

# PROGRESS ON PHASE II OF THE NON-TIDAL ANACOSTIA MODEL

Interstate Commission on the  
Potomac River Basin

June 17, 2003

# FEATURES OF PHASE II MODEL

- 1996-2000 Simulation Period
- Updated Land Use Provided By Counties
- Calibrated Against Storm and Base Flow Data Collected at Northeast and Northwest Gages For WASA's CSO LTCP

# TOPICS

- Land Use
- Hydrology Calibration
- Target Stormwater Concentrations

# LAND USE

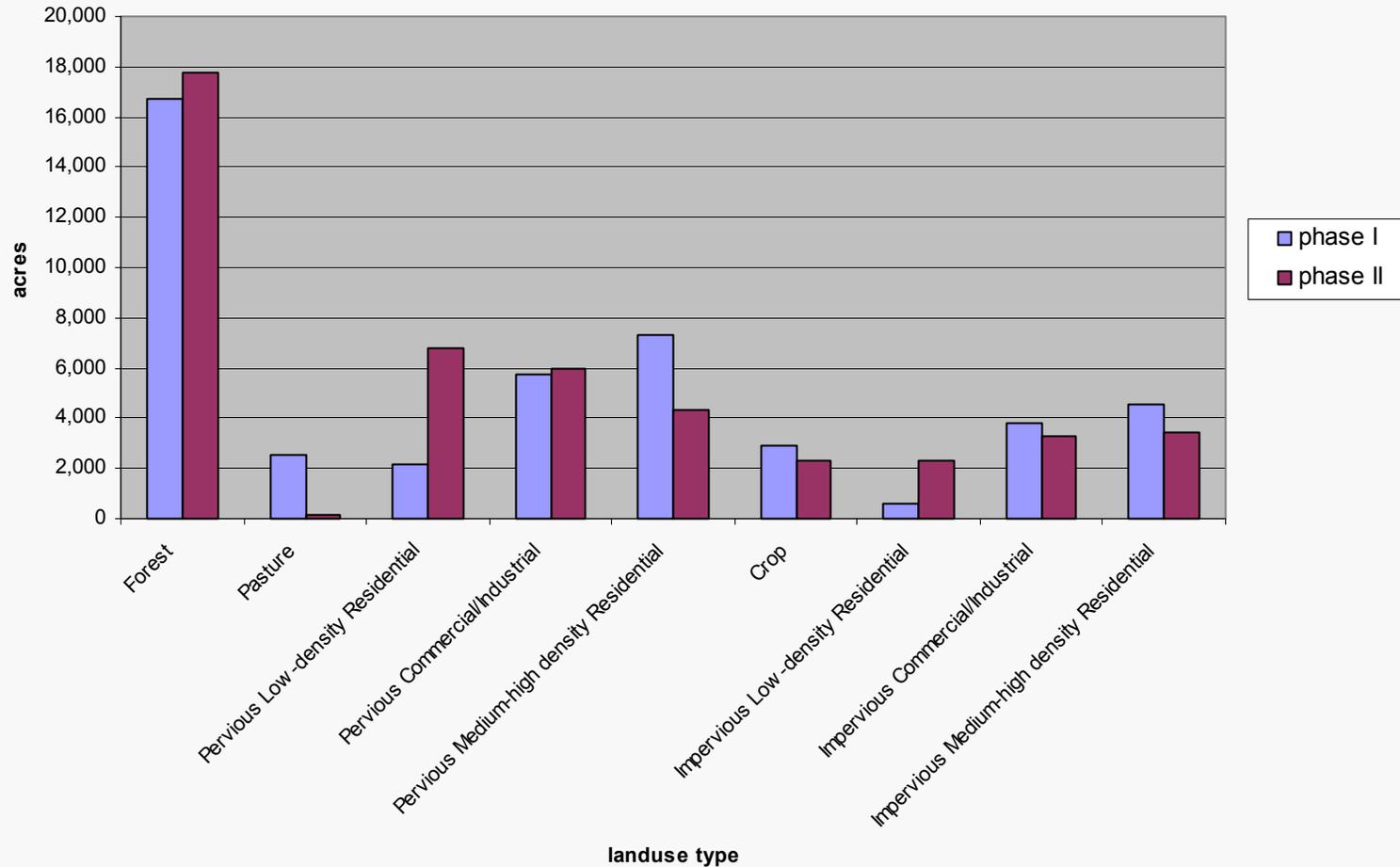
# PG COUNTY LAND USE

- 2000 Land Use Layer
- Produced By Towson State
- Based on Satellite Data
- Percent Imperviousness Supplied By PG County

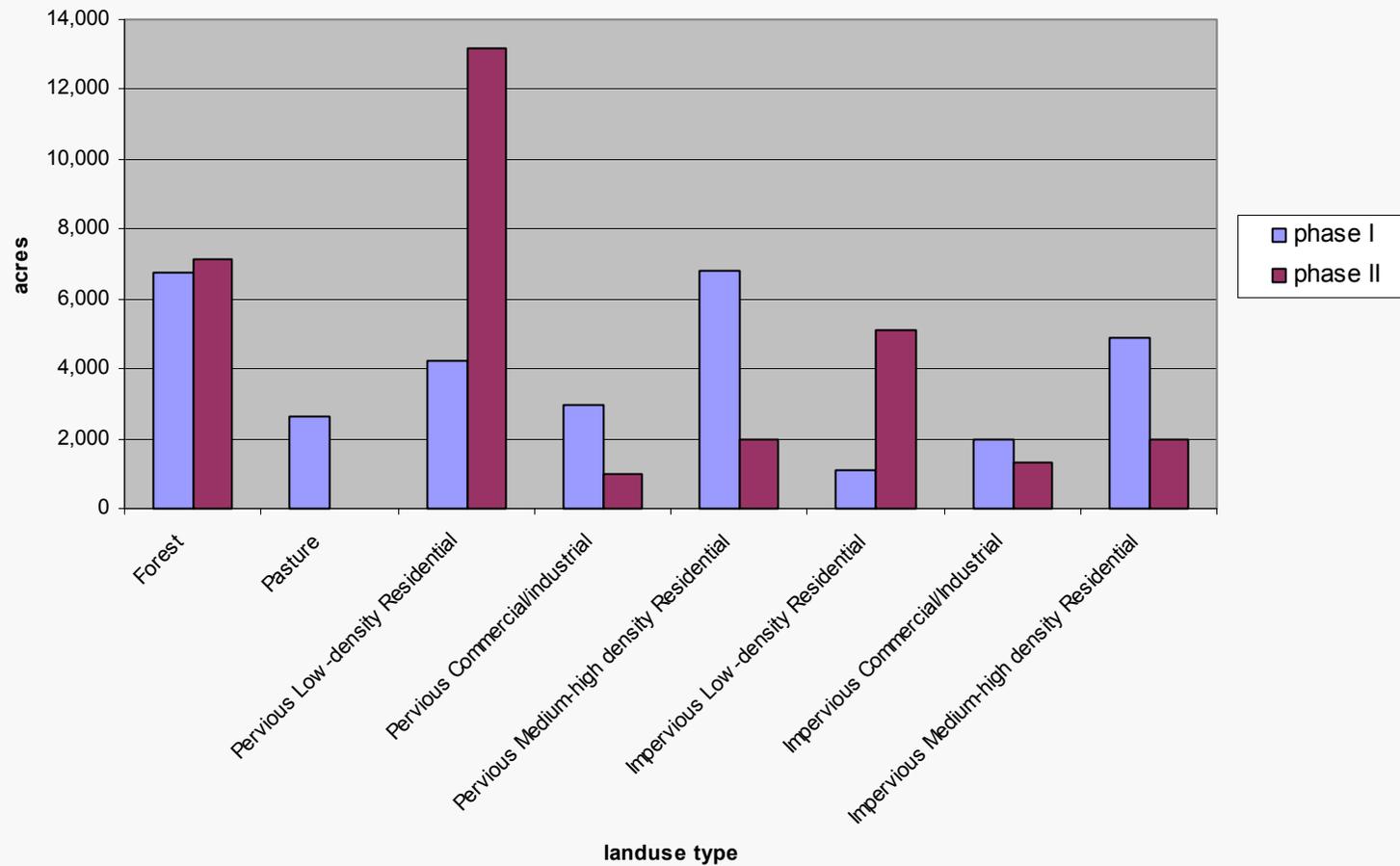
# MONTGOMERY CO. LAND USE

- Land Use based on Zoning Layer
- Land Cover based on Photogrammatic  
Layers: Buildings, Parking Lots, Sidewalks,  
Roads, Trees, Pasture
- Pervious Urban = Zoning – Tree Cover -  
Impervious Surfaces

# NORTHEAST BRANCH LAND USE



# NORTHWEST BRANCH LAND USE



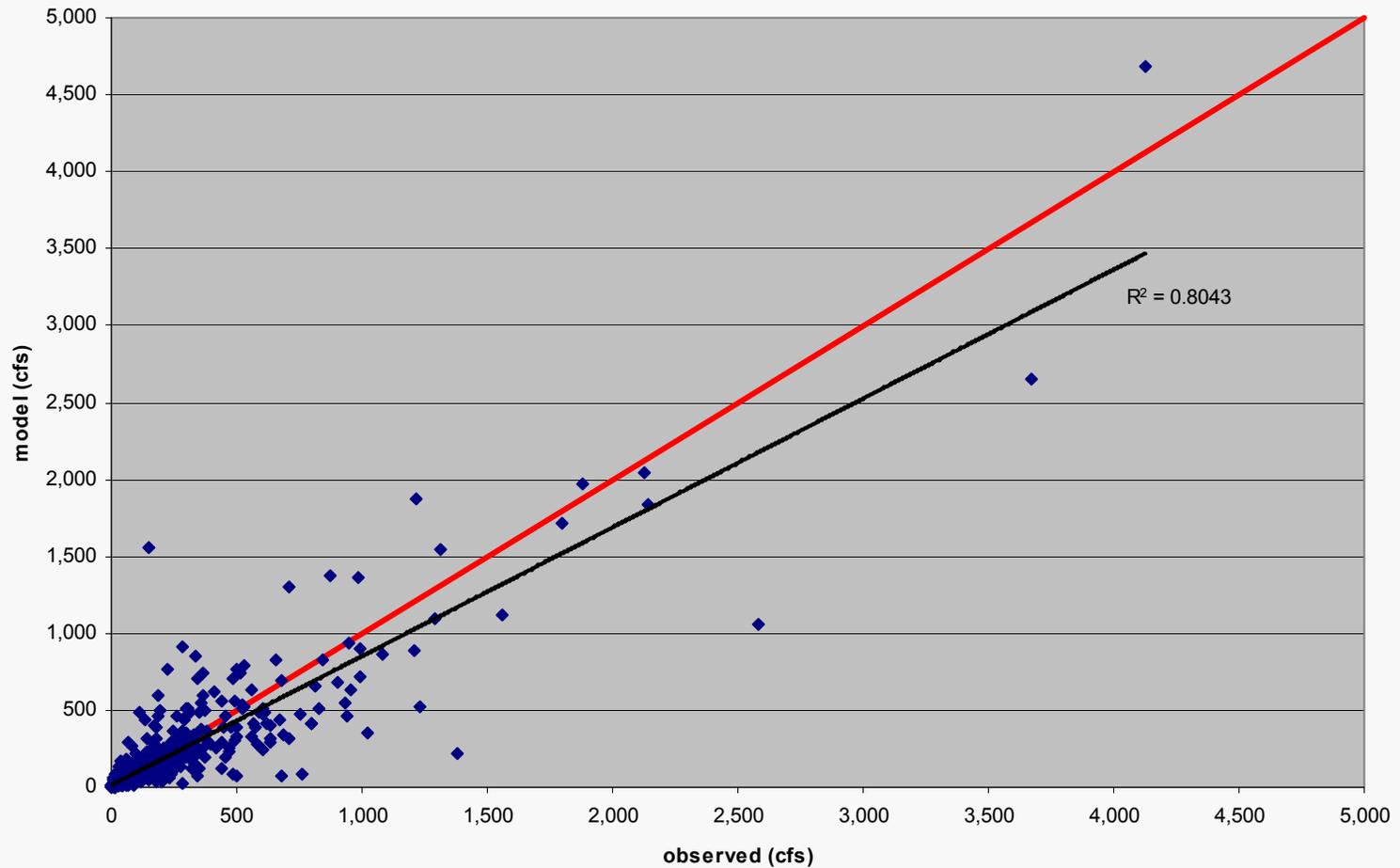
# HYDROLOGY CALIBRATION

# SIMULATED FLOW VOLUMES

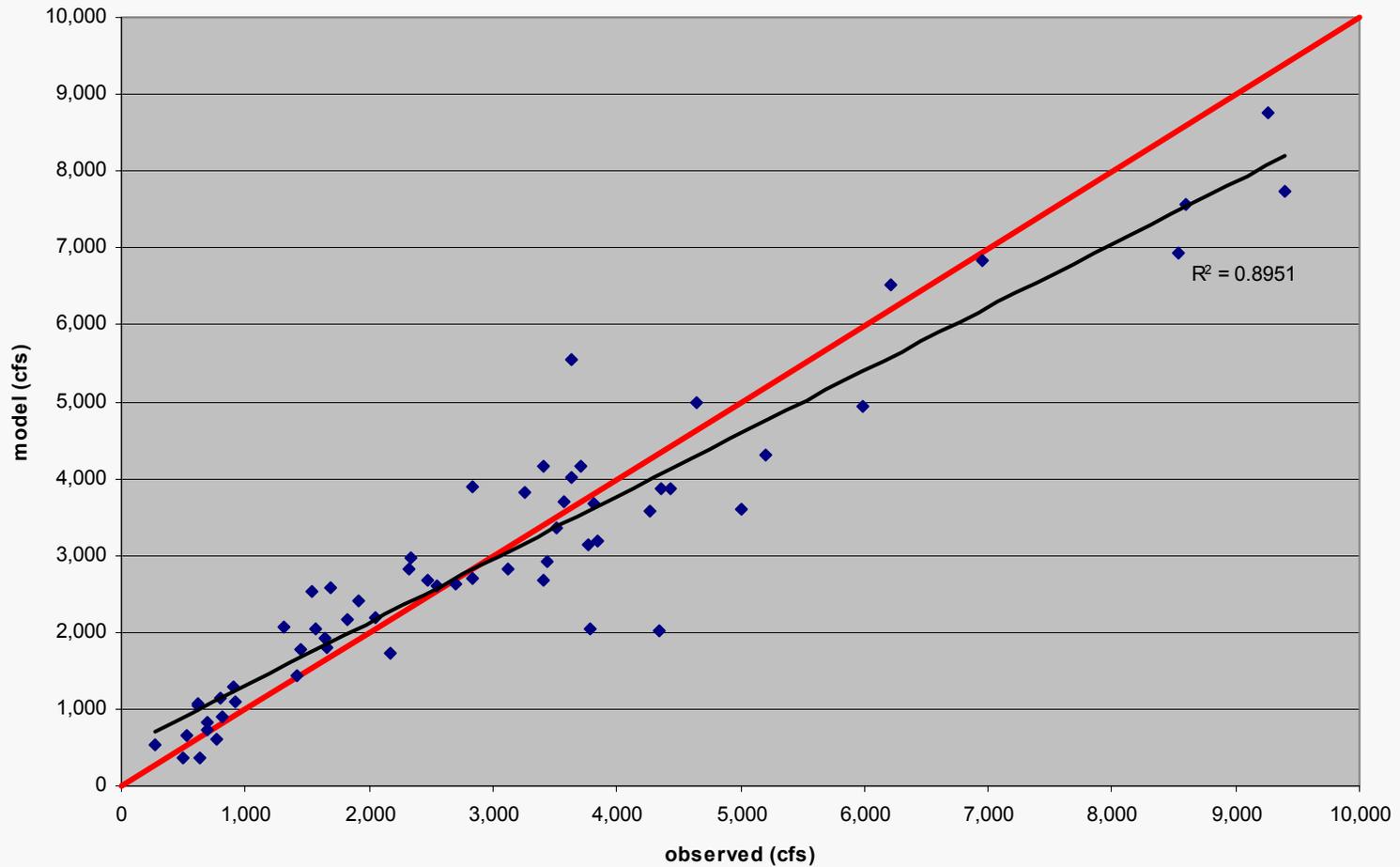
(in percent of observed volume)

	Northeast	Northwest
Low Flows (<50%)	112%	118%
High Flows (>90%)	99%	99%
Spring	97%	100%
Summer	103%	108%
Fall	104%	104%
Winter	93%	101%
Total	98%	102%

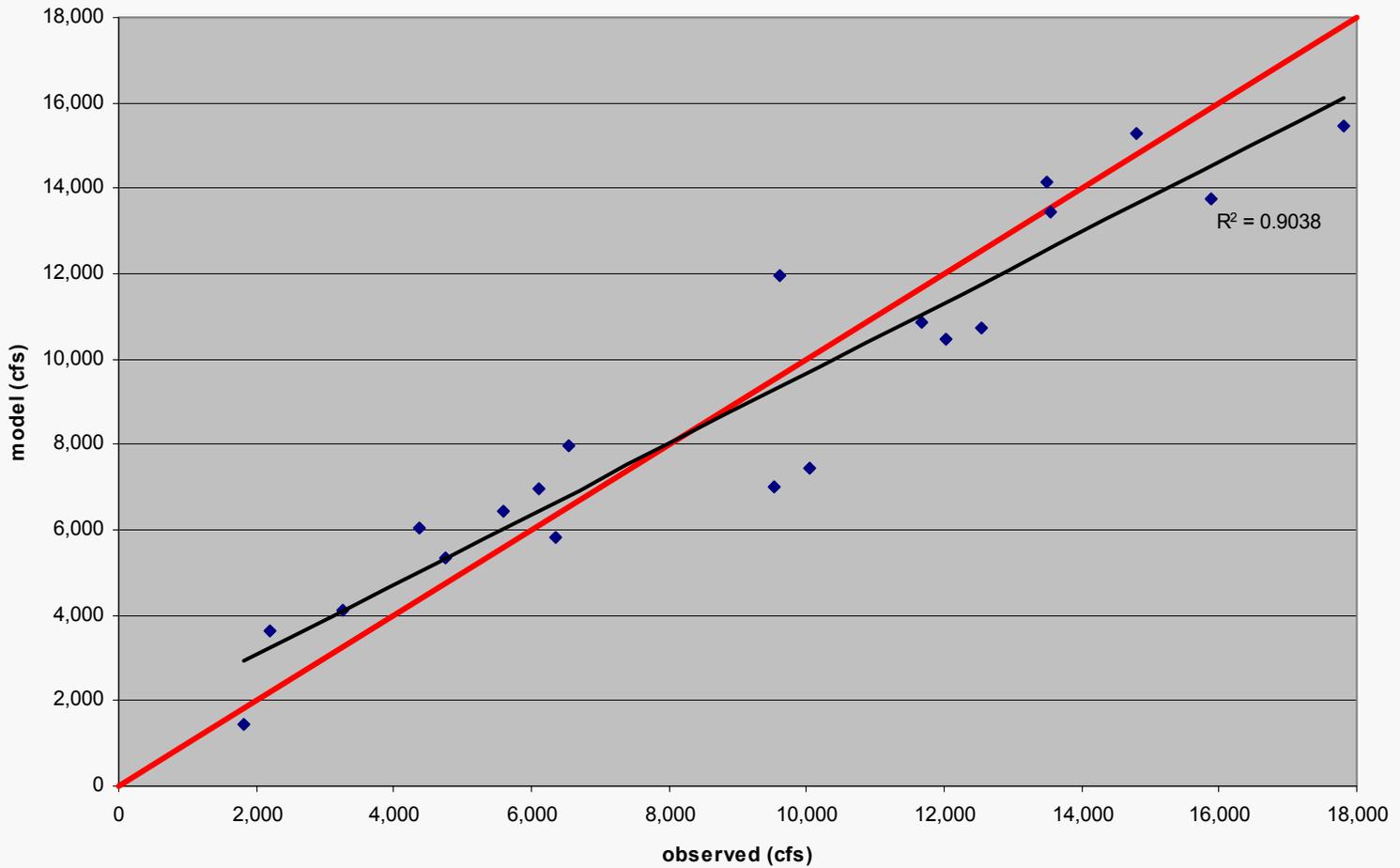
# DAILY FLOW NORTHEAST BRANCH



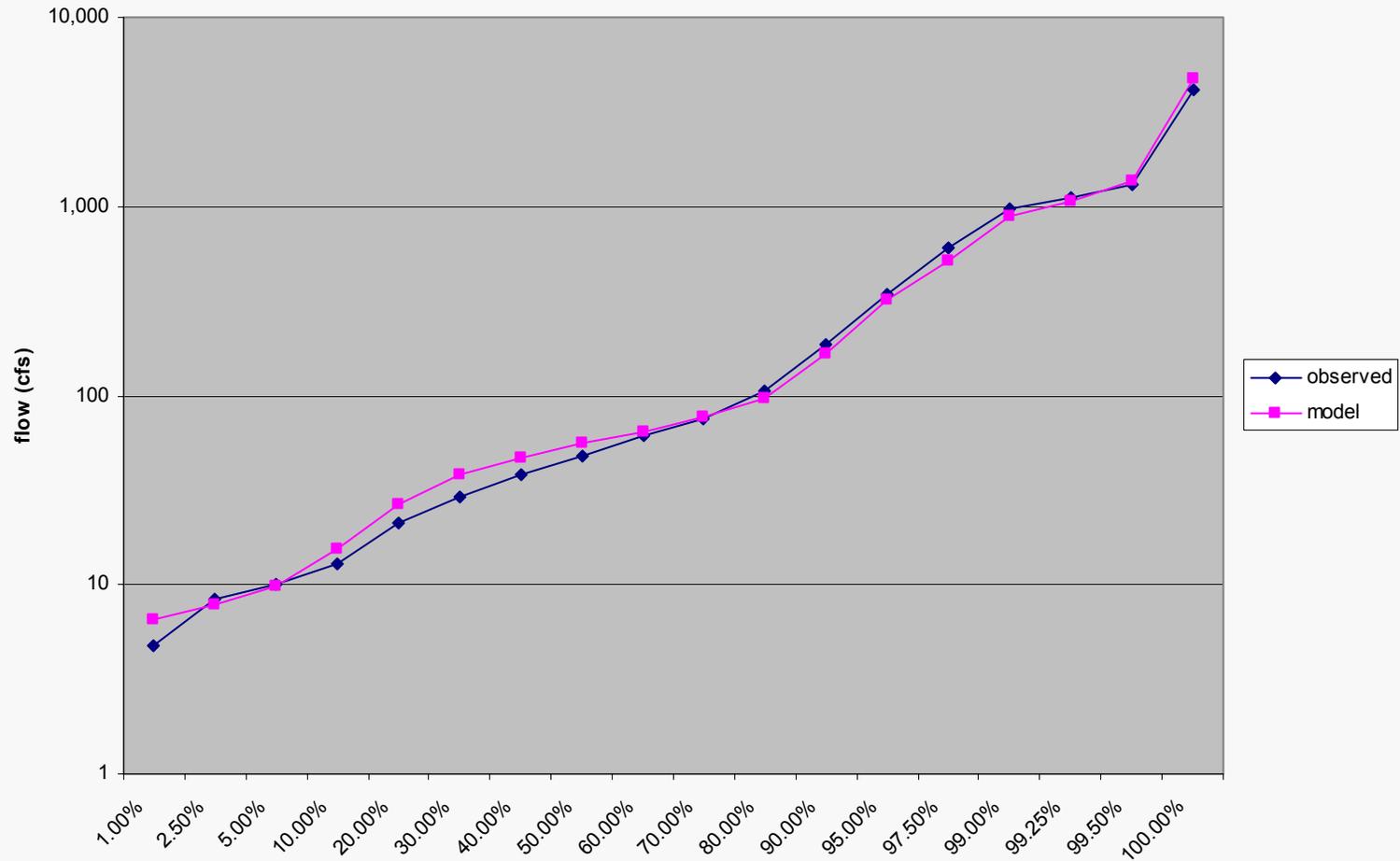
# MONTHLY FLOW NORTHEAST BRANCH



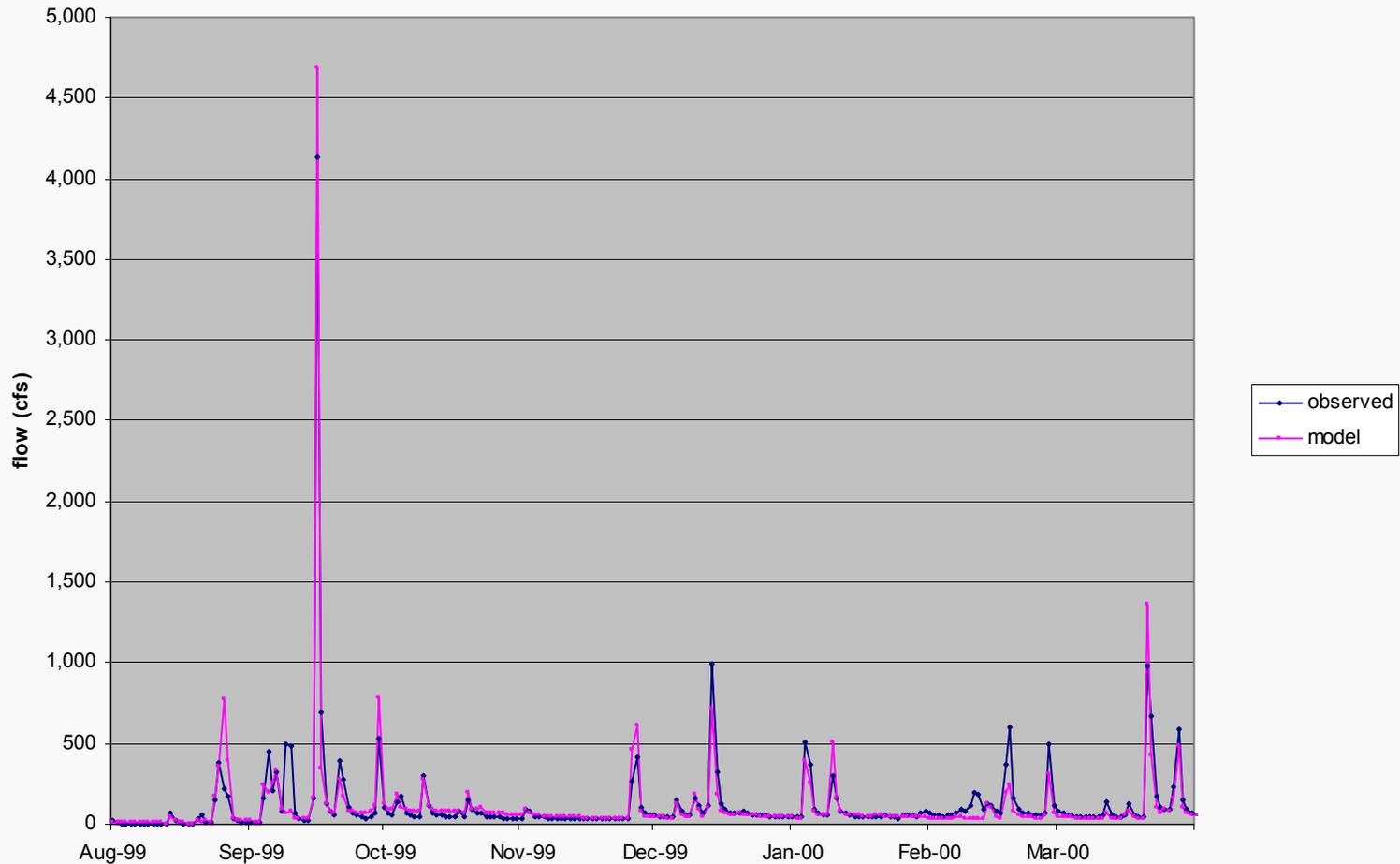
# SEASONAL FLOW NORTHEAST BRANCH



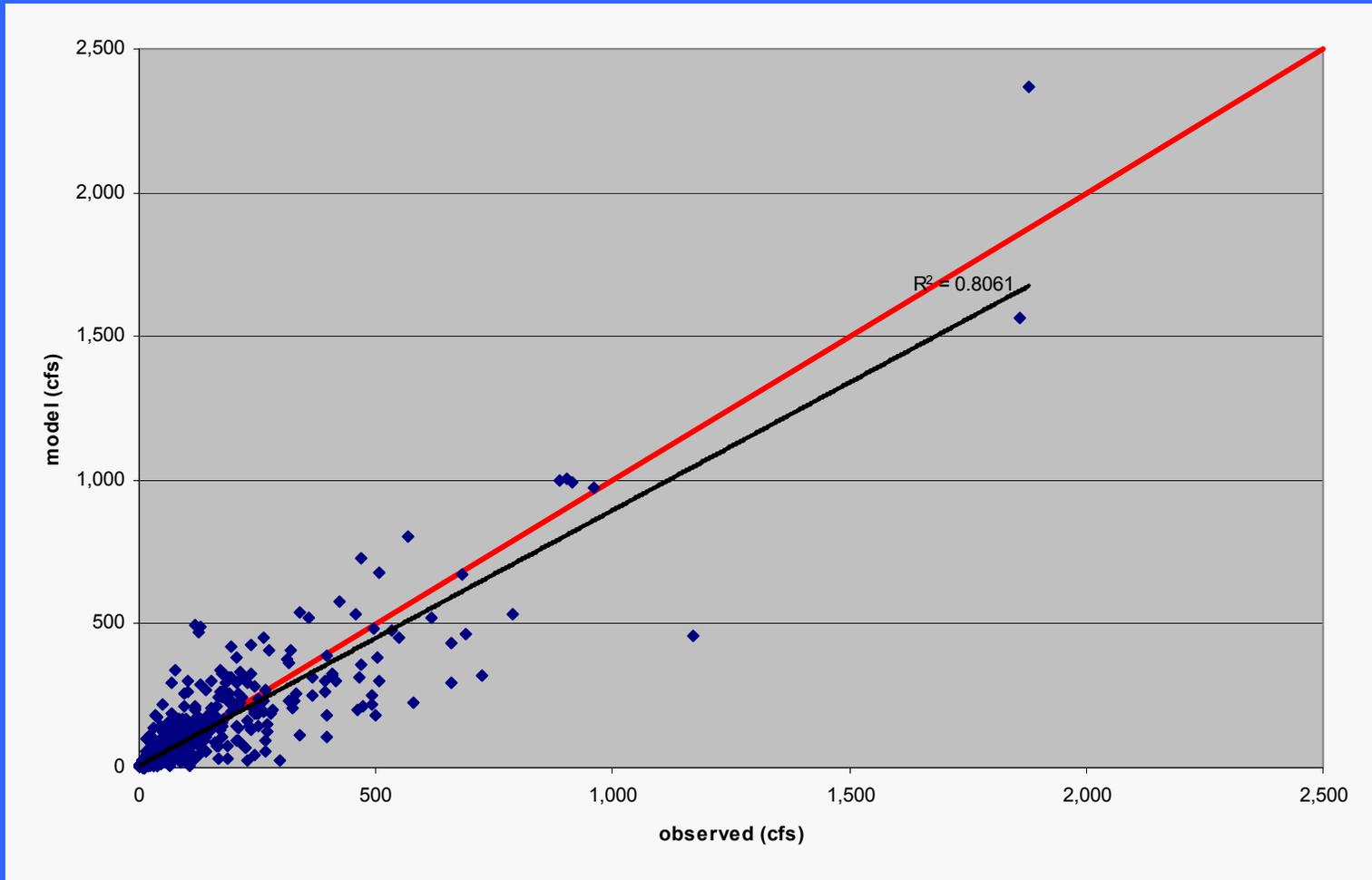
# CUMULATIVE DISTRIBUTION OF FLOWS NORTHEAST BRANCH



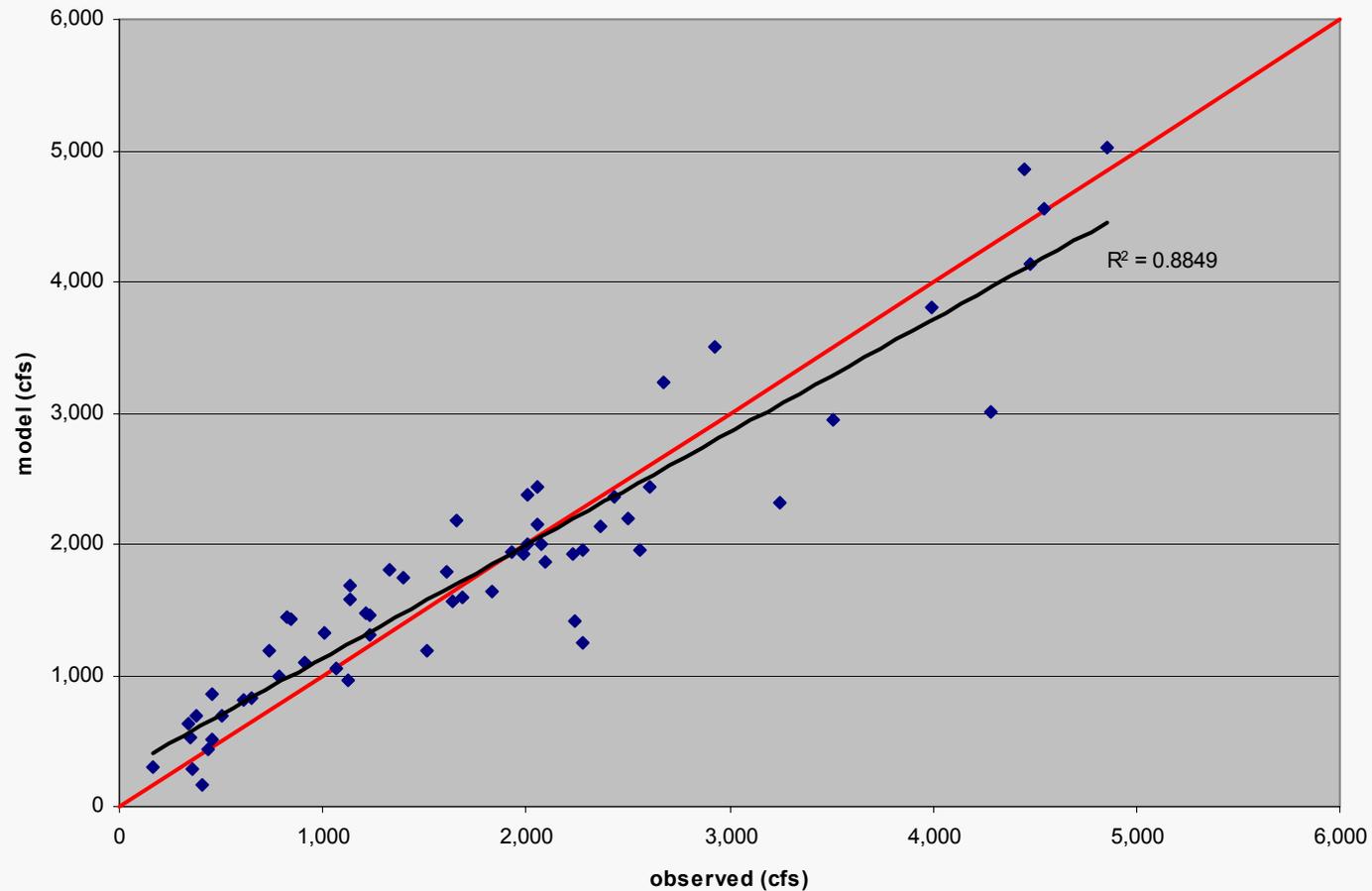
# TIME SERIES DAILY FLOW NORTHEAST BRANCH



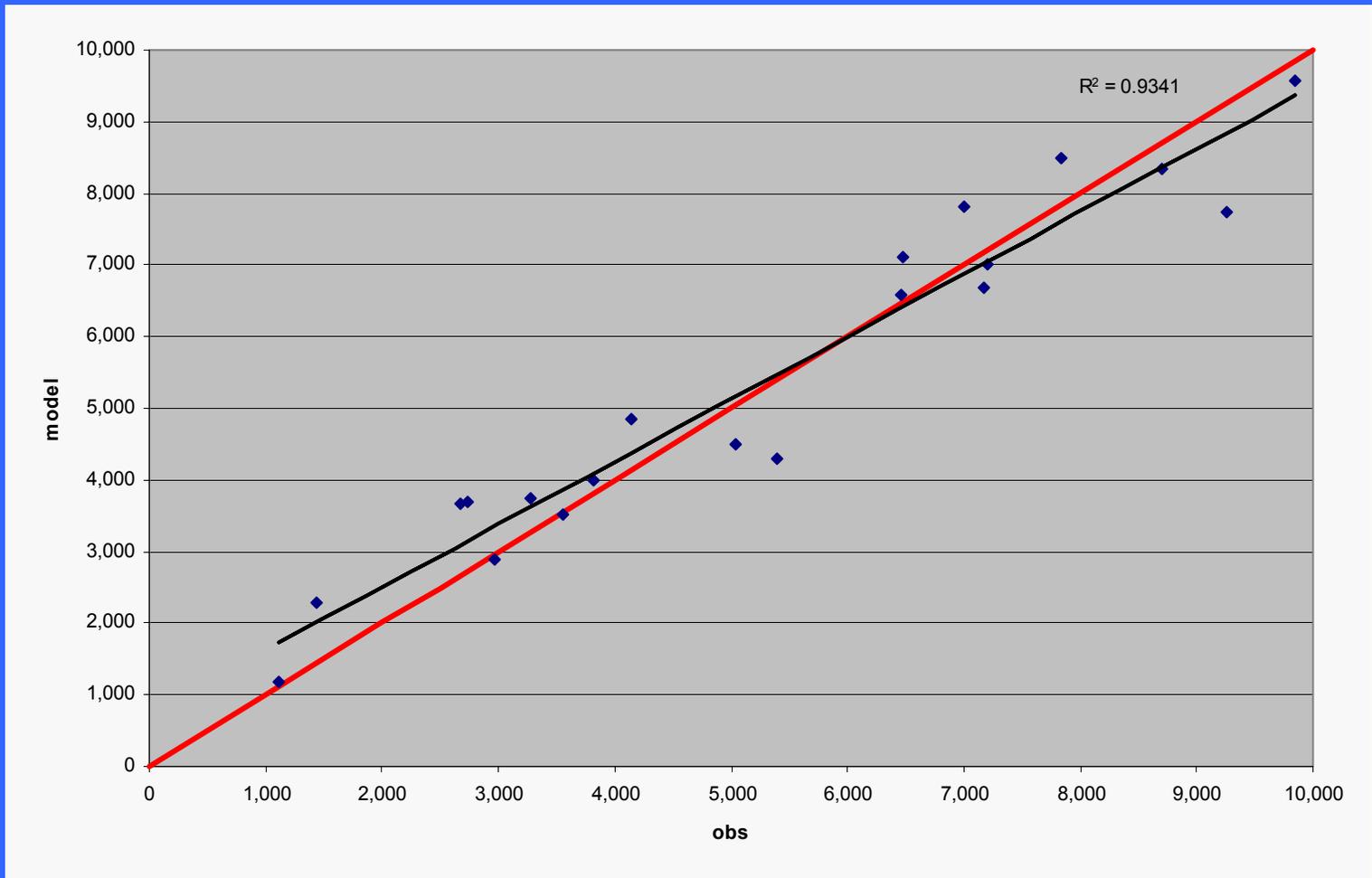
# DAILY FLOW NORTHWEST BRANCH



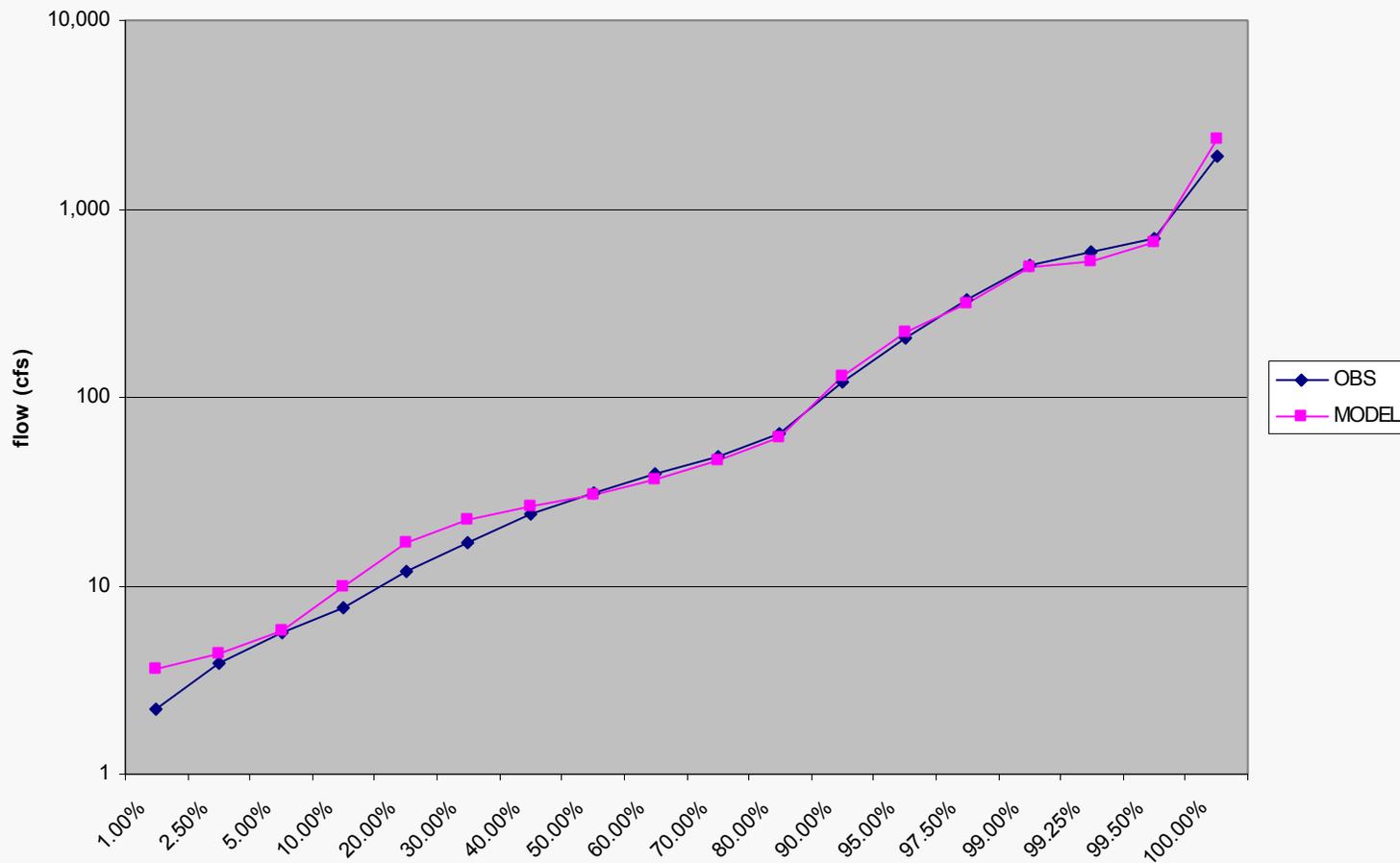
# MONTHLY FLOW NORTHWEST BRANCH



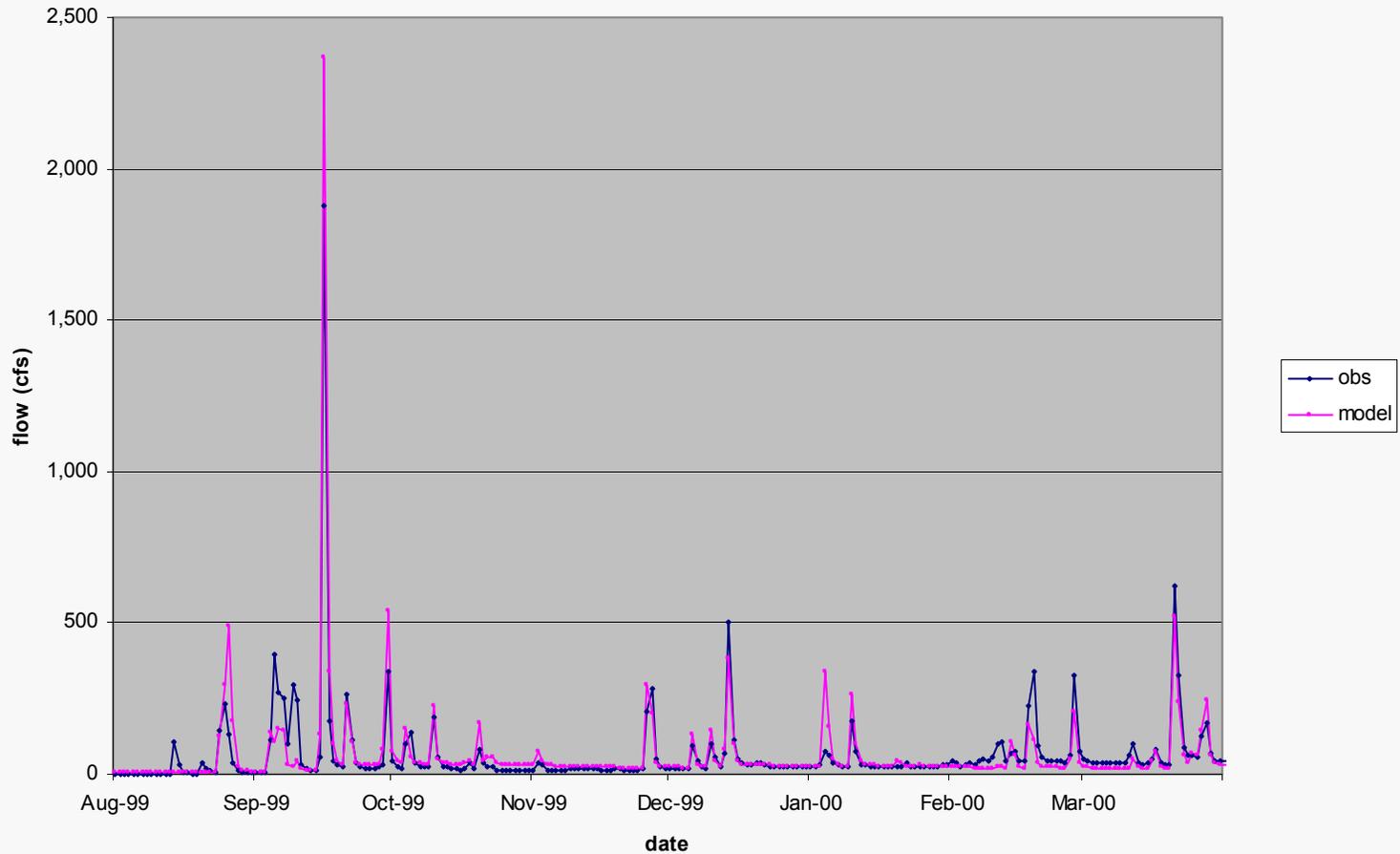
# SEASONAL FLOW NORTHWEST BRANCH



# CUMULATIVE DISTRIBUTION OF FLOWS NORTHWEST BRANCH



# TIME SERIES DAILY FLOW NORTHWEST BRANCH



# NUTRIENT AND SEDIMENT CALIBRATION

# TARGET STORMWATER CONCENTRATIONS (mg/l)

	Residential	Commercial	Industrial
BOD5	16.85	16.72	16.07
NO3	0.595	0.589	0.728
TKN	1.85	2.81	1.14
TP	0.464	0.193	0.249
TSS	141	123	169

# CONTACTS

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