

Operationally Available Capacity (OAC) Map Overview

Northern has developed a web-based interactive pipeline map to geographically represent Northern's [Operationally Available Capacity](#) (OAC) for its Market and Field Areas. The map can be used to quickly identify available capacity on a point or group level, based on scheduled activity, for the current and previous Gas Day. Due to limited space, not all of the points included on the Operational Available Capacity listing are displayed on the OAC map.

The Market Area portion of the map is designed to provide users the ability to identify the operationally available capacity of Northern's mainline and branch line allocation groups and the specific pipeline interconnects. The map's functionality allows users to select an allocation group and then determine the impact to specific interconnect points, as well as available point capacity. Northern expects possible uses of this information to include:

- Assessing risk associated with flows to alternate markets or from alternate supply points
- Identifying available supply sources during periods of constraint in portions of Northern's system (i.e., Oakland Allocation Group)

The Field Area portion of Northern's system is more dynamic in terms of flow direction changes. As such, the map details include group operational information for both receipts inside the group scheduled to points outside of the group, and deliveries scheduled to points inside the group from outside of the group. Users may filter the map based on the particular flow direction (e.g., Receipt or Delivery) of identified points, which may help determine available market or supply points for a constrained group.

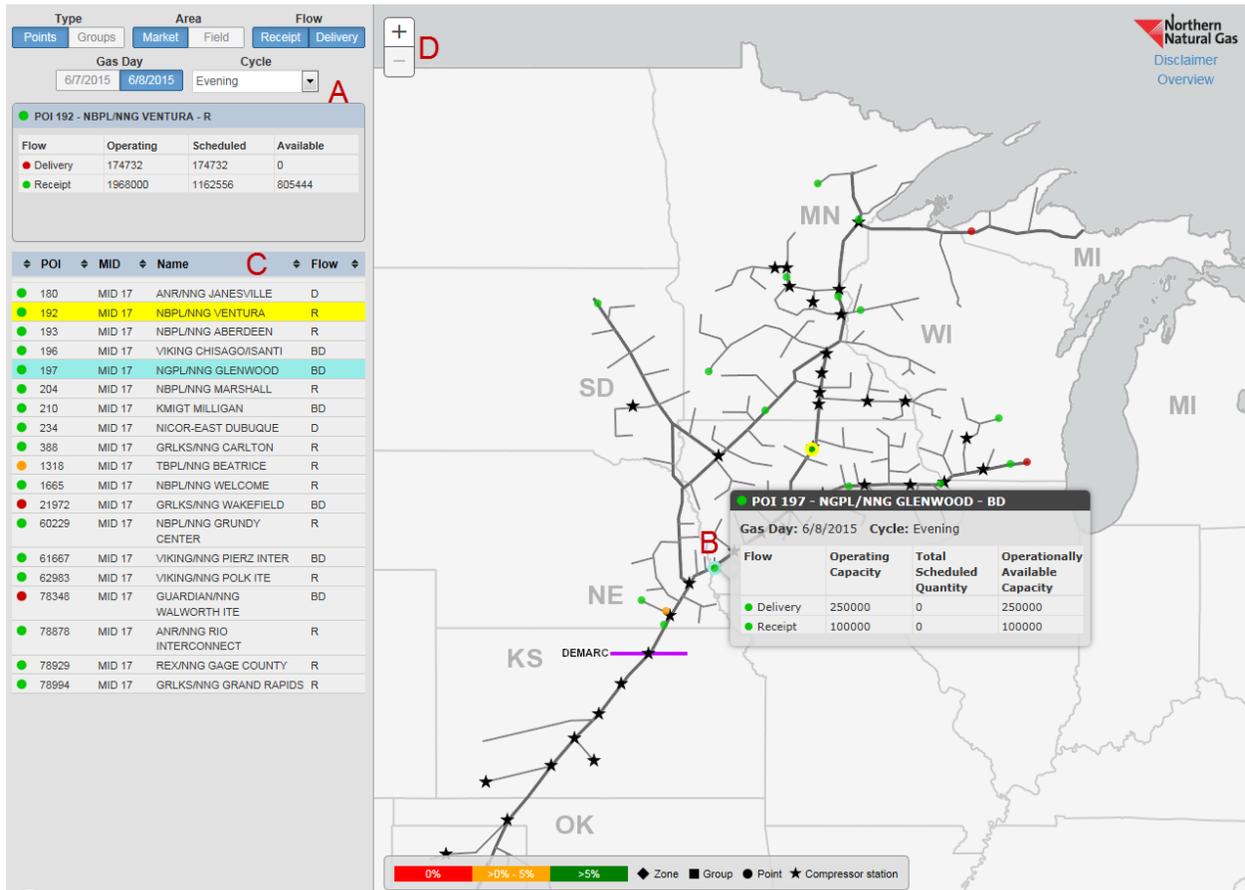
General

- Located in the upper left panel of the OAC map page, users will find selection criteria (see Section A below). Selections can be made between points or groups, Market or Field Areas, receipt or delivery flow, Gas Day and cycle.
- Some points in congested areas will become easier to see by zooming in and additional county detail is provided at the closest zoom extent. The map has three zoom levels that may be controlled by a mouse wheel or clicking on the map zoom button (see Section D below).
- The points and groups displayed on the map will be color coded to reflect varying levels of available capacity. The color green will signify that 5% or more of the operating capacity remains available. The color orange will be displayed when less than 5% of operating capacity is available. The color red will be used to indicate that there is no capacity available.
- The capacity map data will automatically update at the completion of each cycle. When this occurs, the map will be unavailable for viewing for a brief time, typically less than two minutes, while the new data is being updated.

Point Functionality

- Select a point in one of two ways. The first option is to click on the point name located in the left panel of the screen. The second is to click on the applicable icon on the map. Points are represented on the map with circle icons.
- Once a point is selected, its capacity data will be displayed in the upper left panel of the screen (see Section A below). Users will have the ability to hover over other points to view a snapshot of additional point capacity data without losing the capacity data associated with the point originally selected (see Section B below).
- All points listed on the left panel of the screen have the ability to be sorted either numerically or alphabetically by clicking on the applicable column header (see Section C below).
- To deselect a point, users can click on the selected point icon or name or by selecting a new point.

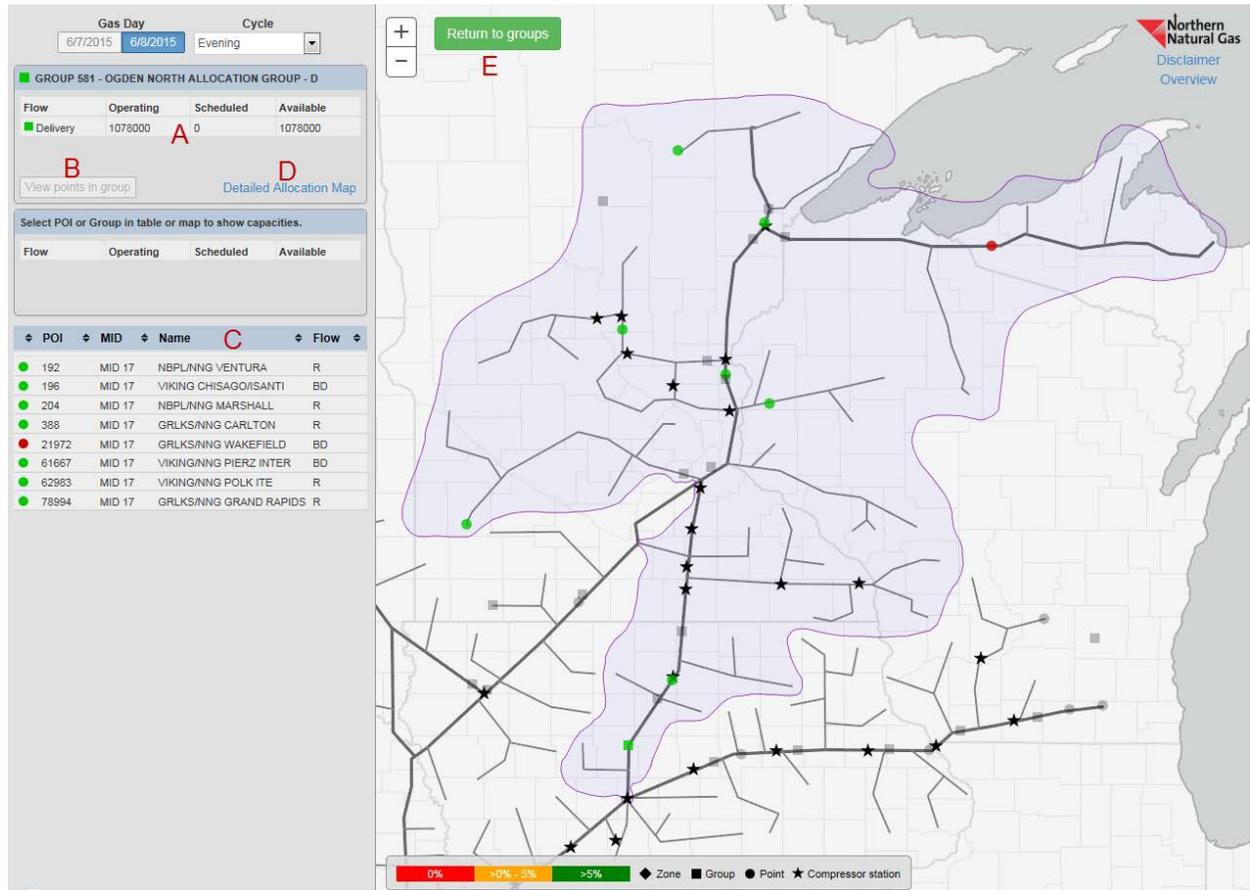
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Group Functionality

- Select a group in one of two ways. The first option is to click on the group name located in the left panel of the screen. The second option is to click on the applicable icon on the map. Groups are represented on the map with square icons.
- Once a group is selected, its capacity data will be displayed on the upper left panel of the screen (see Section A below). Users will have the ability to hover over other groups to view a snapshot of additional group capacity data without losing the capacity data associated with the group originally selected.
- All groups listed on the left panel of the screen have the ability to be sorted either numerically or alphabetically by clicking on the applicable column header.
- When a group is selected, the group's boundary will be visible on the map. Located above the list of groups is a *View points in group* button (see Section B below). When selected, this will display the points located inside of the group in the left panel and activate the point icons on the map (see Section C below).
- Only certain points within groups are provided on the capacity maps. While viewing the points in a particular group, users will have the ability to view an associated *Detailed Allocation Map* by clicking the link for that group. The *Detailed Allocation Map* link is adjacent to the *View points in group* button (see Section D below). This action will open a separate window and allow users to view a static map of the selected group with the ability to retrieve a complete list of points within the group.
- To return to the list of groups, users will have to click on the green *Return to groups* button located at the top of the map (see Section E below).
- To deselect a group, users can click on the selected group icon or name or by selecting a new group.

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Capacity Data

- The Operationally Available Capacity posted is an estimate of the capacity which could be scheduled at or through the group or point in the indicated direction of flow for the Gas Day and cycle referenced. Due to the dynamic nature of the pipeline operations, these capacities are subject to change without notice. Accordingly, there are no guarantees expressed or implied that these capacities will be available. The Operating Capacity may be limited by group and/or point constraints. Further, depending on the receipt and delivery point combinations nominated and scheduled, the Operating Capacity may be less than the design capacity and greater or less than the long-term sustainable capacity. Because of the grid nature of Northern's pipeline system, the operating conditions of the pipeline and the specific receipt and delivery points nominated and scheduled, Northern may schedule quantities that are greater than the Operationally Available Capacity posted for the nomination cycle.
- The Total Scheduled Quantity at group locations represents the quantity scheduled in the general direction of physical flows. The Total Scheduled Quantity may be greater than the posted Operating Capacity at the group location because the Operating Capacity represents the physical capacity for the group location and may not take into account all counter-flow scheduled quantities for the group.
- Only certain groups and points from the Operationally Available Capacity posting are provided on the capacity map. If you are interested in another point or group, please contact your customer service or marketing representative.