**Google Earth Engine Code Editor Script (example using Rainwater Basin, fall migration):**

var States: Fusion Table “US regions” (56 rows, 1 column)

var Monthly: ImageCollection “JRC Monthly Water History, v1.0”

var RWBFa: Table users/nancymcintyre88/RWB\_contig

*[i.e.,:*

**var** States **=** **ee.FeatureCollection**("ft:1fRY18cjsHzDgGiJiS2nnpUU3v9JPDc2HNaR7Xk8"),

Monthly **=** **ee.ImageCollection**("JRC/GSW1\_0/MonthlyHistory"),

RWBFa **=** **ee.FeatureCollection**("users/nancymcintyre88/RWB\_contig");

*]*

var years = ee.List.sequence(1984, 2015);

var RainwaterFa = ee.Feature(RWBFa.first());

var boundary = RainwaterFa.bounds()

var addVarYear = function(year) {

year = ee.Number(year).toInt();

//This defines fall water extent as September data

var startdate = ee.String(year).cat("-09-01");

var enddate = ee.String(year).cat("-09-30");

// image.addBands(image.metadata('system:time\_start'))

var WaterFall = Monthly.filterDate(startdate,enddate).max();

// Creates water binary layer where 0=nodata, nowater=1, water=2; usually at least one water pixel within 3-m window pulled out by max() fn

var WaterSubset = WaterFall.clip(boundary);

var Water = WaterSubset.gt(1); // make Water binary

Water = Water.updateMask(Water.neq(0));

Water = Water.set('system:time\_start', year);

return Water;

};

var max\_water = ee.ImageCollection(years.map(addVarYear));

max\_water = max\_water.sort('system:time\_start');

var ExportCol = function(col, folder, scale, type,

nimg, maxPixels, region) {

type = type || "float";

nimg = nimg || 500;

scale = scale || 1000;

maxPixels = maxPixels || 1e10;

var colList = col.toList(nimg);

var n = colList.size().getInfo();

for (var i = 0; i < n; i++) {

// var year = years.get(i);

// var year\_real = ee.Number(year)

var year\_real = 1984 + i

var img = ee.Image(colList.get(i));

var id = img.id().getInfo();

region = region || img.geometry().bounds().getInfo()["coordinates"];

var imgtype = {"float":img.toFloat(),

"byte":img.toByte(),

"int":img.toInt(),

"double":img.toDouble()

}

Export.image.toDrive({

image:imgtype[type],

description: year\_real.toString(),

folder: folder,

fileNamePrefix: year\_real.toString(),

region: boundary,

scale: scale,

maxPixels: maxPixels});

}

};

ExportCol(max\_water,"RWBFa\_export",30,"byte",500,1e10,boundary.geometry());