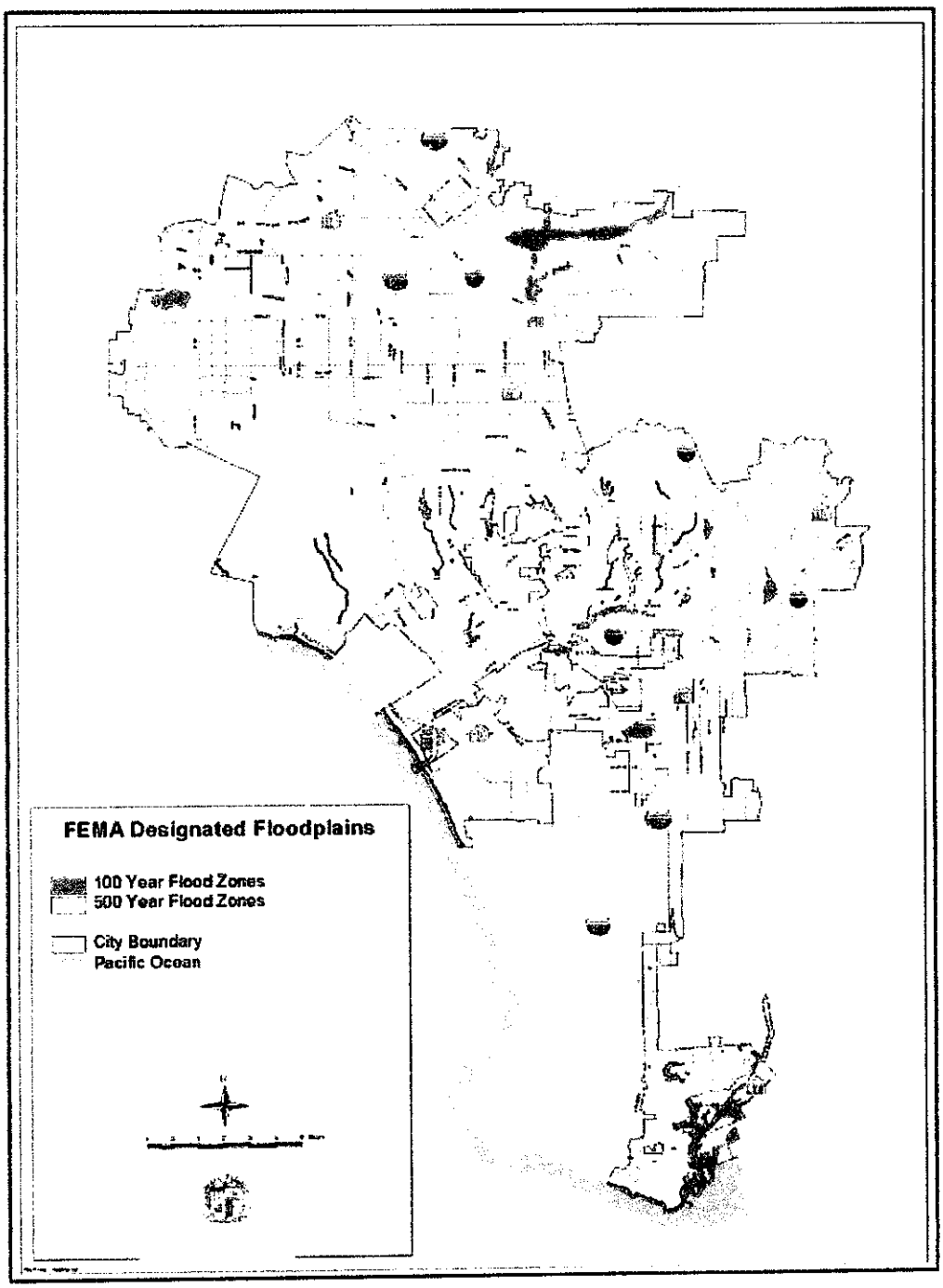
Floodplain Management Association

22nd Semi-Annual Spring Conference

April 7-10, 2002

Paradise Point Resort, San Diego, CA

"Floodplain Management Planning"



Technical Program Chair:

Rosalia Rojo,
City of Los Angeles

Conference Committee:

Iovanka Todt,
County of San Diego

Sterling Yong,
State of Hawaii

Conference Coordinator:

Laura Hromadka,
Executive Director,
Floodplain Management Association

22nd Semi-Annual Spring Conference — April 7-10, 2002

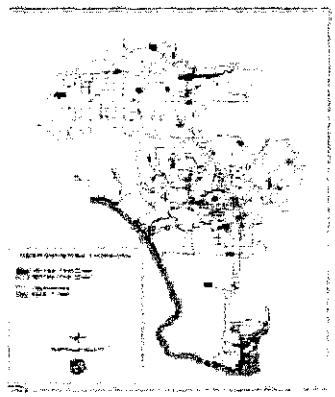
"Floodplain Management Planning"

Paradise Point Resort — San Diego, California

The Floodplain Management Association is proud to announce the approach of its 22nd Semi-Annual Spring Conference in San Diego, California, April 7-10, 2002. This year's emphasis is on "Floodplain Management Planning," a topic that is of great interest to the vast majority of the Association's members.

An ambitious and informative program has been scheduled, including a prestigious list of speakers and on-site presentations to locations such as McGonigle Canyon and the Tijuana Estuary Sedimentation Project fieldtrip.

Both a seminar and interactive panel will be held addressing CRS issues, and an examination of successful



Floodplain Management Plans will be held. Guest speakers will discuss their experiences and recommendations in the FMP area, as well as funding suggestions. A panel session discussing Stormwater and Watershed Planning, including stormwater utilities will introduce new concepts for funding mechanisms. Another panel session, Map Modernization, will update us on mapping issues in the western states.

Program Chair Rosalia Rojo, coordinator and co-author of the successful City of Los Angeles Floodplain Management Plan has timely and valuable experience regarding floodplain management planning, and is directing the programming.

Don't miss out on this opportunity to both advance your floodplain management planning skills and hear the latest innovations in the field of floodplain management!

Conference Program

SUNDAY, APRIL 7, 2002

- *Fieldtrip - 1:30-5:00 pm*
  McGonigle Canyon; **Tory Walker,**
  Tory Walker Engineering

MONDAY, APRIL 8, 2002

- *Continental Breakfast 7:30 am*
- *CRS Workshop 8:00 - 12:00 pm*
  Ed Perez & Jerry Bare,
  CA Dept. of Water Resources
- *HEC-RAS 3 - 8:00 - 12:00 pm*
  Gary Brunner, *COE - HEC*
- *Lunch on Own 12:00 - 1:00 pm*
- *Elevation Certificate Training; 1:00 - 5:00 pm*
  Jeff Lusk; FEMA Region IX
- *HEC-HMS; 1:00 - 5:00 pm*
  Jeff Harris, *COE - HEC*
- *Reception & Auction! 5:30 -10:00 pm*

TUESDAY, APRIL 9, 2002

- **Continental Breakfast-7:30 am**
- **Plenary Session-8:00 - 12:00 pm**
  Marna Van Horn, Chair, FMA
  City of Palm Springs
  Rosalia Rojo, Technical Program Chair, City of L.A.

  Speakers:
  - **Joe McDivitt,** *Public Works Manager, County of San Diego*
  - **Jack Eldridge,** *FEMA IX*
  - **Dorothy Green,** *Director, Watershed Council*
  - **Santa Monica Bay Restoration Project**
  - **Mark Davis,** *Dept. of Emergency Services, City of L.A.*
  - **Gregor Blackburn,** *FEMA IX*
  - **Ken Bryant,** *CA Office of Emergency Services*
- **Luncheon 12:00 - 1:30 pm**
  Stein Buer, CA Dept. of Water Resources; "Floodplain Management on the Move: A DWR Perspective"
- **Panel Session** -1:45 - 3:30 pm

  Forecasting & Warning
  Chair: **Sterling Yong,** *State of Hawaii*
  -Berry Williams, *ISO*
  -Delores Taylor, *County of Ventura*
  - Rand Allen - *County of San Diego*
  - Ed Clark - *NWS (invited)*
- **Paper Session #1, Habitat Protection & Restoration:** 1:45 - 3:30 pm
  - **Flood Proofing - Channel Stabilization Utilizing Soil Cement:** *Mark Krebs - Pacific Advanced Civil Engineering, Inc. & Randall Bass, Portland Cement Association*
  - **Restoring Riparian Vegetation and Instream Aquatic Habitat in an Urban Stream:** *Kevin MacKay - Jones & Stokes, Edward Wallace, Northwest Hydraulic Consultants, Al Gurevich, Santa Clara Valley Water District*
  - **Streambank Erosion Protection with Vinyl Sheet Pile Grade Control Structures:** *Bruce Phillips - RBF Consulting*
- **Break** - 3:30-3:45 pm
- **Panel Session** 3:45 - 5:30 pm

  Floodplain Management Planning
  Chair: **Rosalia Rojo**
  David Stroud, *ISO*
  Susan Pierce, *City of Huntington Beach*
  Lucy Hise, *PCR*
  Dr. Lan Weber, *Tetra Tech*
  Geoff Owu, *County of L.A.*
- **Paper Session #2, Planning Tools in Flood Control:** 3:45 - 5:30 pm
  - **Clark County, NV Receives First Map Mod DFIRM:** *Pernille Buch-Pederson, Michael Baker Jr. Inc.*
  - **An Automated Hydrology Manual Calibration System:** *Theodore V. Hromadka II, Hromadka & Associates*
  - **Scour in Floodplain Management Planning:** *Jennifer Wirsing & Wayne Chang, The Keith Companies*
  - **Fine-Tuning Hydrologic Routing with HEC-RAS of the Pajaro River:** *Christopher Eggers, Schaaf & Wheeler*
- **Dinner and Luaul** (6:00 cocktail hour, 7:00 pm - 10:00 pm)

WEDNESDAY, APRIL 10, 2002

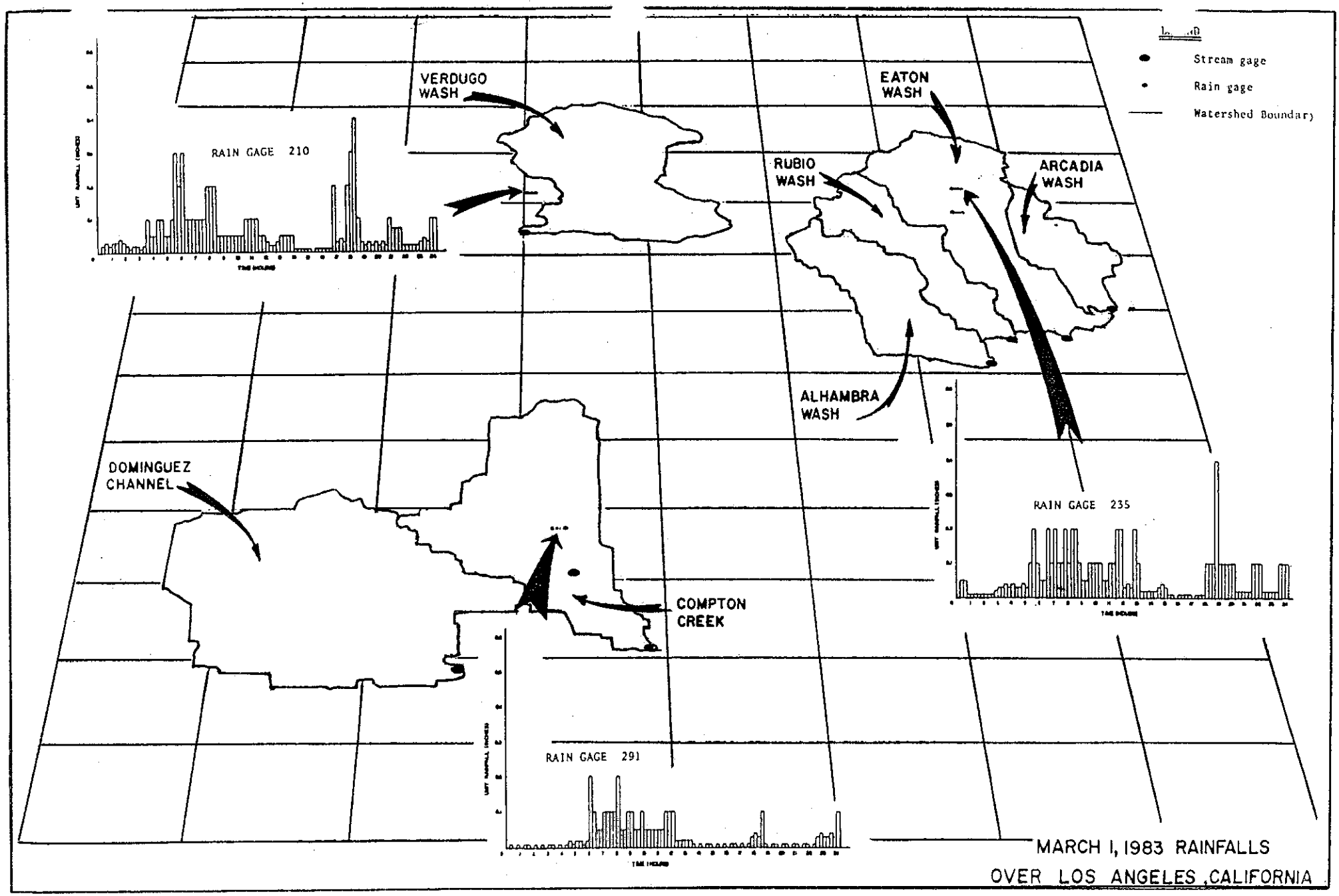
- **Continental Breakfast - 7:30 AM**
- **Panel Session** 8:00 - 10:15 am

  Stormwater and Watershed Planning; **Chair: Iovanka Todt,** *County of San Diego*
  David Zappe, *County of Riverside*
  Vik Bapna, *County of Los Angeles*
  Larry McKenney, *County of Orange*
- ***Paper Session #3, Flood Warning - Simulation and Resources:*** 8:00 - 10:00 am
  - **Flood Forecasting and Warning Dissemination — Bangladesh:** *M.Rashed Chowdhury, Int. Research Insti. for Climate Prediction, Columbia University*
  - **Vitual Reality — New Tools and Techniques for GIS Based Flood Modeling and Visualization:** *H.S. Bajwa & U.S. Tim, Iowas State University*
  - **Reservoir Simulation Analysis using the Newest HEC NexGen Program HEC-ResSim:** *Henry Hu, Brian J. Doeing, WEST Consultants, Scott A. Jutila, USACE*
- **Break** - 10:00 - 10:15 am
- **Panel Session** 10:30 - 12:00 pm

  Map Modernization
  Chair: Dr. Howard Chang, *CSU San Diego*
  Ray Lenaburg, *FEMA IX*
  Jim Buster, *City of Santa Barbara*
  Dennis Bowling, *Rick Engineering*
  Ricardo Pineda, *CA DWR*
- ***Paper Session #4, Runoff Control;*** 10:30 - 12:00 pm
  - **Storm Drain Pollution Prevention:** *John Dorsey, City of Los Angeles*
  - **Control of Urban Runoff Utilizing Low Flow Diversion:** *Dennis Drag, Moffatt & Nichol Engineers*
  - **-Hydromodification Impacts of Urbanization: New Regulatory Approaches:** *Keith Lichten, Dale Bowyer, California Regional Water Quality Control Board*
- **Paper Session #5, Regulatory and NFIP Issues;** 10:30 - 12:00 pm
  - **Proposed Regulations for AB1147 (99-00) Financial Assistance for Flood & Small Management Projects:** *Karina R. Dahl & Susan Lee, CA DWR*
  - **California Floodplain Management Task Force:** *Sergio Guillen & Maria Lorenzo-Lee; California Department of Water Resources*
  - **The Role of the MCC in the NFIP:** *Sheila M. Norlin, Michael Baker Jr.,*
- **Lunch on Own;** 12:00 - 1:00 pm
- **CFM Exam;** 1-4 pm
- **Goat Canyon/Tijuana Project Field Trip:** 1:00 - 5:00 pm;
  Dennis Bowling, *Rick Engineering,* **Mayda Winter** - *Southwest Wetlands Interpretive Association*
- ***End Conference***

An Automated Hydrology Manual Calibration System

T. V. Hromadka
California State University, Fullerton


Stream gage
Rain gage
Watershed Boundary
VERDUGO WASH
EATON WASH
RUBIO WASH
ARCADIA WASH
ALHAMBRA WASH
DOMINGUEZ CHANNEL
COMPTON CREEK
RAIN GAGE 210
RAIN GAGE 235
RAIN GAGE 291
MARCH 1, 1983 RAINFALLS
OVER LOS ANGELES, CALIFORNIA

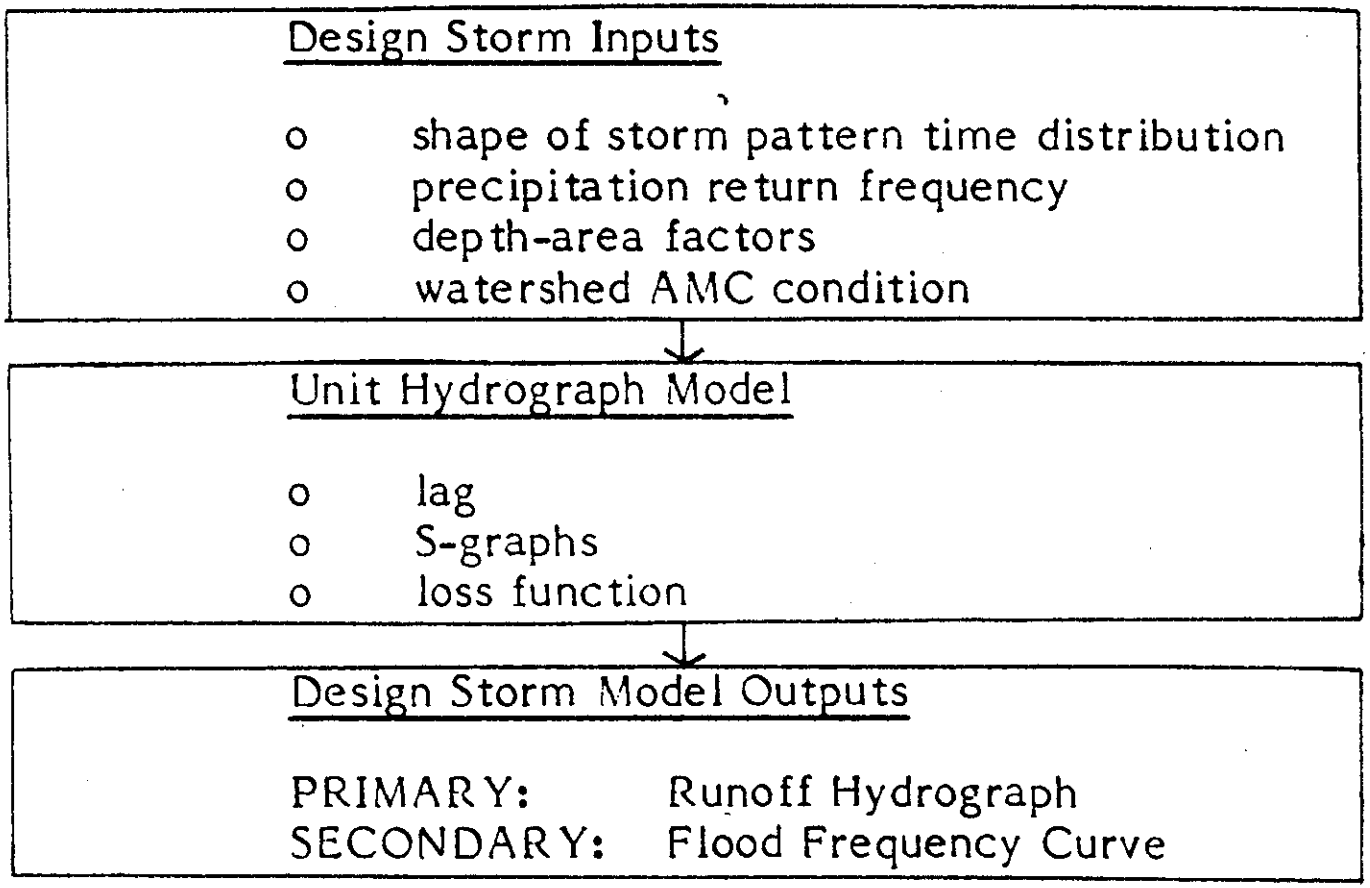


FIG. 1 The Design Storm Modeling Approach

From Fig. 1, it is seen that two of the input parameters used in the design storm approach are the storm pattern shape and the storm pattern's rainfall magnitudes (or return frequency).

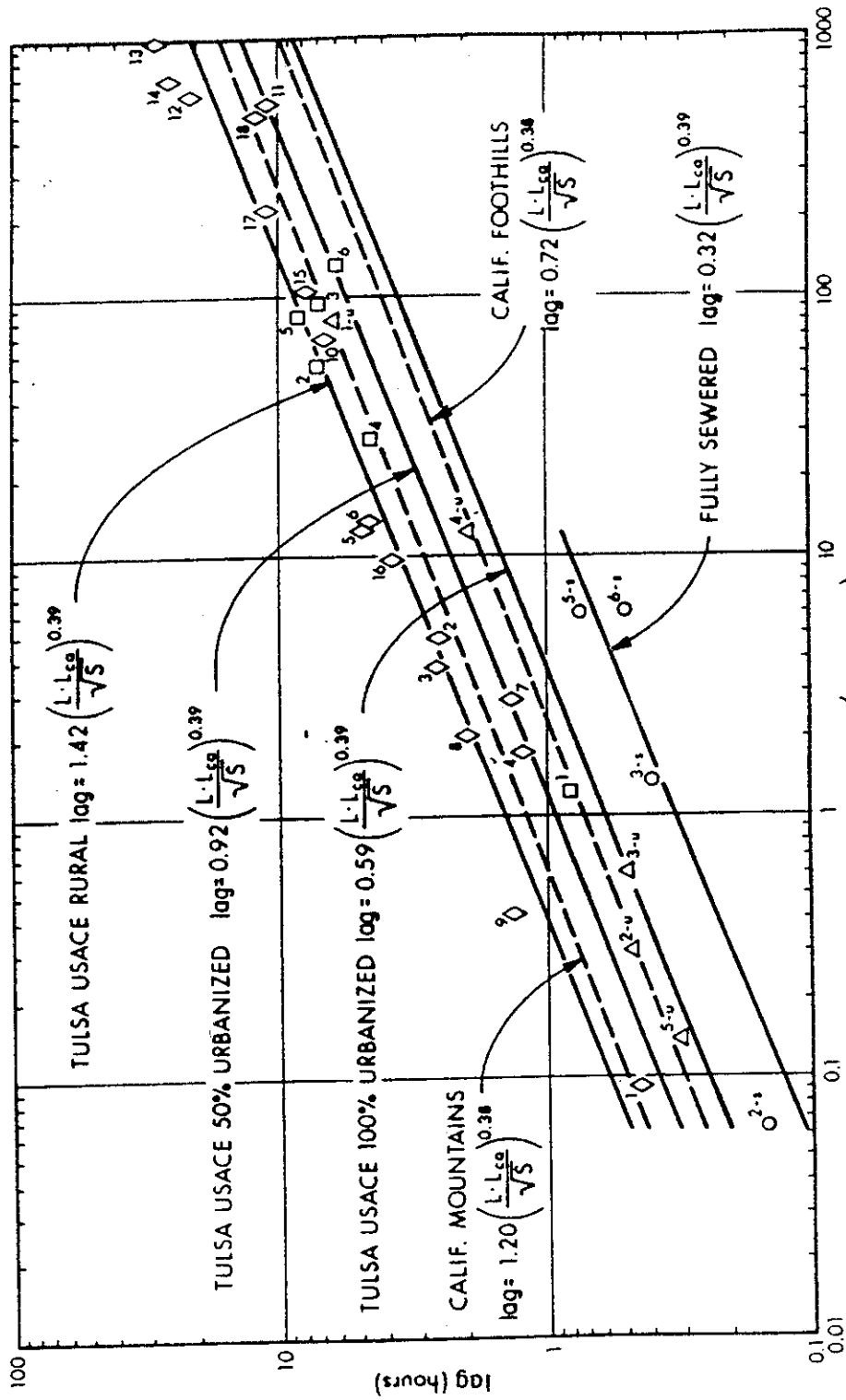


Figure 6 (a) lag vs. $LL_{ca}/\sqrt{S}$ for Synthetic Unit Hydrograph Procedure.

OKLAHOMA, RURAL (by Tulsa, USACE)

		A sq. mile	S ft/ mile	L miles	L_{ca} miles
◊1	Little Dry Ck., Alex, OK	88	82.1	1.4	0.6
◊2	Worley Ck., Tuttle, OK	11.2	17.4	6.3	3.2
◊3	West Beaver, Orland, OK	13.9	23.8	6.4	2.9
◊4	Canyon View, Geary, OK	11.8	19.4	4.4	1.9
◊5	Dry Creek, Kendrick, OK	69	10.9	10.7	3.9
◊6	Elm Creek, Foraker, OK	18.2	17.5	9.4	5.8
◊7	Rock Creek, Snider, OK	9.1	35.8	5.4	3.1
◊8	Adams Ck., Beggs, OK	5.9	32.1	4.4	2.7
◊9	Corral Ck., Yale, OK	2.89	53.3	2.4	1.3
◊10	Big Hill Ck., Cherryvale, KS	37	11.1	21.8	10.6
◊11	Bird Creek, Avant, OK	364	5.8	52.4	25.8
◊12	L. Caney R., Copan(Upper), OK	424	5.1	50.4	26.7
◊13	L. Caney R., Copan(Lower), OK	502	4.1	60.5	33.0
◊14	Hominy Ck., Shiatook, OK	340	5.5	55.2	29.0
◊15	Polecat Ck., Heyburn Dam	133	9.0	25.8	12.2
◊16	Council Ck., Stillwater, OK	31	12.1	8.6	4.0
◊17	Pryor Ck., Pryor, OK	229	5.3	36	14
◊18	Sand Ck., Okesa, OK	139	13.5	60	31

OKLAHOMA, URBAN (by Tulsa, USACE)

			A sq. mile	S ft/ mile	L miles	L_{ca} miles
▲1	Deep Fork R., Arcadia, OK.	(30% Urbanized)	108	10.3	25.8	10.0
▲2-u	Bluff Ck., Okla. City, OK	(60% ")	1.64	62.7	2.18	1.14
▲3-u	Deep Fork Ck., Okla. City, OK.	(100% ")	2.98	44.9	2.88	1.44
▲4-u	Deep Fork Ck., Eastern Ave. Okla City, OK	(100% ")	20.3	19.2	11.4	4.8
▲5-u	Crutch Ck., Trib, Okla. City, OK	(60% ")	0.47	49.1	1.45	0.7

TEXAS AND ILLINOIS, URBAN

		I percent	A sq. mile	S ft/ mile	L miles	L_{ca} miles	COMMENTS
□1	Boneyard, Illinois	37.4	4.45	9.5	2.8	1.3	storm sewers, no channel improvements
□2	Brays Bayour, Houston, TX	40.0	88.4	4.07	23.3	10.4	storm sewers and channel improvements
□3	Greens Bayou, Houston, TX	25.0	67.5	6.65	21.6	10.0	agricultural & urban, no storm sewers
□4	Halls Bayou, Houston, TX	30.0	26.2	7.08	13.5	5.7	some storm sewers & channel improvements
□5	Simms Bayou, Houston, TX	30.0	63.0	3.38	18.0	9.7	some storm sewers & channel improvements
□6	White Oak Bayou, Houston, TX	35.0	92.0	5.02	21.1	12.8	storm sewers & channel improvements

KENTUCKY, FULLY SEWERED

		I percent	A sq. mile	S* ft/ mile	L miles	L_{ca} miles
○2-s	17th St., Louisville, KY	83	.22	20.08	.93	.31
○3-s	NW Trunk, Louisville, KY	50	1.90	6.34	3.03	1.13
○5-s	Southern Outfall, Louisville KY	48	6.44	7.23	6.44	2.52
○6-s	S.W. Outfall, Louisville, KY	33	7.51	7.76	6.48	2.68

*Slope used is the Weighted Sewer Slope

(b)

Figure 6 (b) Explanation of data points.

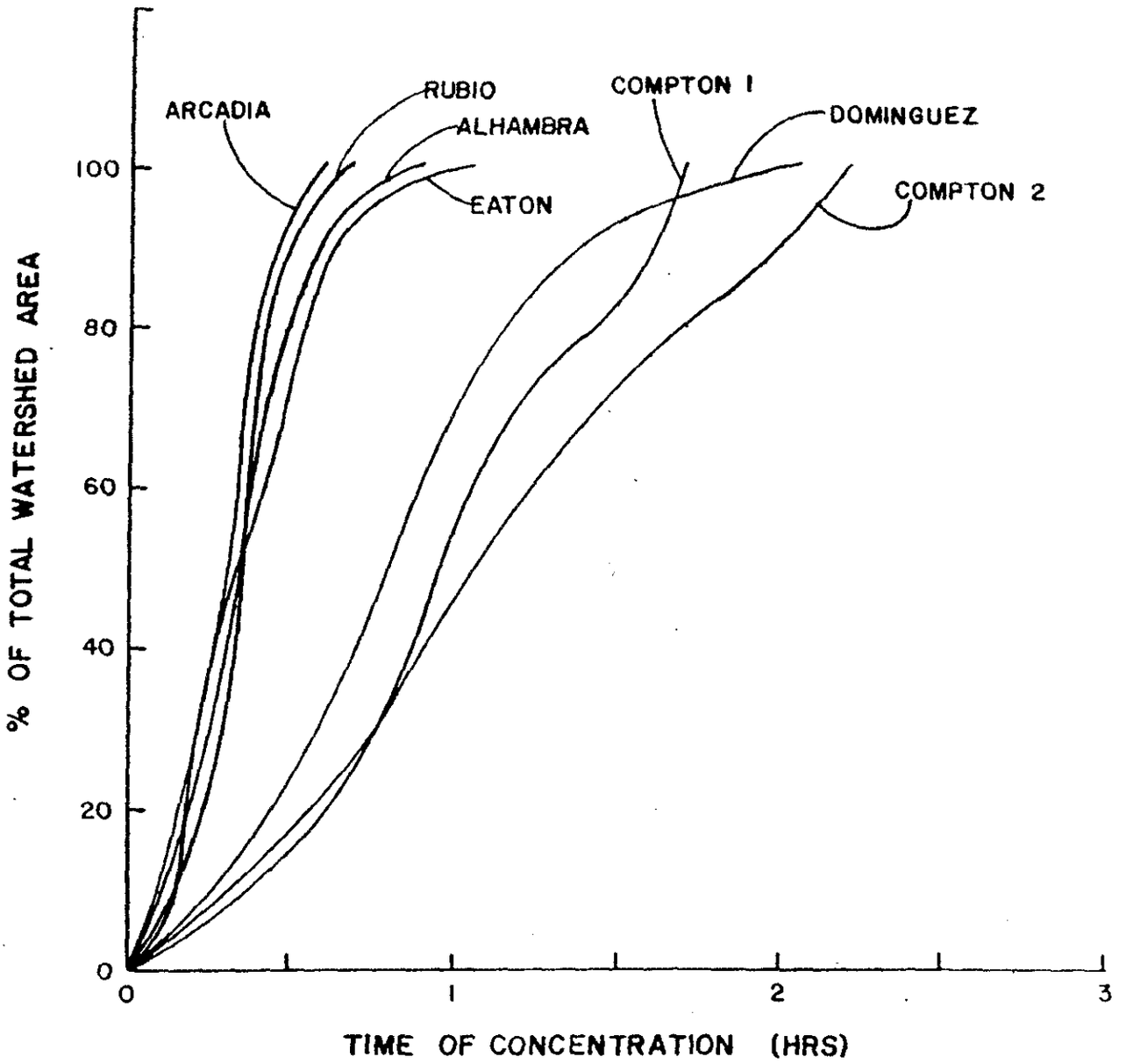


Figure 7. Time-Area Diagrams

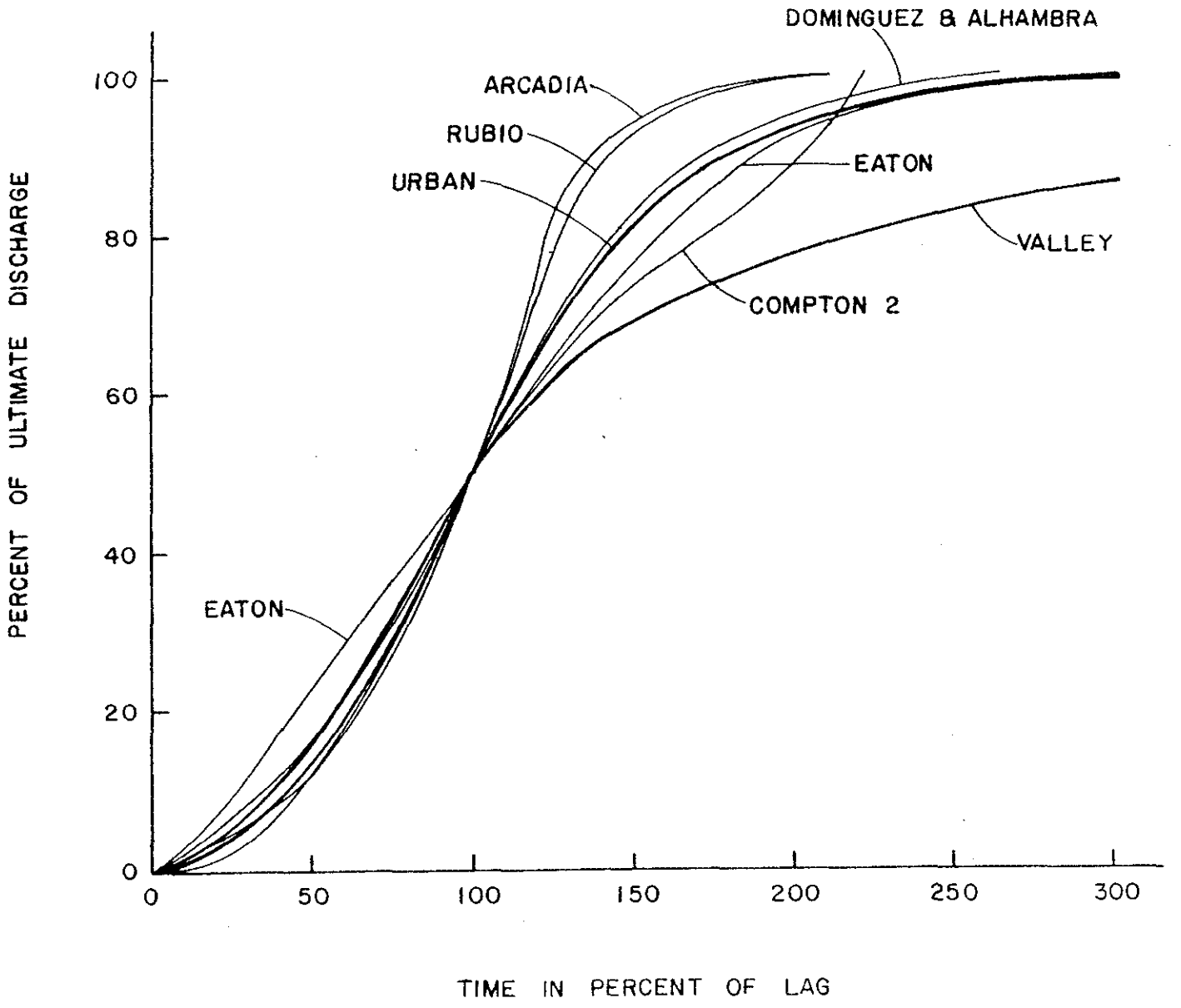


Figure 8. Comparison of S-Graph to Time-Area Diagrams (Normalized with Respect to Lag)

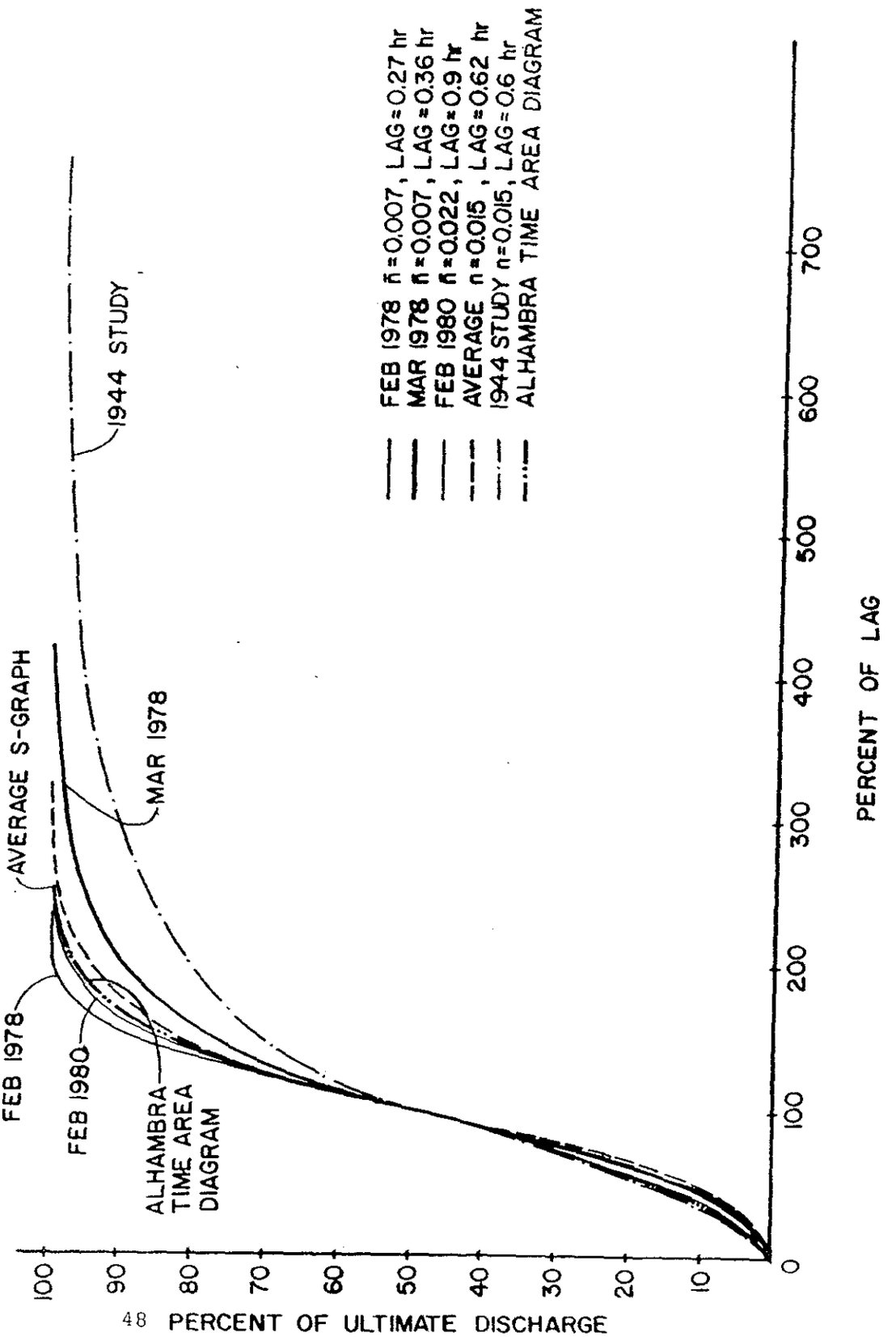


Figure 9. Comparison of Alhambra Time-Area Diagram and S-Graphs.

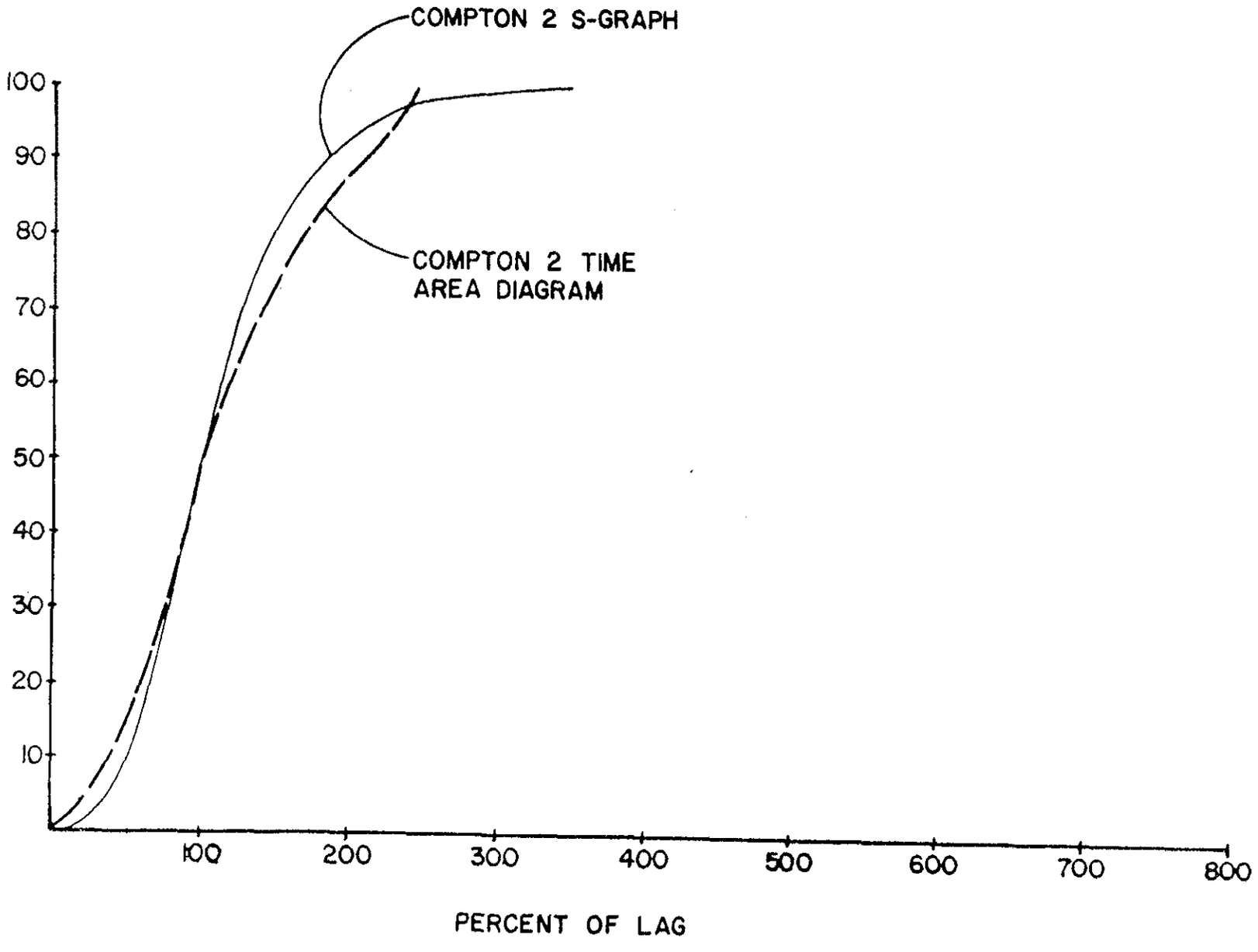


Figure 10. Comparison of Compton Creek (Compton 2) Time-Area Diagram and S-Graph

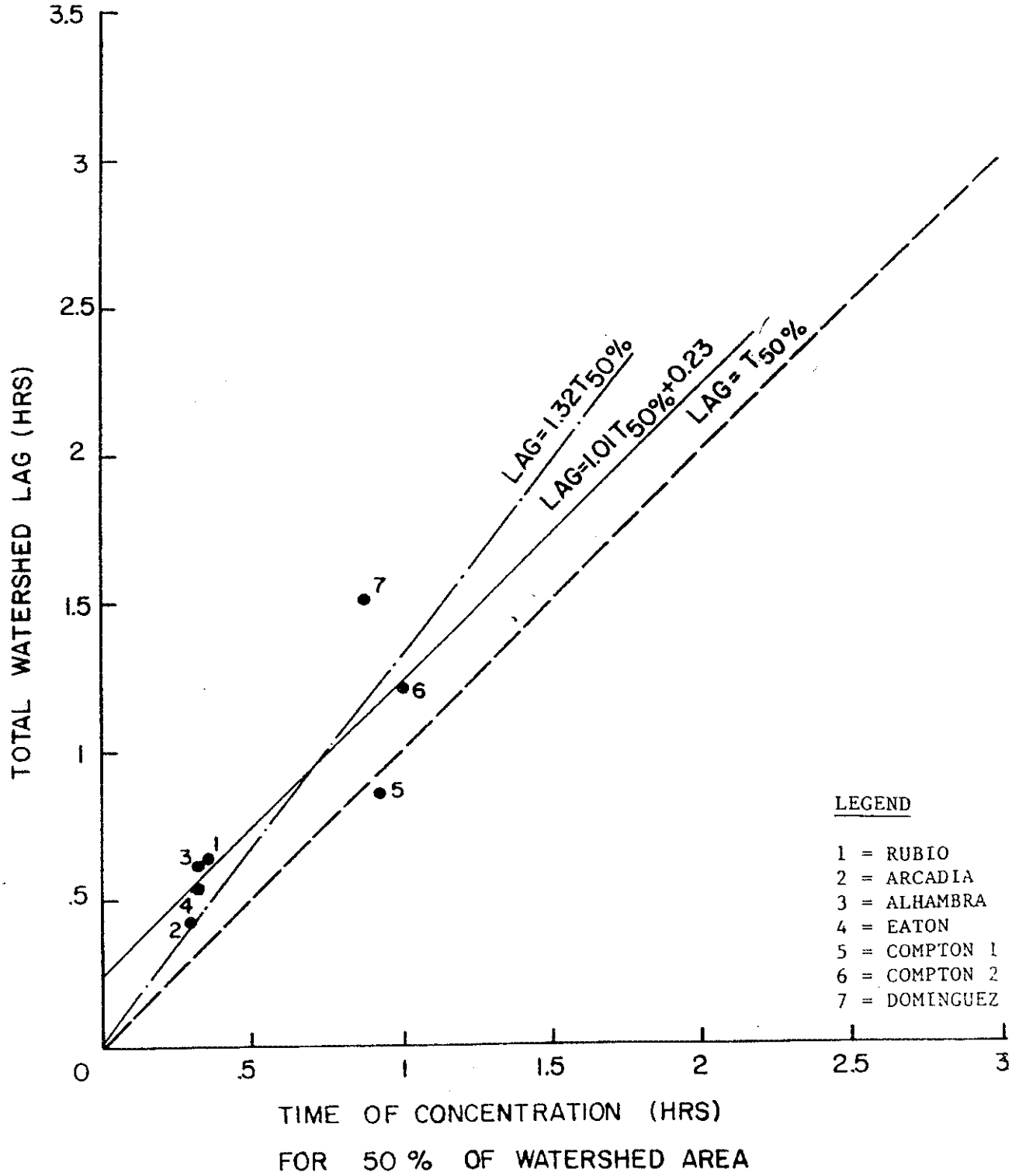


Figure 12. Lag as a Function of $T_{50\%}$

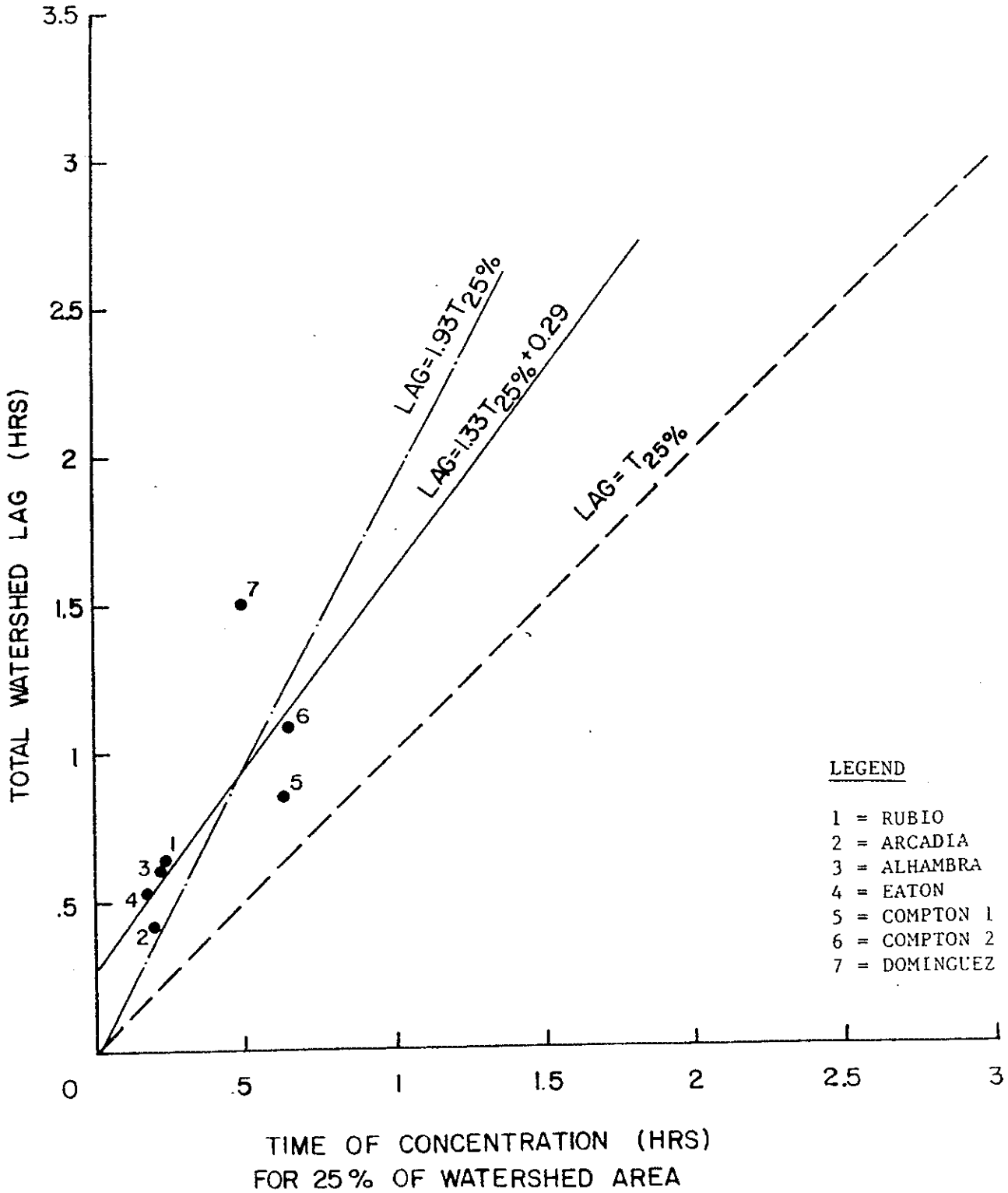


Figure 11. Lag as a Function of $T_{25\%}$