

Public Notice - Tennessee Valley Authority (TVA)
Floodplains No Practicable Alternative Analysis for
Proposed Groundwater Wells and Piezometers in the 100-Year Floodplain

December 9, 2024

Notice is hereby given that TVA is planning to install and maintain groundwater wells on the Paradise Fossil Plant reservation (PAF), at about Green River miles 99.4-101.0 in Muhlenberg County, Kentucky. Analyzed under Categorical Exclusion 53141 and represented in Figure 1 by yellow circles, four monitoring wells would be installed on the bank of the Green River, within the limits of the 100-year floodplain, and are therefore subject to analysis under Presidential Executive Order 11988, Floodplain Management. Installation of the wells would include anchoring the well casings in a small concrete pad and installing bollards to protect the wells. The wells would contain instrumentation such as transducers and sampling pumps, and water-tight well caps would be installed to protect the monitoring equipment. In order to appropriately monitor impacted groundwater along the bank of the Green River, there is no practicable alternative to the installation of these monitoring wells within the 100-year floodplain. All work will be completed in accordance with the Kentucky Department of Environmental Quality – Division of Remediation Guidance.

In addition to the wells being installed in this CEC other monitoring wells and piezometers could potentially be installed at other locations at PAF within the Daniel Run, Green River, and Jacobs Creek 100-year floodplains, as represented in Figures 2 through 4 by orange clouds. Future wells and piezometers would contain the same well equipment and instrumentation as described above, using the same construction methods.

All practicable design measures to minimize harm to the floodplain have been identified by TVA. These measures include:

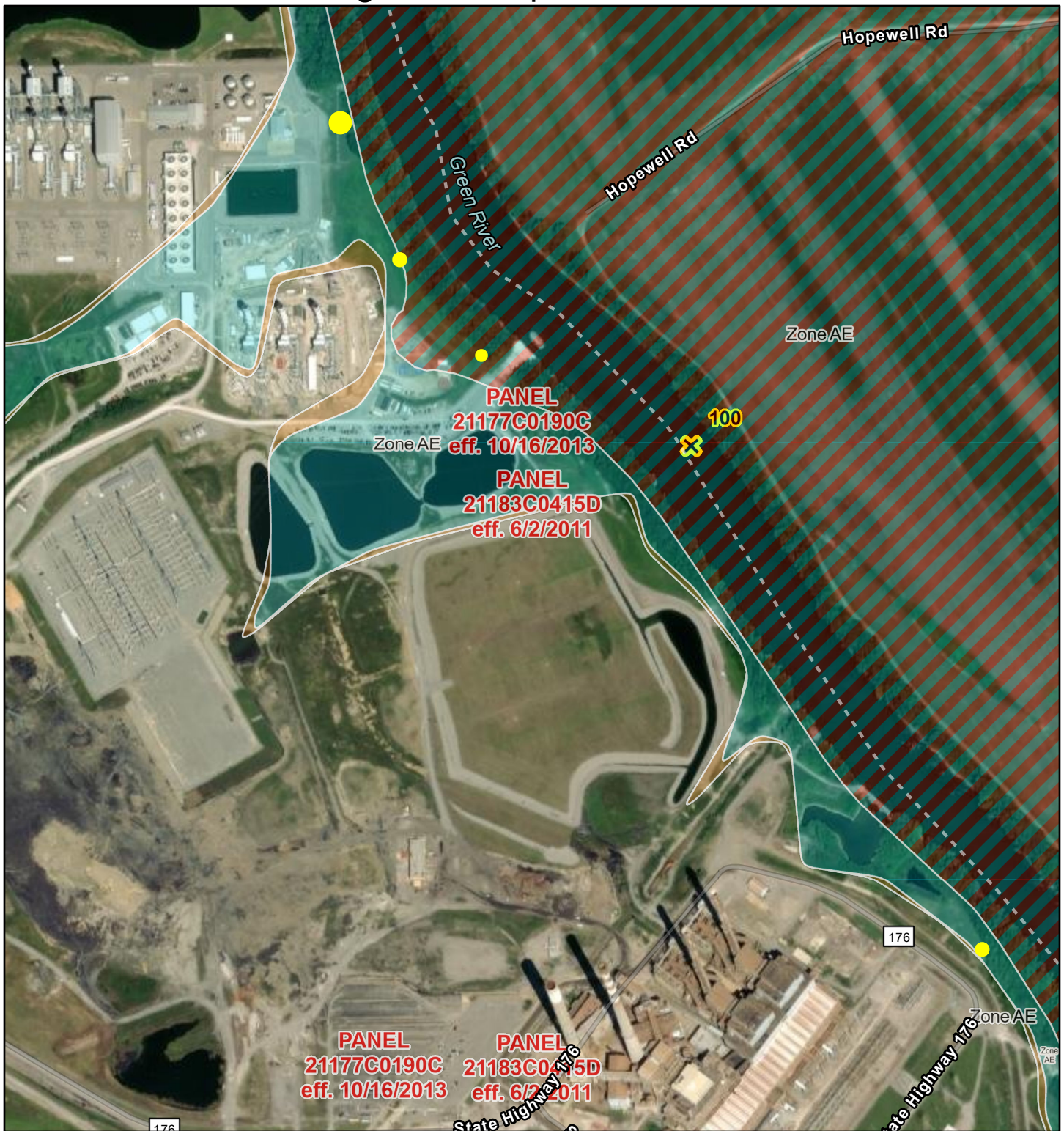
- Installing water-tight well caps on the wells, to prevent water infiltration into them
- Implementing standard erosion and sediment control best management practices during construction of the wells
- Ensuring construction of the wells complies with all applicable floodplain regulations

TVA has therefore concluded that the proposed project is consistent with Executive Order 11988 because

1. There is no practicable alternative to locating these wells in the floodplain
2. The proposed project will be designed to minimize to the extent practicable harm to or within the floodplain
3. The proposed project would conform with applicable state and local floodplain protection standards
4. Identifiable impacts to the floodplain are negligible

Any party wishing to comment on the proposal should email comments to ccwilliamson@tva.gov on or before December 23, 2024.

Figure 1. Proposed wells



December 5, 2024

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Flood Hazard Zones

Zone Type

- 1% Annual Chance Flood Hazard
- Regulatory Floodway
- 0.2% Annual Chance Flood Hazard

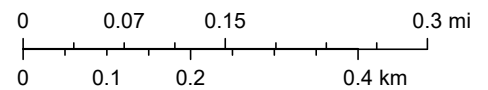
Flood Hazard Boundaries

LN_TYP

- SFHA / Flood Zone Boundary
- FIRM Panels

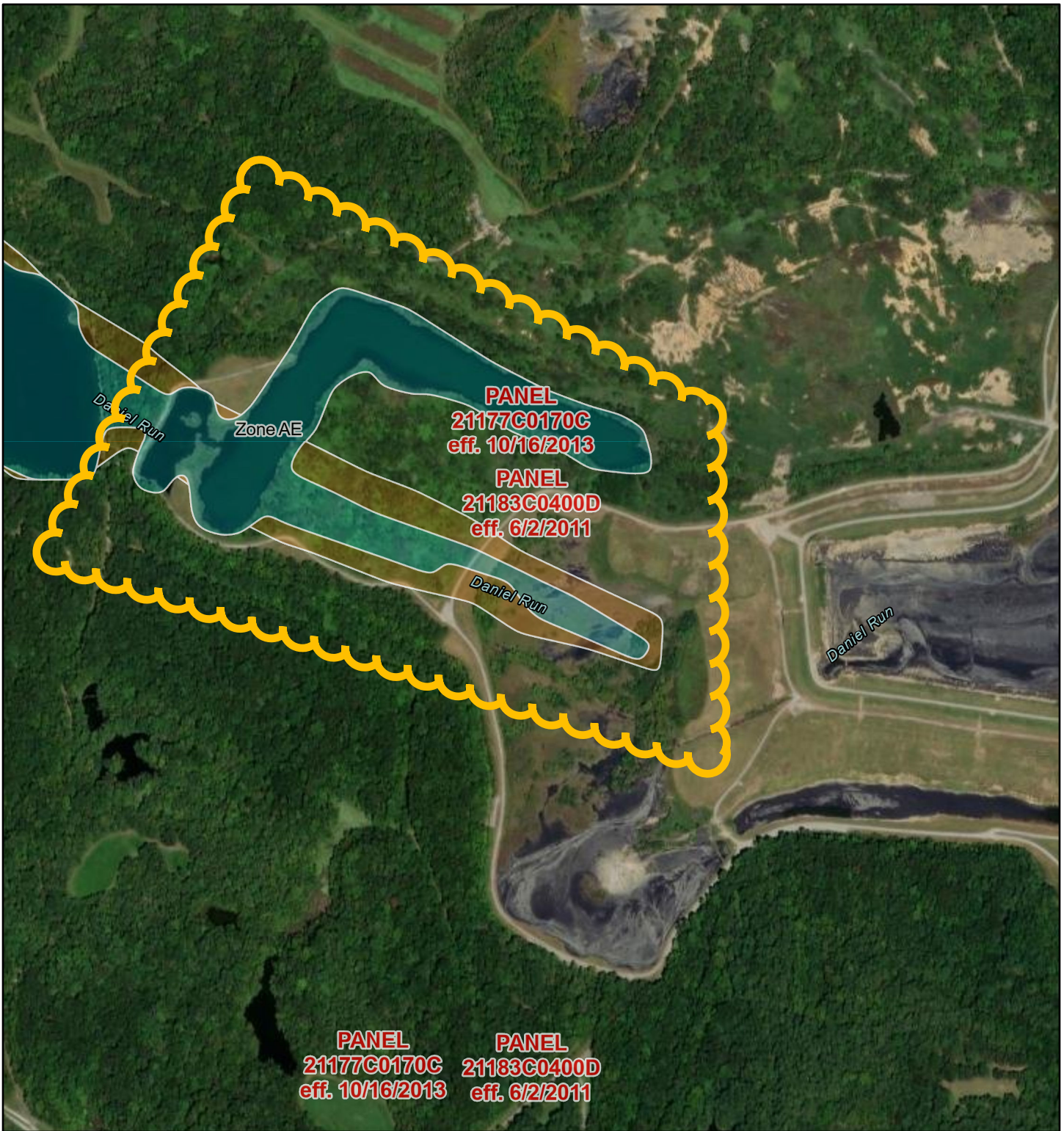
Fossil Plants

- Coal/Gas
- River Miles



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Figure 2. Potential Wells Locations - Daniel Run



December 5, 2024


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Flood Hazard Zones


Flood Hazard Boundaries

Zone Type

LN_TYP

 1% Annual Chance Flood Hazard

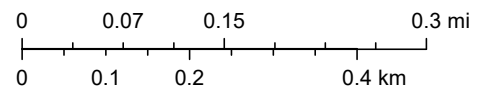
 SFHA / Flood Zone Boundary

 0.2% Annual Chance Flood Hazard

 FIRM Panels

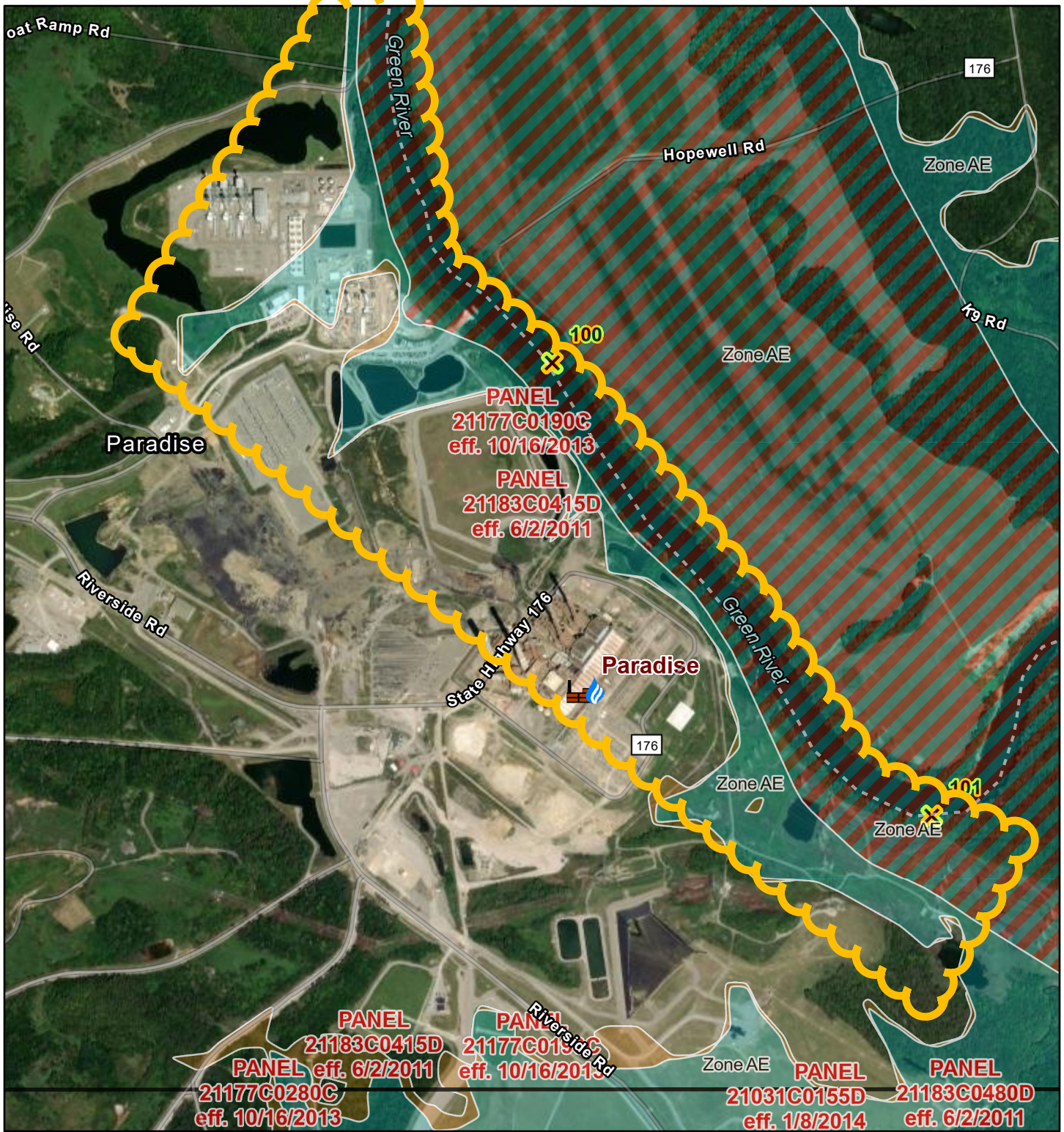


Area of future groundwater wells



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Figure 3. Potential Wells Locations - Green River






December 5, 2024

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Flood Hazard Zones

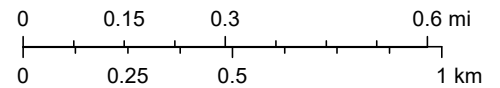
Zone Type

-  1% Annual Chance Flood Hazard
-  Regulatory Floodway
-  0.2% Annual Chance Flood Hazard

Flood Hazard Boundaries

LN_TYP

-  SFHA / Flood Zone Boundary
-  FIRM Panels
-  River Miles

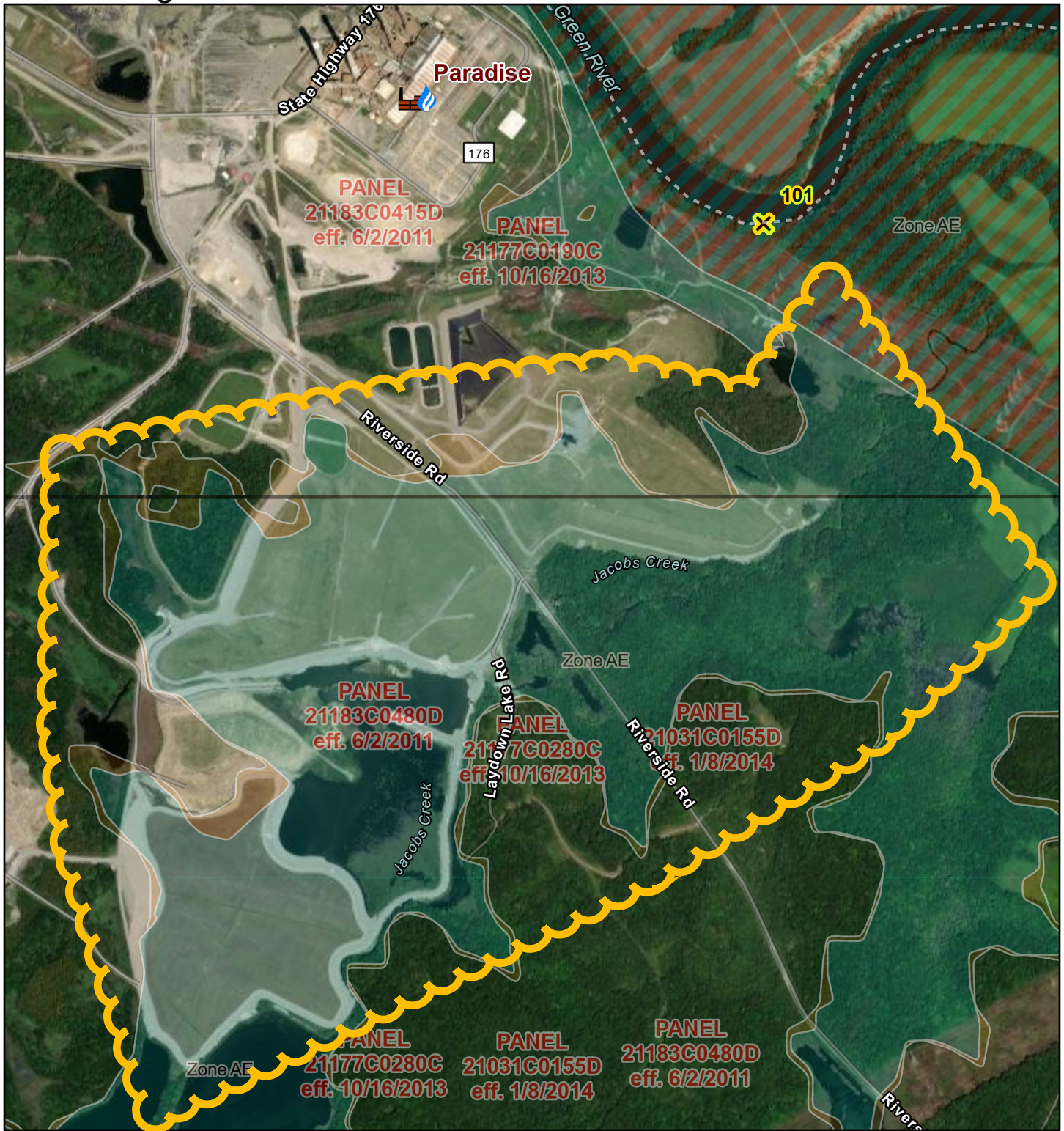


Earthstar Geographics
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USDA, USFWS
TVA GIS & Mapping



Area of future groundwater wells

Figure 4. Potential well locations near Jacobs Creek.






December 5, 2024

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Flood Hazard Zones

Zone Type

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-  Regulatory Floodway
-  0.2% Annual Chance Flood Hazard

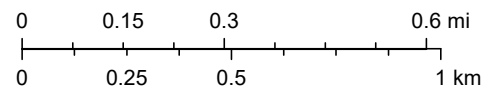
Flood Hazard Boundaries

LN_TYP

-  SFHA / Flood Zone Boundary
-  FIRM Panels

Fossil Plants

-  Coal/Gas
-  River Miles



Potential future well locations

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