

Leonard M. Prezorski
4953 State Route 145
Cobleskill, NY 12043

February 13, 2023

Town on Carlisle Planning Board

Re: Cypress Creek Renewables – Rock District Solar LLC public comments

I have reviewed the proposed Cypress Creek Renewables - Rock District Solar LLC Project application documents. This review is based on the documents posted on the project website <https://ccrenew.com/rock-district/application/> and on file with the Town of Carlisle. It is my opinion, which is based on 32 years of experience as a Soil Conservationist with the USDA Soil Conservation Service and 38 years of living and farming just over the hill from the project site, that there are a number of errors and omissions in the Full Environmental Assessment Form (FEAF) that greatly underestimates the environmental and community impacts of the project.

All of the following comments are based on the final FEAF Part 1, September 8, 2022 by Jason Dickey (TRC Companies; Sponsor) on behalf of the applicant Cypress Creek Renewables for the Rock District Solar project. This review also includes FEAF Parts 2 and 3 as submitted to the Town of Carlisle on December 13, 2022.

I have two major areas of concern regarding the environment impact of the Rock District Solar Project. They are the loss of Prime Farmland and the potential for the pollution local aquifers.

Loss of Prime Farmland

The Rock District Solar site is currently active agricultural land. Forage crops are grown on the land in support of a beef herd. The Rock District Solar Project will remove the use of this land from agricultural production. Of particular concern is the effect on the loss of Prime Farmland from production. The FEAF assessment of Project impacts on the agricultural resources on the site are incomplete and in places in error resulting in a gross under estimation of the true impacts.

The NYSDEC State Environmental Quality Review (SEQR)- Environmental Assessment Form Workbook for the evaluation of potential project impacts on agricultural resources <https://www.dec.ny.gov/permits/91745.html> details evaluation criteria and identifies potential impact thresholds to be documented on the FEAF.

FEAF Part 1 E.1.b identifies 124 acres of agricultural land to be impacted.

Part 1 E.3.a places 100 percent of all land under contract with Rock District Solar in Schoharie County Agricultural District No. 3.

Part 1 E.3.b. identifies approximately 235 acres of highly productive soils on the contract area.

FEAF Part 2 Question 8 correctly identifies the potential for impacts to agricultural resources by the Project.

NYSDAM policy attempts to limit the conversion of Prime Farmland Soils that are impacted by NYSERDA funded solar projects. Michael Saviola, NYSDAM recently explained: “The Department’s goal is for projects to limit the conversion of agricultural areas within the Project Areas, to no more than 10% of soils classified by the Department’s NYS Agricultural Land Classification mineral soil groups 1-4, generally Prime Farmland soils, which represent the State’s most productive farmland.”

FEAF Part 2 Question 8a Impact on soils groups 1 through 4 of the NYS Land Classification System, indicates no or small impact may occur. Instead, this project will have a major impact on prime farmland groups 1-4. All solar applications are required to include an exhibit for agricultural resources that inventory the number of acres of mineral soil groups 1-4 impacted by the proposed action.

A thorough review of all the Rock District supporting documents failed to identify this important evaluation. The only reference to this requirement is a brief mention of this in the June 22, 2022 letter from Jason Dickey TRC Companies to Stephen LeFevre of B & L. Mr. Dickey writes in reference to prime soils on the site, “This project will be situated over approximately 107 acres of these soils, which amounts to less than one percent of the high-quality farmland in these Towns.”

Project documents state that 124 acres are within the Limits of Disturbance (LOD). Using Mr. Dickey’s 107-acre figure this equates to 86 percent of the site. Referencing the NRCS Web Soil Survey reports I estimate a minimum of 65 acres or 52 percent of the site to be in soil groups 1-4. The applicant should correctly calculate this number as required and file the required NOI with NYSDAM.

FEAF Part 2.8.a. is therefore a large environmental impact due to the large loss of prime farmland resulting from the project.

FEAF Part 2.8.b. indicates a moderate to large impact. The impacts are large as the project will sever agricultural fields and the remaining agricultural land outside of the LOD will become inaccessible due to natural landscape and drainage features. Surrounding remaining agricultural land will be less productive due to increase edge affect from small field size. Existing large fields will become scattered odd shaped fields that are unworkable with modern farming machinery.

FEAF Part 2.8.d. 124 acres of agricultural land within an established Agricultural District will be converted to non-agricultural uses. The threshold for concern is 2.5 acres. NYS Agricultural District Law requires notification to the County Farmland Protection Board if this threshold is exceeded. A phone call today to John Radliff, chair indicates that the board has yet to receive this notification.

FEAF Part 2.8.e. Another major impact of the project is the disruption of an existing agricultural management system. Numerous subsurface (tile) drains have been previously installed in fields on the north and south ends of the project area. Surface inlets and outlets to the drainage systems are documented in the Wetland and Waterbody Delineation Report by TRC Co. Thousands of feet of tile will be disturbed by the extensive site grading and trenching yet no mention of this could be found in project documentation. The existence of drainage also potentially increases the acreage of prime farmland on the site.

FEAF Part 1.C.2.c. identifies the project site as located with the Schoharie County Agricultural District No. 3. It also references the Schoharie County Farmland Protection Plan (2017).

FEAF Part 2.8.g. indicates no to small impact from the proposed action. This project instead in direct opposition to the Schoharie County Farmland Protection Plan. The plan includes the Priority Farmland Area Map. Attachments Map 1. <https://www4.schohariecounty-ny.gov/PdfFiles/AgDev/agPlanMap.pdf> The Priority Farmland Area Map ranks the identified farmland parcels into 5 categories. The map shows the total 'score' of each parcel: The more features from the list above the parcel had, the higher the 'score' and thus the darker the color on the map. The higher ranked farmland parcels, symbolized in a darker red color on the map, deserve extra attention, especially when local or regional projects will have a significant impact on their continuation as farmland. The Rock District site is shaded the darkest indicating it is a high priority for remaining in agricultural use.

FEAF Part 2.8.d potential large impact

The Addendum to the FEAF Part3, Revised 11/2/2022 attempts to address the moderate to large impacts of the proposed action as identified in FEAF Part 2. The gross under estimation of the effects of the Rock District Solar project on the agricultural resources of the site are based on the false claim that agricultural activities will resume in the future and that remaining lands will continue to be farmed just like before the fences go up.

Numerous references have been made to follow NYSDAM Guidelines for Solar Energy Projects - Construction Mitigation for Agricultural Lands, https://agriculture.ny.gov/system/files/documents/2019/10/solar_energy_guidelines.pdf but the current site drawings do not include minimal provisions such as site-specific location such as topsoil stockpiling and reuse. Land disturbance on the site will be severe making the return of the land to agricultural cost prohibitive if not downright physically impossible. Many acres will be bulldozed. The North Access Road on the site includes the installation 112 feet of 24 inch culvert requiring 14 feet of fill to the top of the roadway for a distance of over 600 feet.

Potential for the Pollution Local Aquifers

The FEAF locates the project site in the wrong watershed and does not consider off site effects on the sensitive underlying aquifer. FEAF Part I Addendum, Attachment A, Figure 5 Watershed,

Aquifer and Coastal Zone Resources Map is incorrect. The watershed boundary delineated on the map indicates that all runoff from the project site flows to the Flat Creek – Mohawk River drainage basin. Attachments Map 2.

Attachment B to the FEAF, Wetland and Waterbody Delineation Report by TRC Co. Inc. August 2018 further documents this error on Page. 7 in Section 4.0 Hydrology. Stating that, “The Project is located within the Mohawk River watershed Hydrologic Unit Code (HUC): (020200041001).” The correct basin for the project site is HUC 020200050605 Cobleskill Creek.

This error is very significant as the project site is located on the western edge of the largest cave system in the northeast US which has formed in Karst topography. Karst is a landscape formed from the dissolution of soluble rock or rock containing minerals that are easily dissolved from within the rock. The landscape is characterized by sinkholes, caves, losing streams, springs, and underground drainage systems, which rapidly move water through the karst.

Limestone rock can be found in the northern part of Schoharie County and coincides with much of the agricultural lands in Wright, Schoharie, Cobleskill, Carlisle, and portions of Sharon. The project site lies on the western edge of the Cobleskill Plateau where most surface waters, including those from this site, drain into the subsurface karst aquifer. Numerous studies and published reports document the complex interconnection between surface drainage and the numerous cave systems in the Cobleskill Plateau and resurgences (springs) along the northern slopes of the Cobleskill Creek valley. These can be referenced to indicate that further investigation into the potential groundwater impacts of the project is warranted.

Attachments Map 3 is a corrected watershed map which shows that all drainage from the project site flows to the southeast. Blue line streams on this map are perennial which are also documented in the TRC report. All runoff from the site flows a short distance to closed depression. This outlet to this depression is known as Cave Mistake which is located adjacent to the shoulder of Little York Road.

Attachment Map 4 Locates Cave Mistake and other identified karst features in the Cobleskill Plateau.

On June 7, 1993 Kevin Dumont injected fluorescein dye into Cave Mistake. The fluorescein pulse arrived at Doc Shaul’s Spring 14 days later on June 21, 1993. This documented a direct hydraulic connection between the entrance of Cave Mistake and the spring miles to the south.

Attachment Map 5 Karst Systems and Flow Routes of the Cobleskill Creek. This maps documents the hydraulic connection between many identified sinks in the northern reaches of the plateau and the associated resurgences located along the northern fringes of the Cobleskill Creek valley.

Concerns about the interconnection between surface water via sink holes in the plateau and domestic wells are well justified and have been documented.

A study of the Cobleskill Plateau by Braun (2000, p. 62–63) indicated that “Of the 40 wells for which chemical analysis was available, 87.5 percent showed some level of contamination from nitrates and 82.5 percent contained phosphates... Of the 43 wells tested for bacteria using a presence or absence test, 81.4 percent showed a presence. These figures indicate a strong degree of interaction of surface water with well water on the limestone plateau. All the wells [tested] on the Cobleskill Plateau are located in an area where dairy farming is the number one industry. One of the wells, which had high nitrate levels, had raw manure coming through the water system...as reported by the homeowner. The well drew water from 116 ft below the surface [likely the location of the well pump, as the water level in the well was not noted]. Adjacent to the house are crop fields where sinkholes formed and are filled with fieldstone... The fieldstones fill the sinkholes, but they do not seal the sinkholes, which have a direct connection with groundwater.”

The Geotechnical Investigation Report by Mott MacDonald 9/20/19 P. 9 states, “Based on Mott MacDonald’s review of available USGS mapping, the bedrock formation beneath the northeast and southeast extents of the site includes Onondaga Limestone. While these bedrock units are susceptible to karst terrain, no surface depressions or other features indicative of ground subsidence were observed during our field investigation. Evidence of potential karst features just below the surface are documented in the same report on P. 52 Core Boring Log for test pit B-9. This test pit is located in the northeast of the site. Sampling clearly identified highly fractured limestone bedrock at the 4-to-8-foot depth and strong, closely spaced discontinuities limestone from 8 to 15 feet.

This is indicative of karst terrain where all surface water drains into the bedrock under a thin mantle of glacial till. 30 percent of the project area is soil mapped as HfB - Honeoye-Farmington Complex. 30% of the HfB map unit is exclusively Farmington soil which is underlain by limestone bedrock at as little as 20-inch depth. It is likely that additional soils borings would locate other shallow to bedrock locations within the HfB map unit. It is also noteworthy that limestone outcrops at the surface in the adjacent farm field 1000 feet east of the project boundary and sinkholes are visible on the surface along Karker Road 2000 feet to the east with rock outcropping and an escarpment just a little further to the east.

Surface water from this site potentially enters the groundwater aquifer via Cave Mistake as detailed above. At the location of test pit B-9 surface water can also directly enter the limestone bedrock on site. Exposed karst features are not the only concern in this landscape. Although the extent of karst development is important for understanding the surface water–groundwater interaction in a karst terrain, “the number of karst features has little to do with the problems of groundwater flow and contamination in karst. In fact, sparse karst can give a false security. Some of the worst cases of groundwater contamination are in carbonates with only minor karst features” (Art Palmer, professor emeritus, State University of New York at Oneonta, written commun., 2016).

FEAF Part 1.E.2.a records the average depth to bedrock on the site at 5.5 feet.

FEAF Part 1.E.2.g should clearly identify the unique karst features in and around the site.

FEAF Part 2. Impact on Geologic Resources. The installation of H-posts as solar panel foundations requires pounding into the soil to a minimum depth of 56 inches. The northeastern and southeastern are underlain by bedrock above this depth. The posts will be pounded into the bedrock in many locations to meet the minimum depth requirement.

Geotechnical Investigation Report by Mott McDonald 9/20/19 P. 9 Section 2.4 Geologic Impacts states, "The potential Impacts considered include, but are not limited to, significant soil erosion, detrimental fracturing of bedrock, introduction of slippage or failure planes and creation of subsurface instability." The potential for major impacts to the local geology exists due this activity that has not been fully evaluated.

FEAF Part 1.E.2.l. should consider potential impacts on the Principal Aquifer along the Cobleskill Creek.

FEAF Part 2.4. Impact on Groundwater. As detailed above, the potential for groundwater impacts from this project on the sensitive karst landscape exists. Further evaluation of this topic is warranted. The Watershed, Aquifer and Coastal Zone Resources Map identifies a Principal Aquifer along the northern banks of the Cobleskill Creek. This corresponds with the resurgences from the karst the Cobleskill Plateau to the north. As documentation exists between the potential runoff from the project site and this aquifer, all potential impacts should be evaluated.

With the potential for impacts to sensitive karst features the following subsections should be also re-evaluated. FEAF Part 2.3. Impacts to Surface Water - a. Construction along the bed and banks of waterways and wetlands. h. Increased stormwater runoff due to the installation of 38 acres of impervious solar panels. i. Degraded downstream runoff due to poor water quality from construction activities as well as project use and maintenance.

FEAF D.2.e.ii. 2 new culverts will be installed under the north and south access roads. These are new point sources.

FEAF D.2.e.iii. Runoff from the 24 inch culvert under the north access road will flow to a culvert under the town road and then on to neighboring property. Will the town culvert handle the additional flow?

Other Potential Impacts to be considered

I did not conduct a full assessment of the following items but bring them up for consideration should the FEAF be reopened for revision.

FEAF Part 1.D.2.e.i. Only .54 acres are identified as impervious. 31.8 acres of impervious solar panels should be added to this figure. FEAF Part 1.E.1.a. lists the 31.8 acres of panels as "other" which includes pervious surfaces. This should instead be under impervious surfaces instead. Post solar construction will most certainly result in increased stormwater runoff due to this

impervious addition and the lack of any meaningful peak runoff storage on the site. The SWPPP should include realistic post construction estimates.

FEAF Part 1.E.3.h. The Route 20 Scenic Highway is less than 5 miles and the project will be visible from the highway.

The Addendum to the FEAF Part 3, Revised 11/2/2022 attempts to address a number of potential major impacts of the proposed action. A number of these concerns are centered around visual impacts and consistency with community character.

The Town of Carlisle is a rural agricultural community. Active farms, from backyard flocks to large dairies dominate the land use. Rural homeowners move to the town for the beautiful views of the patchwork fields and forests. The Rock District Solar Project is totally inconsistent with the community character of the Town of Carlisle no matter how many trees they offer to block distant views.

The FEAF Part 3 completely fails to mention the effect of the project on neighboring property values. The applicant dismisses this concern in Part 2 by citing a biased report of no effect on property values by the installation of neighboring solar panels. This is certainly not true when beautiful views of the Adirondacks are tainted with the glare of solar panels in the foreground.

The vote on December 14, 2022 to accept the FEAF was premature as a minimum as comment from many involved agencies were not received at the time. Based on the above analysis of the FEAF, I request that the Town of Carlisle Planning Board reopen the Full Environmental Review for further evaluation of the long-term effects on the Town of Carlisle and surrounding communities of this proposed action.

On January 24, 2023 at the Town of Seward public hearing on the Rock District Project, I specifically asked Theresa Bakner if reopening the FEAF was an option the Town of Carlisle as the Lead Agency could exercise. She clearly answered yes if it could be demonstrated that errors and omissions in the FEAF would have affected the boards decision to find no significant impacts and the issuance of the negative declaration. I trust that I've provided you with adequate information to reopen the FEAF for further review of the Rock District Solar Project.

References

Agricultural and Farmland Protection Plan Schoharie County, March 17, 2017

Braun, B.B., 2000, Karst hydrology of the Cobleskill plateau, Schoharie County, New York: State University of New York at Oneonta, master's thesis, 76 p.

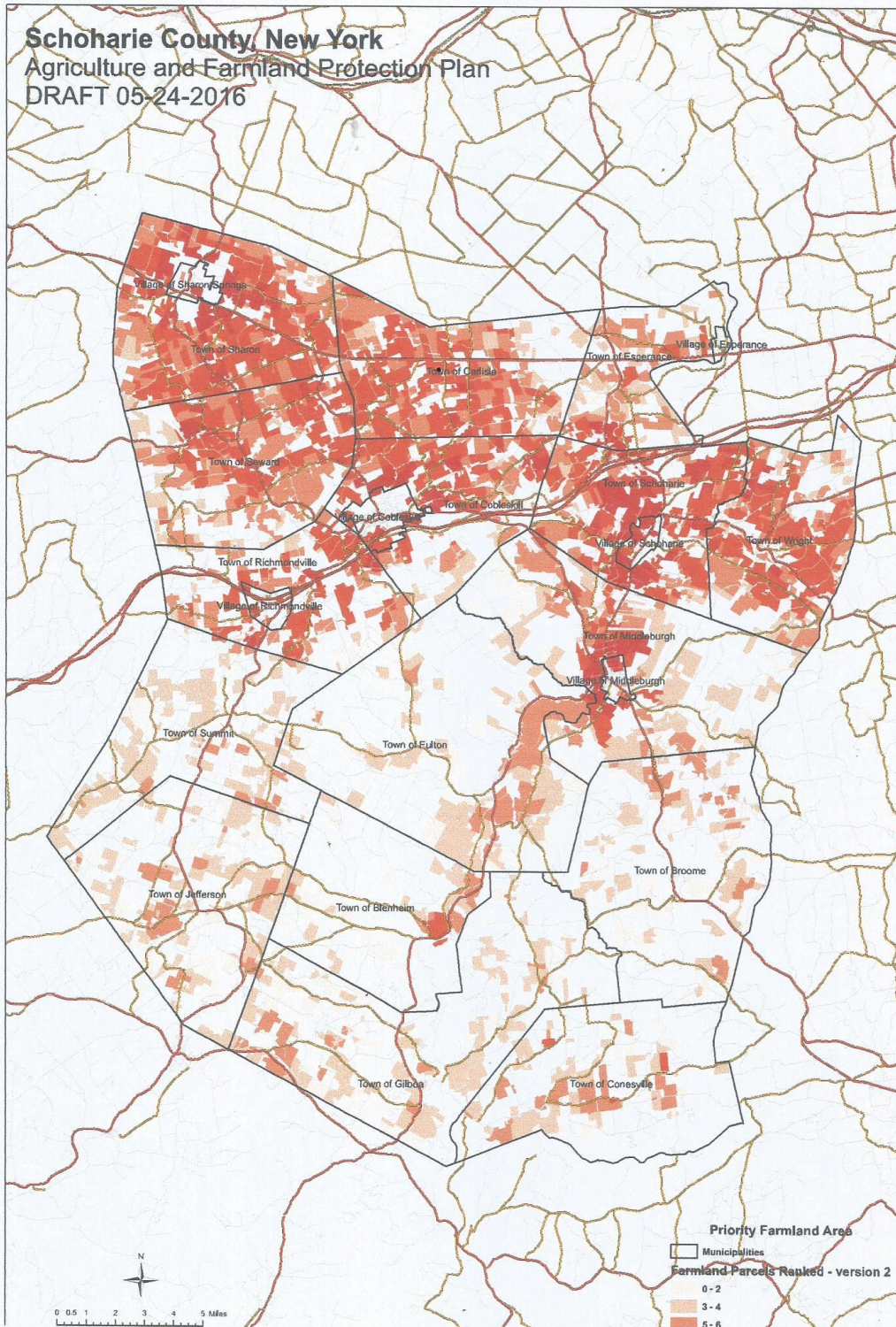
Dumont, Kevin A., 1995 Karst Hydrology and the Geomorphology of the Barrack Zourie Cave System, Schoharie County, NY

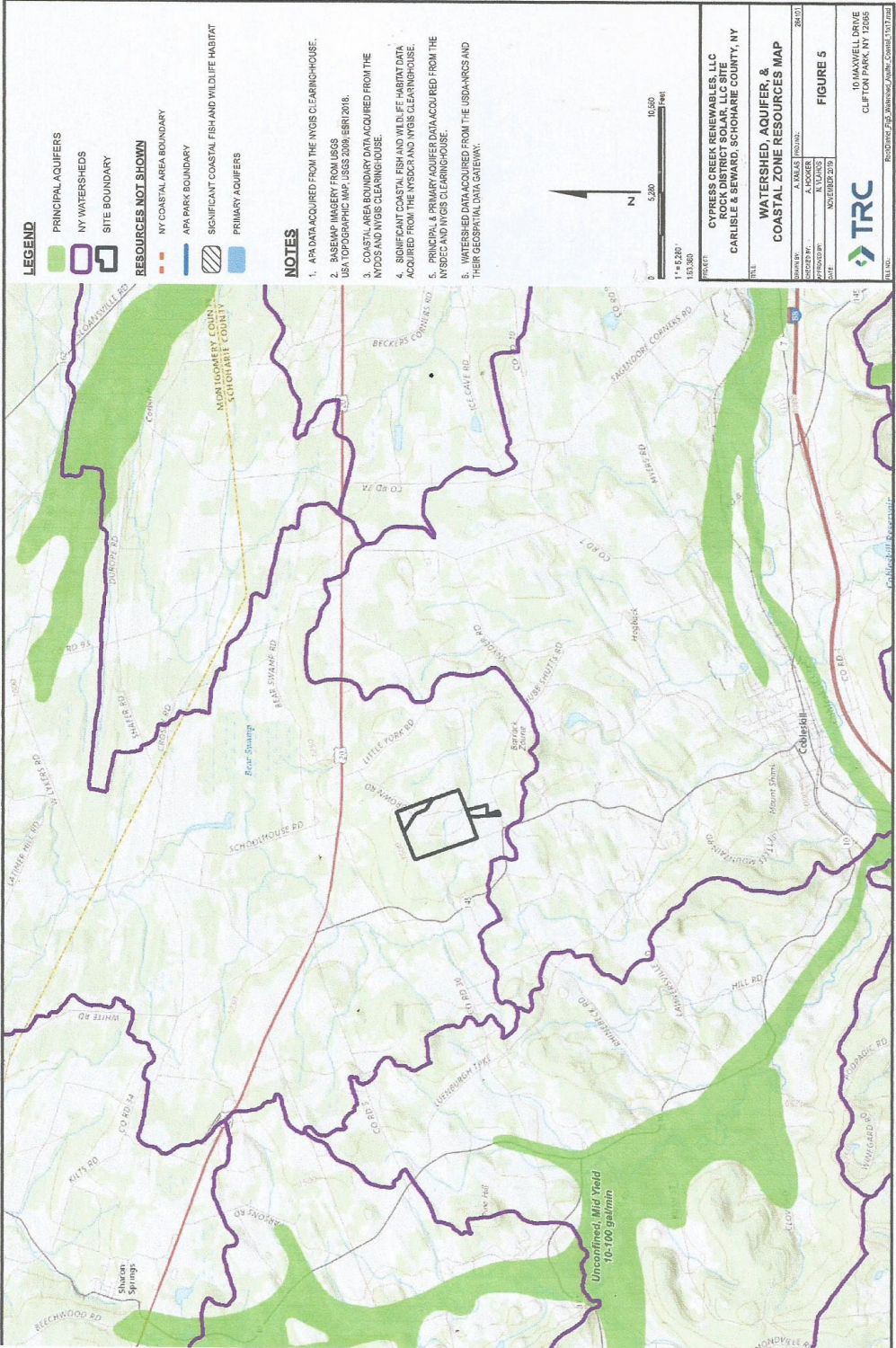
Palmer, A.N., Rubin, P.A., Palmer, M.V., Engel, T.D., and Morgan, B., 2003, Karst of the Schoharie valley, New York, in New York State Geological Association, 75th annual meeting, September 12–14, 2003, Oneonta, N.Y.: New York State Geological Association field trip guidebook, p. 141–176.

Statewide Assessment of Karst Aquifers in New York With an Inventory of Closed-Depression and Focused-Recharge Features, William M. Kappel, James E. Reddy, and Jonathan C. Root, USGS 2020

Attachments

Schoharie County, New York
Agriculture and Farmland Protection Plan
DRAFT 05-24-2016



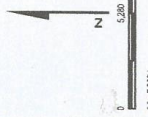


LEGEND

- PRINCIPAL AQUIFERS
- NY WATERSHEDS
- SITE BOUNDARY
- RESOURCES NOT SHOWN
- NY COASTAL AREA BOUNDARY
- APA PARK BOUNDARY
- SIGNIFICANT COASTAL FISH AND WILDLIFE HABITAT
- PRIMARY AQUIFERS

NOTES

1. APA DATA ACQUIRED FROM THE NYGIS CLEARINGHOUSE.
2. BASEMAP IMAGERY FROM USGS USA TOPOGRAPHIC MAP, USGS 2008 88R1208.
3. COASTAL AREA BOUNDARY DATA ACQUIRED FROM THE NYGIS CLEARINGHOUSE.
4. SIGNIFICANT COASTAL FISH AND WILDLIFE HABITAT DATA ACQUIRED FROM THE NYGIS CLEARINGHOUSE.
5. PRINCIPAL & PRIMARY AQUIFER DATA ACQUIRED FROM THE NYGIS CLEARINGHOUSE.
6. WATERSHED DATA ACQUIRED FROM THE USGS AND THEIR GEOSPATIAL DATA CENTER.



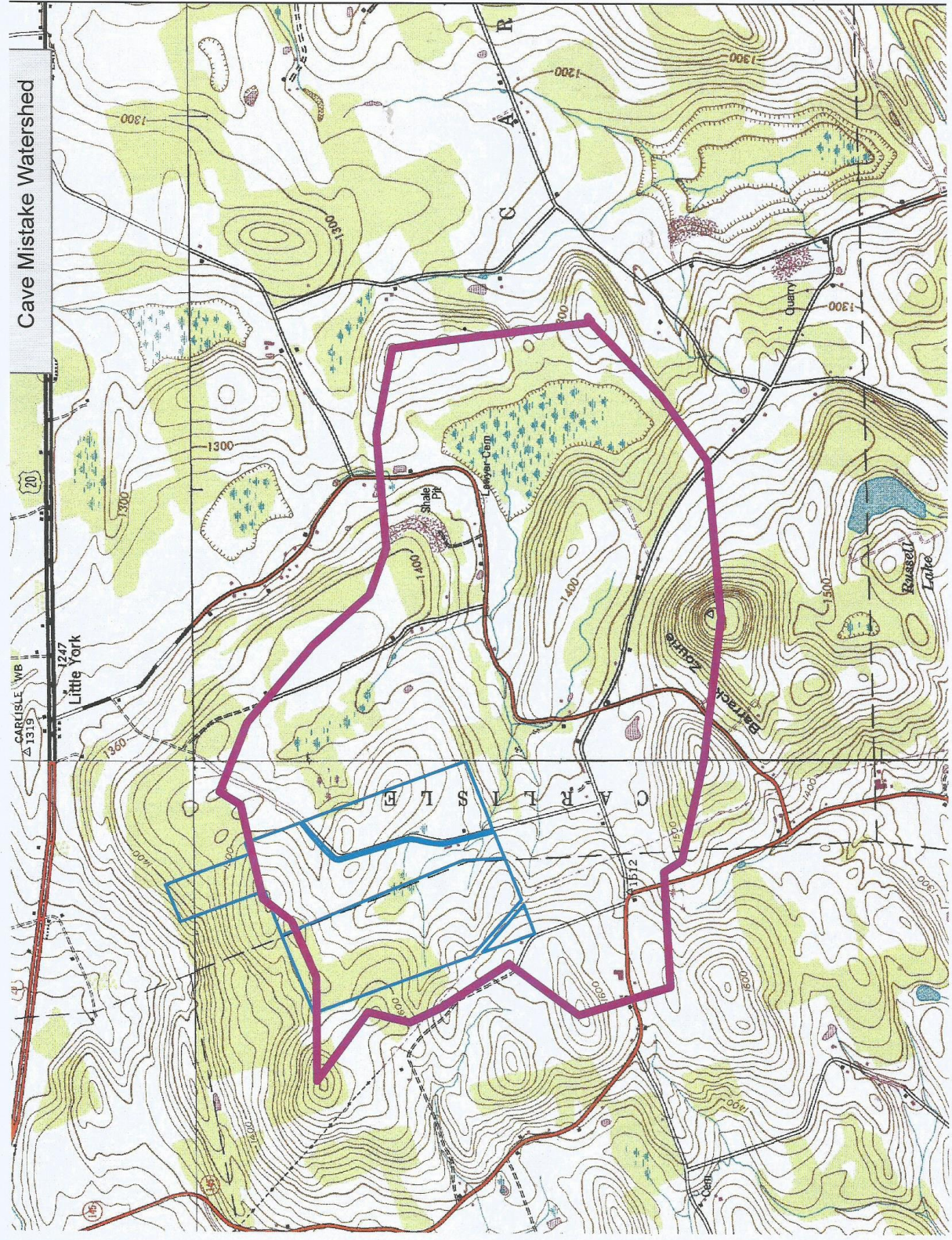
PROJECT: CYPRESS CREEK RENEWABLES, LLC
 100 ACRES OF WATERSHED AQUIFER & COASTAL ZONE RESOURCES MAP, SCHOHARIE COUNTY, NY

DATE: NOVEMBER 2019

FIGURE 5

TRC
 10 MAXWELL DRIVE
 CLIFTON PARK, NY 12065
 518-352-7200
 WWW.TRCSOLUTIONS.COM

Cave Mistake Watershed



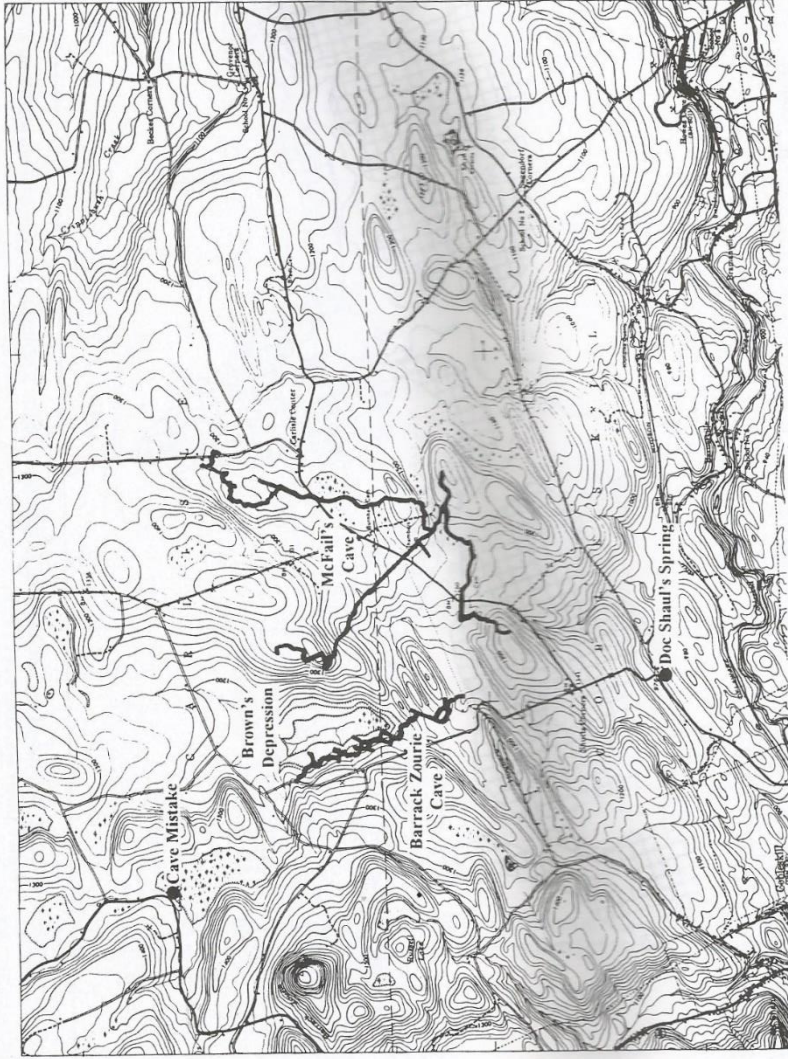


Figure 3 - Topographic map of the Cobleskill Plateau showing major karst features. Contour interval is 20 feet.

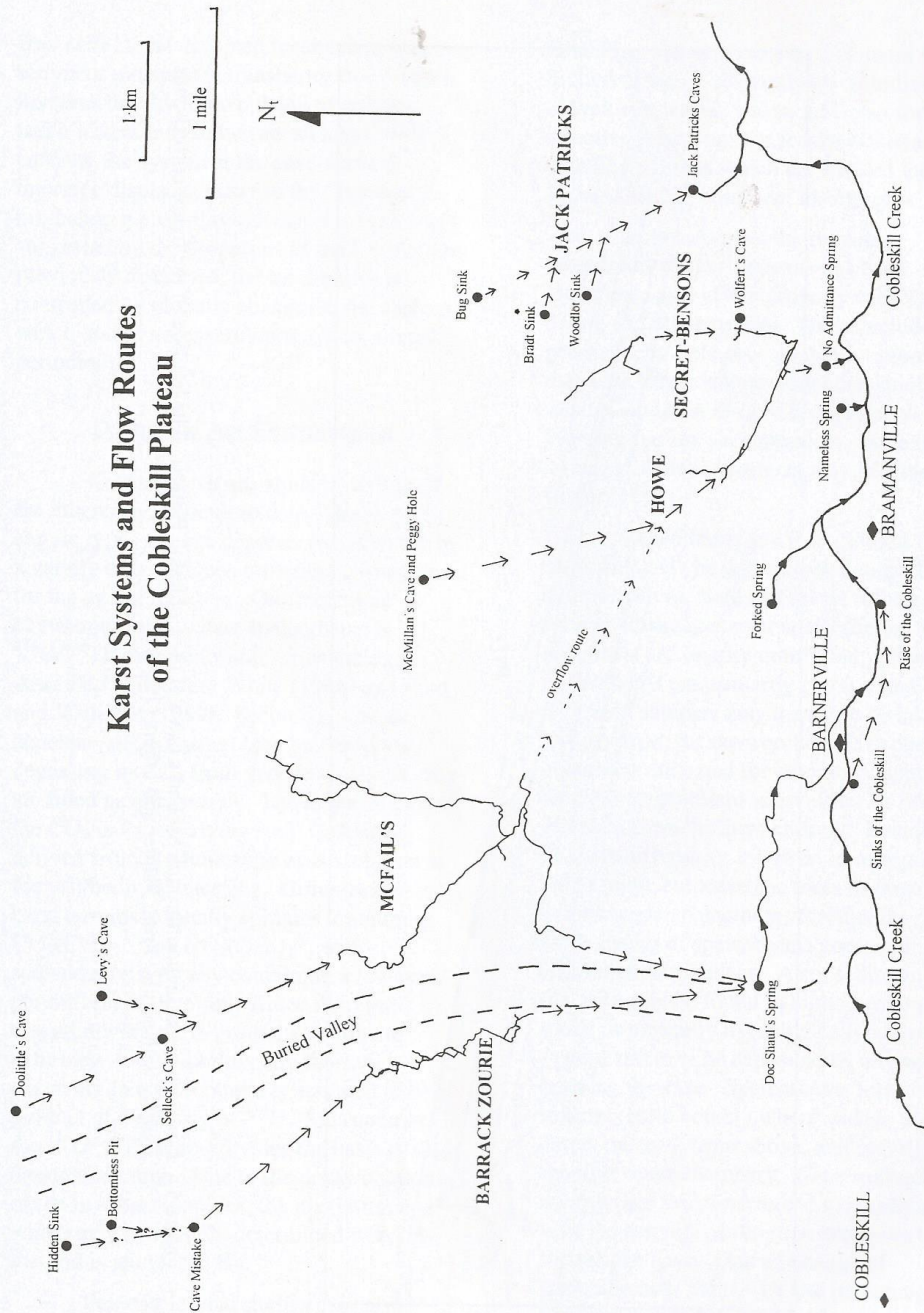


Figure 4 - Map of Cobleskill Plateau showing relative locations of all major karst features. Arrows indicate flow routes. Suspected flow routes are signified by question marks.