



## Iowa Department of Education Regional Center Study

### Web Mapping Application Details

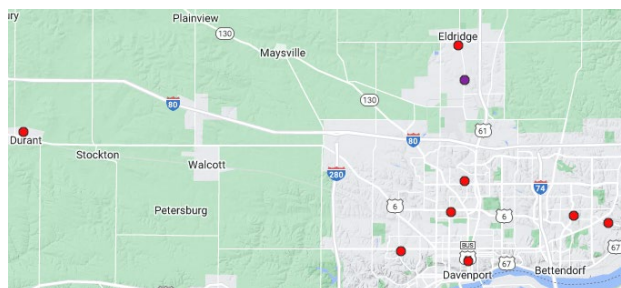
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The web mapping application at <https://www.geotree.uni.edu/web/idoe/> is built to allow data exploration in relation to present, planned, and potential future regional center locations and the location of high schools, school districts, community college locations, etc. More detail on data sources can be found at the bottom of this document. The definitions for centers can be found on the bottom of the left panel of the web application.

The application has various layers that can be toggled on and off and specific functionality for dynamically examining locations.

- Under Point Visibility –
  - High School point locations (red points) can be turned on and off. If all four types are turned on, this would be all high schools in the state
    - Otherwise if individually turned on then
      - Existing Regional Center Access – high schools which have an Existing Regional Center within a 30-minute drive time away from that school.
      - Planned Regional Center Access – high schools which have a Planned Regional Center within a 30-minute drive time away from that school.
      - Potential Regional Centers/Other Career Academies – high schools which have a Potential Regional Centers/Other Career within a 30-minute drive time away from that school.
      - No Access for above locations – these are high schools that don't have an Existing, Planned Regional Center, and don't have an Potential Regional Center/Other Career Academy within 30 minute drive time away from that school.
  - The Existing, Planned, and Potential (Other Career Academies) Regional Centers can be tuned on/off. So in example below purple points are Planned Regional Centers and the red points are high schools within a 30 minute drive time of those Planned Regional Centers in the Davenport area.



- Community College Visibility



- Community College locations can be toggled to show no (None) or all (All) community college locations. Alternatively, a user can turn on only points associated with a given Iowa Community College (e.g. Eastern Iowa Community College) or based on the type of facility at the given location. So in the latter situation or example below all point locations that are of Type= Administrative Center are turned on while in the first example all points associated with Eastern Iowa Community College will be displayed.

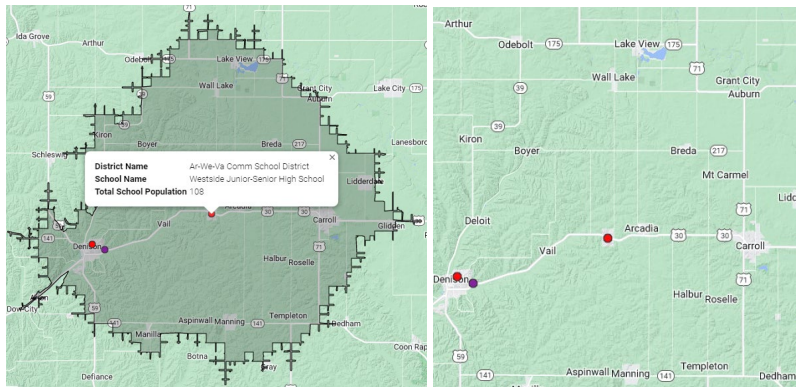


- Under District Visibility
  - You can toggle on the Community College Administrative Districts and Public School Districts

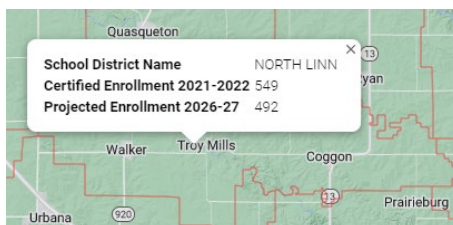
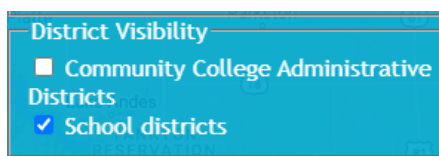
### Data Exploratory Tools

There are a variety of built-in custom data exploratory functionality. These are listed below in no specific order. The functionality can depend on which layers are turned on or off and where exactly clicked upon.

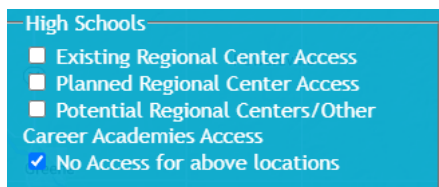
- If you have any of the high school points turned on and click on one of those points it will do 2 things
  - Bring up a popup with information including the name of the school district, high school, and the total high school population (2021-2022 school year).
  - It will draw the 30-minute drive time polygon away from that high school.
    - To turn that drive time polygon back off click on the high school point a second time.

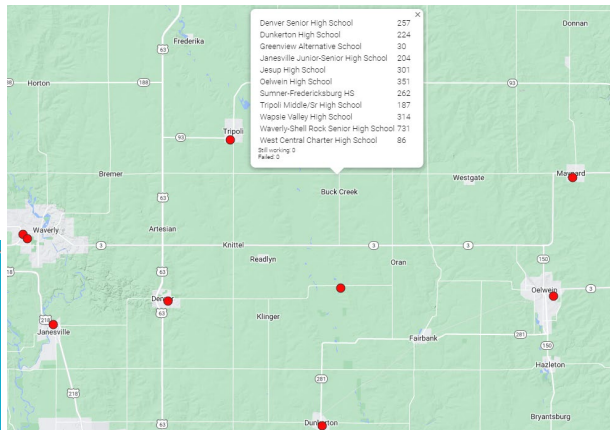
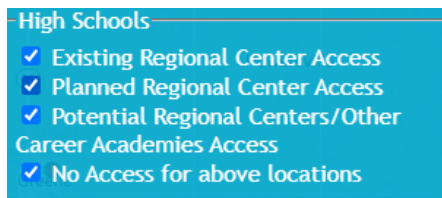


- If you have School Districts turned on under District Visibility and you click on a school district polygon in the map it will open a popup with the name, certified enrollment (2021-22) and projected enrollment (2026-27) and will also display historic and projected enrollment in the graph in left panel.

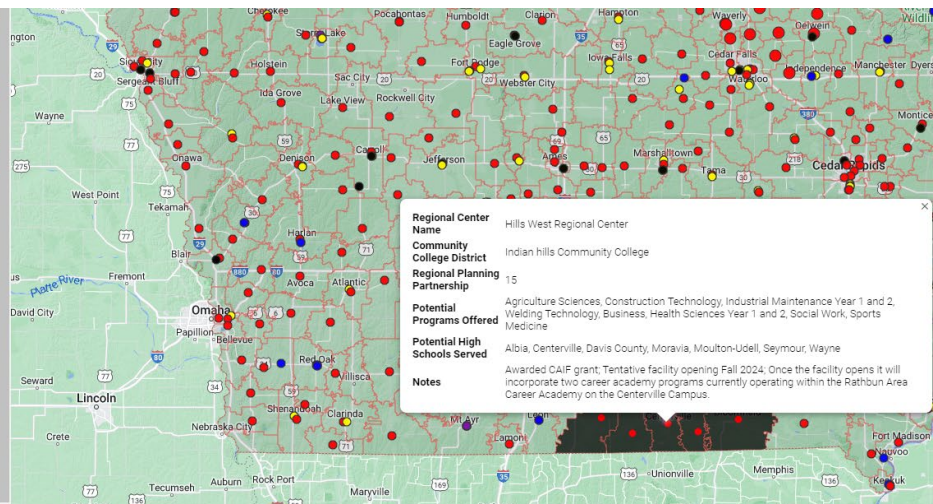
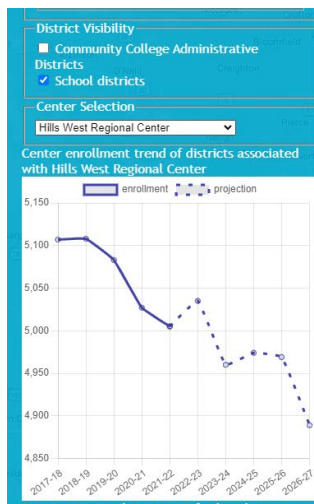


- If you click on any location on the map it will dynamically generate a list of high schools that are within a 30-minute drive time. The high school points within that drive time also are drawn with a bigger symbol
  - NOTE: This requires that neither the Community College Administrative Districts or School districts are turned on.
  - NOTE: The list generated is a function of which high school points are turned on. So in this example only one high school is chosen when the location (highlighted yellow) was clicked on in first screenshots. When all high schools are turned on the list is much longer.





- If a Center is selected under Center Selection the popup for that Center opens, the school districts that are potentially served by that Center are selected/highlighted in the map and the combine enrollment of those districts are displayed both historically and future projections.
  - NOTE: The School Districts must be turned on under District Visibility for the polygons to be highlighted.
  - NOTE: the districts served are a best estimate list that was created as part of this project (see below).



## Brief Metadata

- High Schools are subset of Public School Buildings downloaded from <https://educateiowa.gov/data-reporting/education-statistics-pk-12> in summer 2022. The UNI GeoTREE Center used addresses from those compiled data to geocode addresses (ArcGIS Pro World Geocoding Service) to create the points in the map. This should be all public high schools in the state of Iowa from 2021-22. The enrollment for each school came from <https://educateiowa.gov/documents/public-district-prek-12-enrollment-grade-race-and-gender/2021/12/2021-2022-iowa-public>



- All of the Center locations and attributes (e.g. potential programs offered, potential high school served) were the result of the Iowa Department of Education compiling the best available information from many collaborator from school districts and community colleges around the state. The UNI GeoTREE Center used addresses from those compiled data to geocode addresses (ArcGIS Pro World Geocoding Service) to create the points in the map.
- Drive time polygons are calculated either using ESRI's ArcGIS Pro Network Analyst extension (pre-calculated high school drive time polygons turned on when a high school is clicked on) or Google Maps API (when a user clicks on any location in the web map to find high schools within a 30-minute drive time).
- Community college locations were provided by the Iowa Department of Education in summer 2022.
- Enrollment projections by School District were provided by the Iowa Department of Education in late spring 2022.