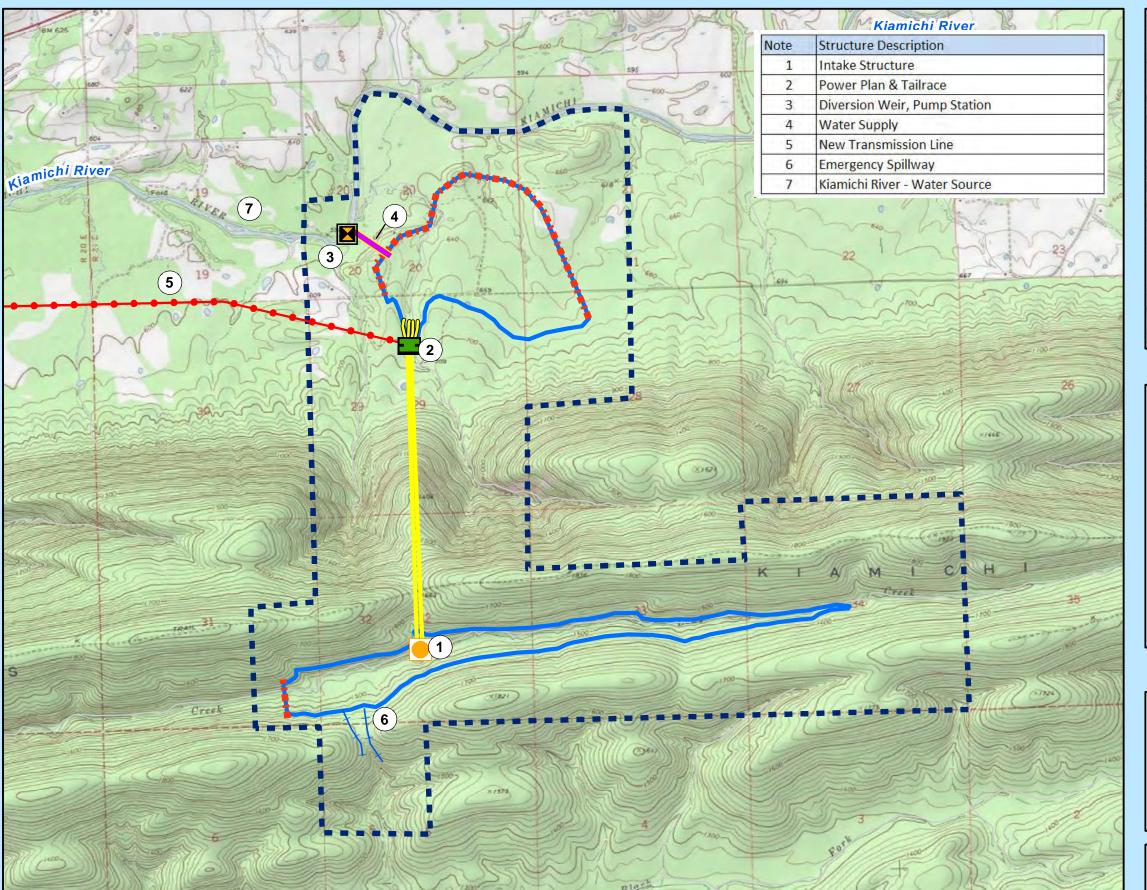
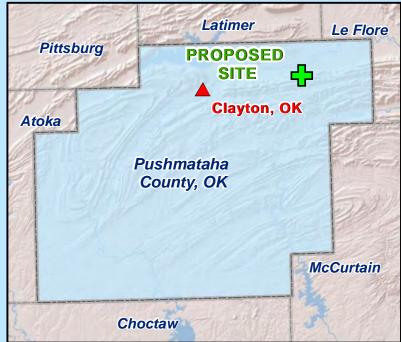
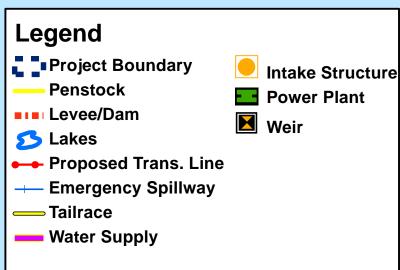
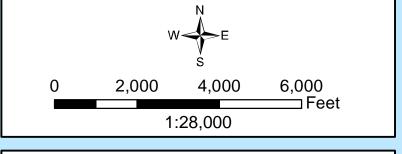


Figure 2: Wild Flower Water Pumped Storage - Site Map











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