figure( 1 )

plot( depth )

title('lake depth')

xlabel('Month: Jan85-Dec08')

ylabel('Depth(ft)')

legend('Jordan lake', 'Falls lake')

jordanOverTarget = numel(depth( depth(:)>216 & depth(:)<230));

fallsOverTarget = numel(depth( depth(:)>251.5));

figure( 2 )

R = rain';

j\_rain = R(1,:);

aug\_j\_rain = j\_rain(8:12:288);

f\_rain = R(2,:);

aug\_f\_rain = f\_rain(8:12:288);

y = (1985:2008);

plot(y, aug\_j\_rain)

hold on

plot(y, aug\_f\_rain,'r-')

title('Rain in August')

xlabel('year')

ylabel('inches')

legend('Jordan lake', 'Falls lake')

hold off

figure( 3 )

D = depth;

j\_depth = D(:,1);

f\_depth = D(:,2);

jan = f\_depth(1:12:288)-251.5;

feb = f\_depth(2:12:288)-251.5;

mar = f\_depth(3:12:288)-251.5;

apr = f\_depth(4:12:288)-251.5;

may = f\_depth(5:12:288)-251.5;

jun = f\_depth(6:12:288)-251.5;

jul = f\_depth(7:12:288)-251.5;

aug = f\_depth(8:12:288)-251.5;

sep = f\_depth(9:12:288)-251.5;

oct = f\_depth(10:12:288)-251.5;

nov = f\_depth(11:12:288)-251.5;

dec = f\_depth(12:12:288)-251.5;

y\_dep = [sum(jan)/24, sum(feb)/24, sum(mar)/24, sum(apr)/24, sum(may)/24, sum(jun)/24, sum(jul)/24, sum(aug)/24, sum(sep)/24, sum(oct)/24, sum(nov)/24, sum(dec)/24];

x\_dep = 1:12;

bar(x\_dep, y\_dep)

title('Rain in August')

xlabel('month')

ylabel('deviation')

moreThanOneInch = 4;

lessThanOneQuarterInch = 314;

figure( 4 )

te\_rain\_bymonth = rain(176:188,:);

te\_rainfall = cumsum( te\_rain\_bymonth );

plot(te\_rainfall)

title( 'Cumulative rain 2008' )

xlabel('day')

ylabel('inch')

legend('gague1', 'gague2')

lowestHeight = [210.2300, 1.4600, 3.0600, 2.5500];

maxIncrease = [1.1600, 7.1500, 2.5700, 4.3700];

MaxDecrease = [-0.4700, -6.2200, -1.5600, -2.5300];