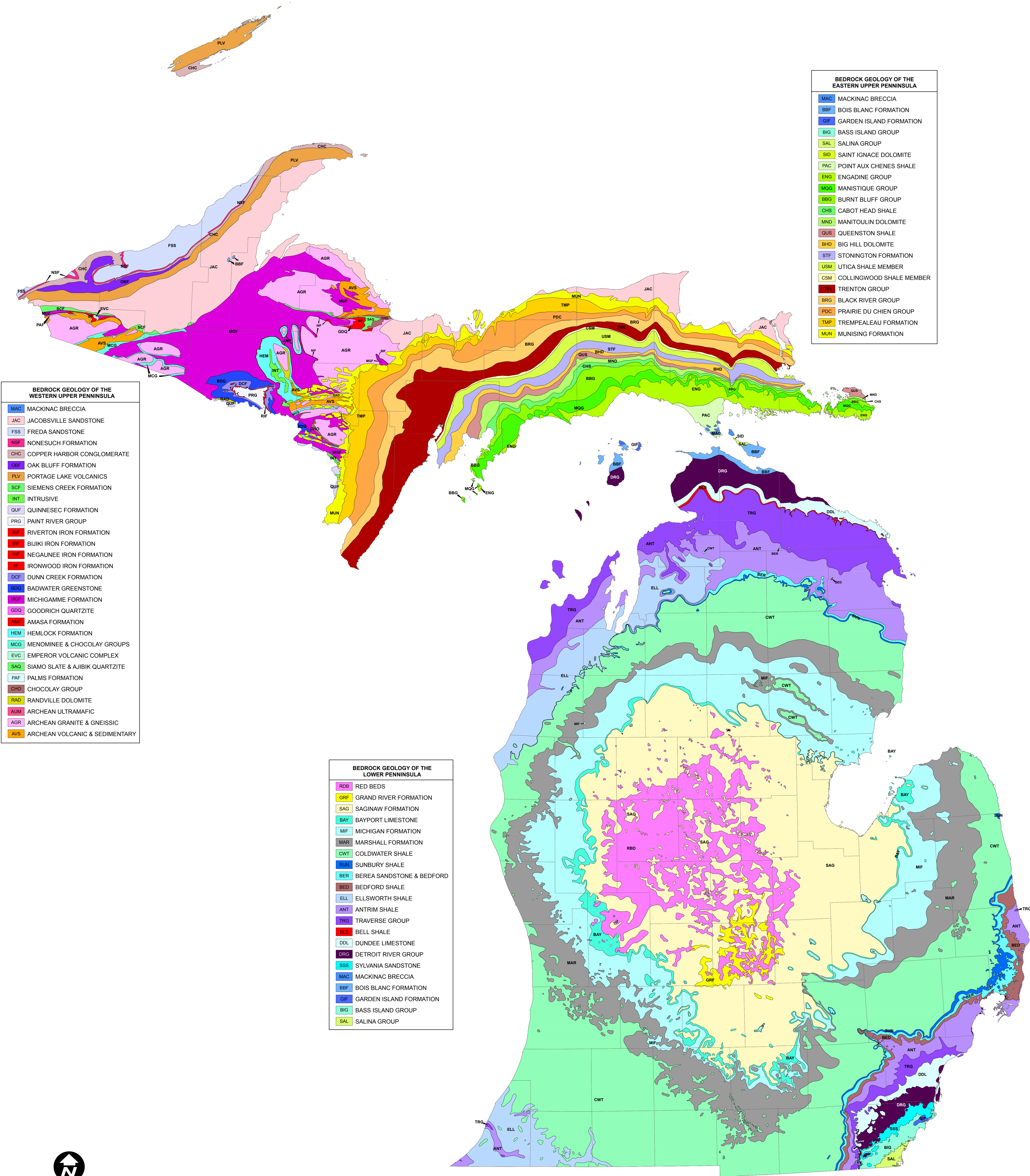


# BEDROCK GEOLOGY OF MICHIGAN



| BEDROCK GEOLOGY OF THE WESTERN UPPER PENINSULA |                                |
|------------------------------------------------|--------------------------------|
| MAC                                            | MACKINAC BRECCIA               |
| JAC                                            | JACOBSVILLE SANDSTONE          |
| FSS                                            | FREDA SANDSTONE                |
| NSF                                            | NONESUCH FORMATION             |
| CHC                                            | COPPER HARBOR CONGLOMERATE     |
| OBF                                            | OAK BLUFF FORMATION            |
| PLV                                            | PORTAGE LAKE VOLCANICS         |
| SCF                                            | SIEMENS CREEK FORMATION        |
| INT                                            | INTRUSIVE                      |
| QUF                                            | QUINNESEC FORMATION            |
| PRG                                            | PAINT RIVER GROUP              |
| RIF                                            | RIVERTON IRON FORMATION        |
| BIK                                            | BIJIKI IRON FORMATION          |
| NEG                                            | NEGAUNEE IRON FORMATION        |
| IF                                             | IRONWOOD IRON FORMATION        |
| DCF                                            | DUNN CREEK FORMATION           |
| BDG                                            | BADWATER GREENSTONE            |
| MGF                                            | MICHIGAMME FORMATION           |
| GDQ                                            | GOODRICH QUARTZITE             |
| AMF                                            | AMASA FORMATION                |
| HEM                                            | HEMLOCK FORMATION              |
| MCG                                            | MENOMINEE & CHOCOLAY GROUPS    |
| EVC                                            | EMPEROR VOLCANIC COMPLEX       |
| SAQ                                            | SIAMO SLATE & AJIBIK QUARTZITE |
| PAF                                            | PALMS FORMATION                |
| CHO                                            | CHOCOLAY GROUP                 |
| RAD                                            | RANDVILLE DOLOMITE             |
| AUM                                            | ARCHEAN ULTRAMAFIC             |
| AGR                                            | ARCHEAN GRANITE & GNEISSIC     |
| AVS                                            | ARCHEAN VOLCANIC & SEDIMENTARY |

| BEDROCK GEOLOGY OF THE EASTERN UPPER PENINSULA |                          |
|------------------------------------------------|--------------------------|
| MAC                                            | MACKINAC BRECCIA         |
| BBF                                            | BOIS BLANC FORMATION     |
| GIF                                            | GARDEN ISLAND FORMATION  |
| BIG                                            | BASS ISLAND GROUP        |
| SAL                                            | SALINA GROUP             |
| SID                                            | SAINT IGNACE DOLOMITE    |
| PAC                                            | POINT AUX CHENES SHALE   |
| ENG                                            | ENGADINE GROUP           |
| MOG                                            | MANISTIQUE GROUP         |
| BBG                                            | BURNT BLUFF GROUP        |
| CHS                                            | CABOT HEAD SHALE         |
| MND                                            | MANITOULIN DOLOMITE      |
| QUS                                            | QUEENSTON SHALE          |
| BHD                                            | BIG HILL DOLOMITE        |
| STF                                            | STONINGTON FORMATION     |
| USM                                            | UTICA SHALE MEMBER       |
| CSM                                            | COLLINGWOOD SHALE MEMBER |
| TRG                                            | TRENTON GROUP            |
| BRG                                            | BLACK RIVER GROUP        |
| PDC                                            | PRAIRIE DU CHIEN GROUP   |
| TMP                                            | TREMPEALEAU FORMATION    |
| MUN                                            | MUNISING FORMATION       |

| BEDROCK GEOLOGY OF THE LOWER PENINSULA |                           |
|----------------------------------------|---------------------------|
| RDB                                    | RED BEDS                  |
| GRF                                    | GRAND RIVER FORMATION     |
| SAG                                    | SAGINAW FORMATION         |
| BAY                                    | BAYPORT LIMESTONE         |
| MIF                                    | MICHIGAN FORMATION        |
| MAR                                    | MARSHALL FORMATION        |
| CWT                                    | COLDWATER SHALE           |
| SUN                                    | SUNBURY SHALE             |
| BER                                    | BEREA SANDSTONE & BEDFORD |
| BED                                    | BEDFORD SHALE             |
| ELL                                    | ELLSWORTH SHALE           |
| ANT                                    | ANTRIM SHALE              |
| TRG                                    | TRAVERSE GROUP            |
| BLS                                    | BELL SHALE                |
| DDL                                    | DUNDEE LIMESTONE          |
| DRG                                    | DETROIT RIVER GROUP       |
| SSS                                    | SYLVANIA SANDSTONE        |
| MAC                                    | MACKINAC BRECCIA          |
| BBF                                    | BOIS BLANC FORMATION      |
| GIF                                    | GARDEN ISLAND FORMATION   |
| BIG                                    | BASS ISLAND GROUP         |
| SAL                                    | SALINA GROUP              |