Excess Diversions

Data Processing Module: Statistics_ExceedsFV

Description: Identify water rights with reported annual diversion amounts that exceed the face value or previously reported annual diversion amounts.

Example: A water right holder has a reservoir and reports the total diversion amount under both "direct diversion" as well as "diversion to storage" thus resulting in doubling up of total diversion amounts.

What (is being flagged): Annual water use reports for appropriative water rights with total annual diversions that exceed face value. Annual water use reports for non-appropriative statements with total annual diversions that exceed previous reported diversions by a threshold.

Why: Water use with diversions reported above what is authorized by the water right are likely an error, or may be an unauthorized diversion and use of water, and will result in inaccurate and excessive water demand estimates.

How: Determine maximum reasonable annual total diversion (sum of direct diversion and diversion to storage) amount. For appropriative water rights, the face value field will be used to determine maximum annual diversion.

Resolution: Proportionally reduce each monthly reported diversion record so that the total annual diversion is equal to either the face value, or the mean annual diversion. Flag for potential direct follow up with water right holder to update the record, if in error.

Data Source(s):
- [ewrims flat file csv file](#)

Existing Fields:
- APPLICATION_NUMBER (ewrims_flat_file.csv)
- INI_REPORTED_DIV_AMOUNT (ewrims_flat_file.csv)
- INI_REPORTED_DIV_UNIT (ewrims_flat_file.csv)
- FACE_VALUE_AMOUNT (ewrims_flat_file.csv)
- FACE_VALUE_UNITS (ewrims_flat_file.csv)
- APPL_ID (water_use_report.csv)
- WATER_RIGHT_ID (water_use_report.csv)
- YEAR (water_use_report.csv)
- MONTH (water_use_report.csv)
- AMOUNT (water_use_report.csv)
- DIVERSION_TYPE (water_use_report.csv)

New Fields:

- Diversion_as_Percent_of_FV - For appropriative water rights; calculates the percentage of water diverted of the face value amount of the water right; if greater than 1, diversion exceeds the face value amount
- Amount_over_FV - Volume of water diverted that exceeds face value of water right
- Diversion_as_Percent_of_IniDiv - Applies to Statements of Water Diversion and Use or when face value is not available for appropriative water right; calculates the percentage of water diverted of the initital reported diversion amount; if greater than 1, it exceeds the initial reported diversion
- Amount_over_IniDiv - Volume of water diverted that exceeds the initial diversion amount of water right (converted to acre-feet)