

**ANSAC Public Hearing
for
Cochise County**

**Date: August 17, 2000
Time: 9:30 AM
Venue: Bisbee, Arizona**

**Stantec Consulting, Inc.
Phoenix, Arizona
In association with:
JEFuller Hydrology & Geomorphology, Inc.
Tempe, Arizona**

003



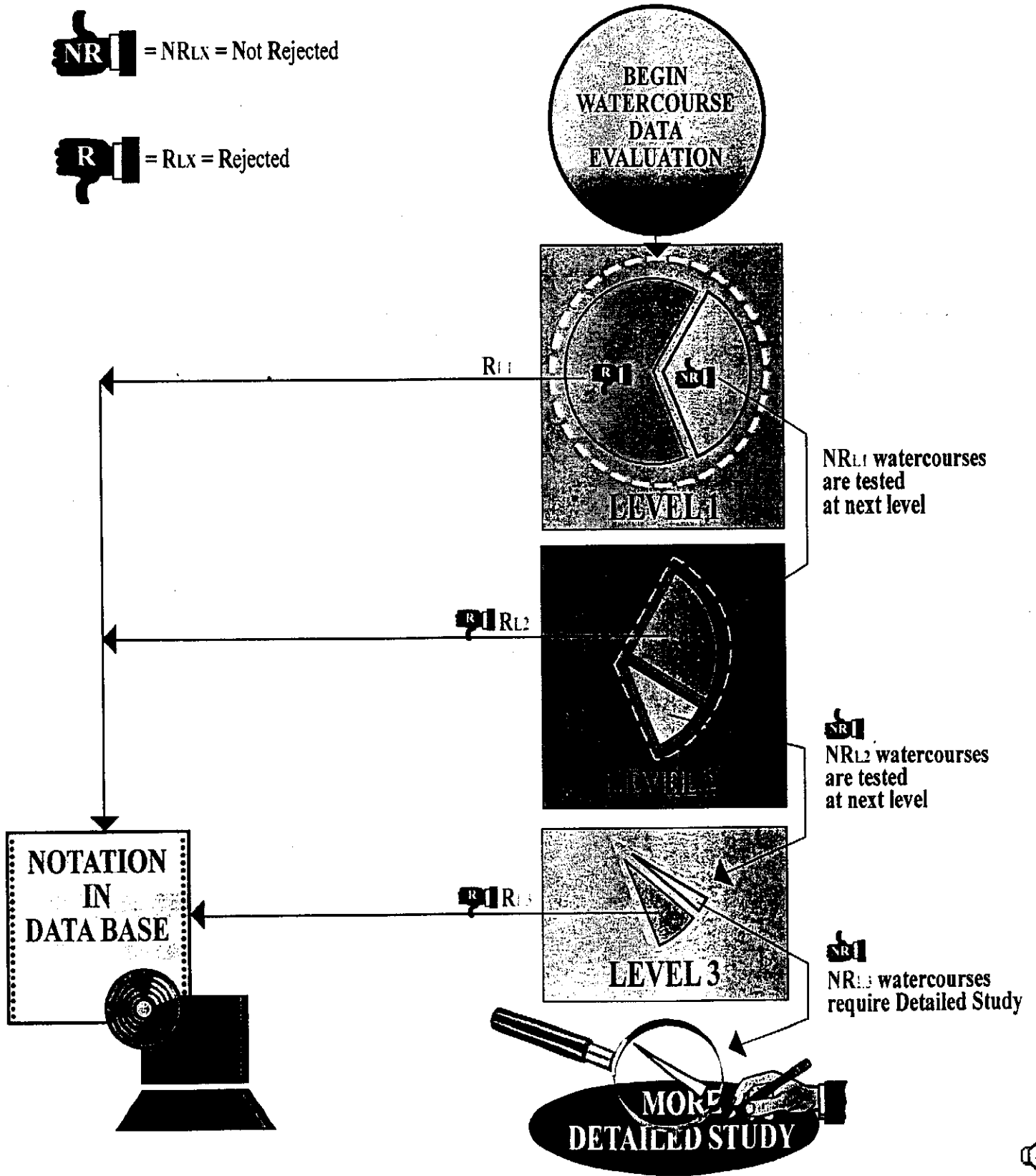


Figure 2
**THREE-LEVEL WATERCOURSE
 EVALUATION PROCEDURE**

Three-Level Watercourse Evaluation Procedure

NR = NRLX = Not Rejected

R = RLX = Rejected



Level 1 Evaluation

Goal

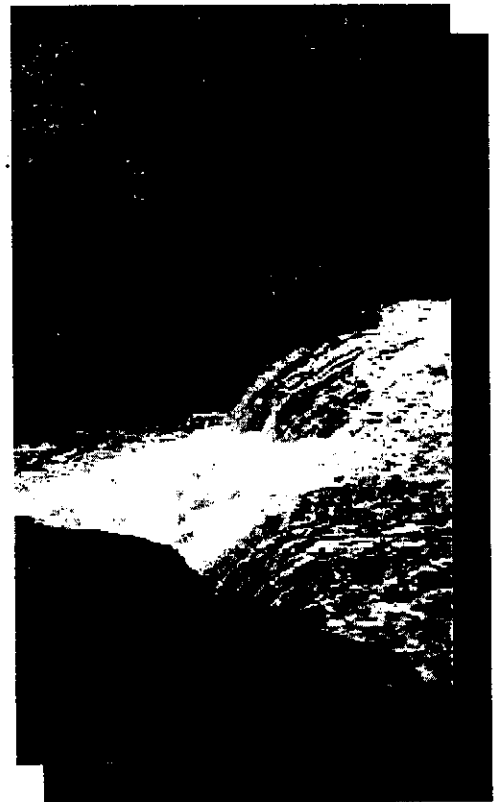
Coarse Sort
Eliminate Watercourses Most Likely to be
Non-Susceptible to Navigation

Methodology

Quantitative Screening Analysis
Binary Database Queries

Data Requirements

Stream Type
Dam Information
Historical Boating
Modern Boating
Fish
Special Status



Application

Apply full test to all watercourses in the database catalog

Resulting Databases

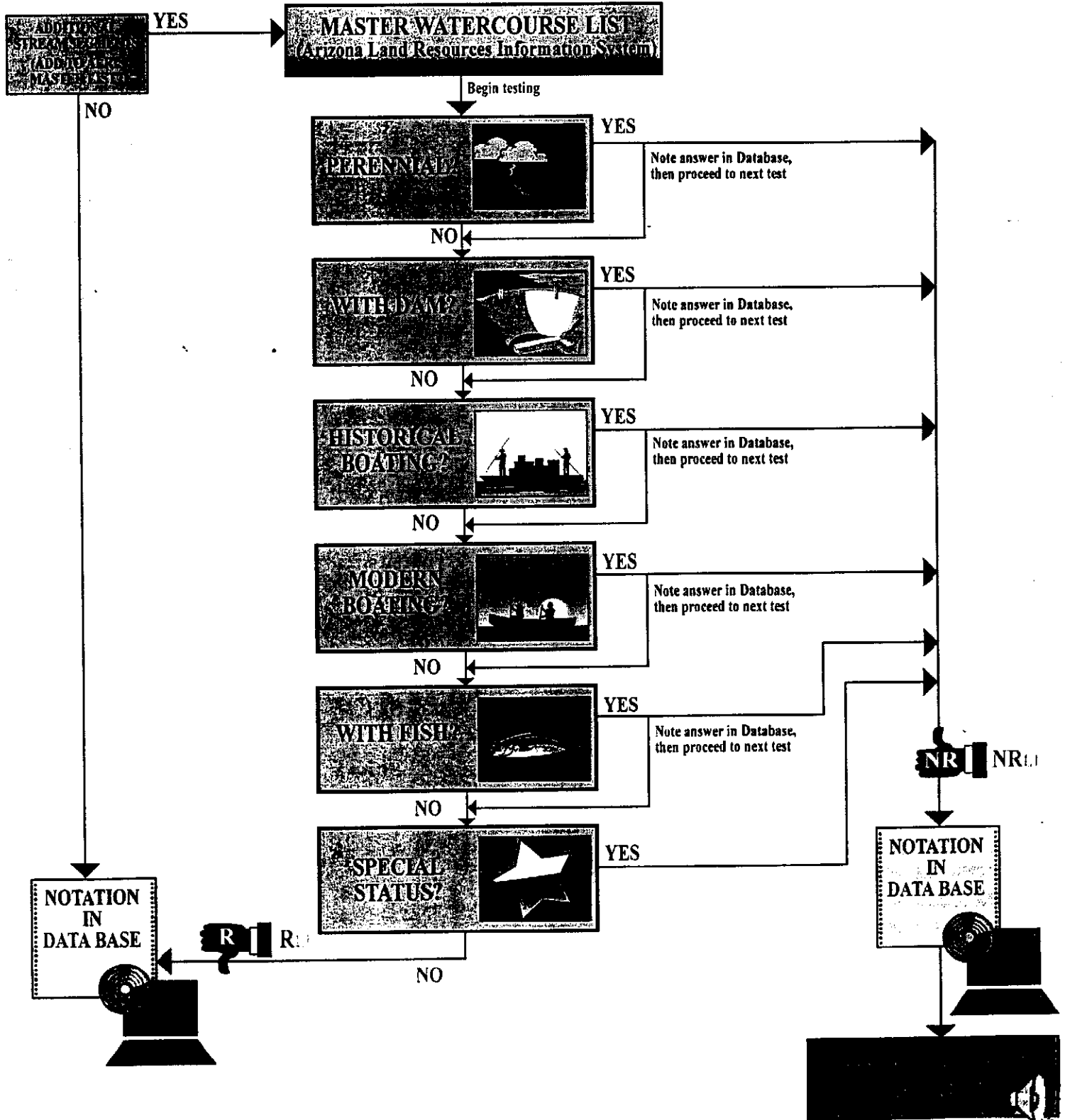
U1: Watercourses which are most likely non-susceptible to navigation
NRL1: Watercourses which require qualitative evaluation
at Level 2





Figure 3
LEVEL 1 SCREENING PROCEDURE

Level 1 Screening Procedure



Level 2 Evaluation

Goal

Refined Sort

Eliminate Watercourses Unlikely to be Susceptible to Navigation

Methodology

Qualitative Approach

By Inspection

Quality Control Check

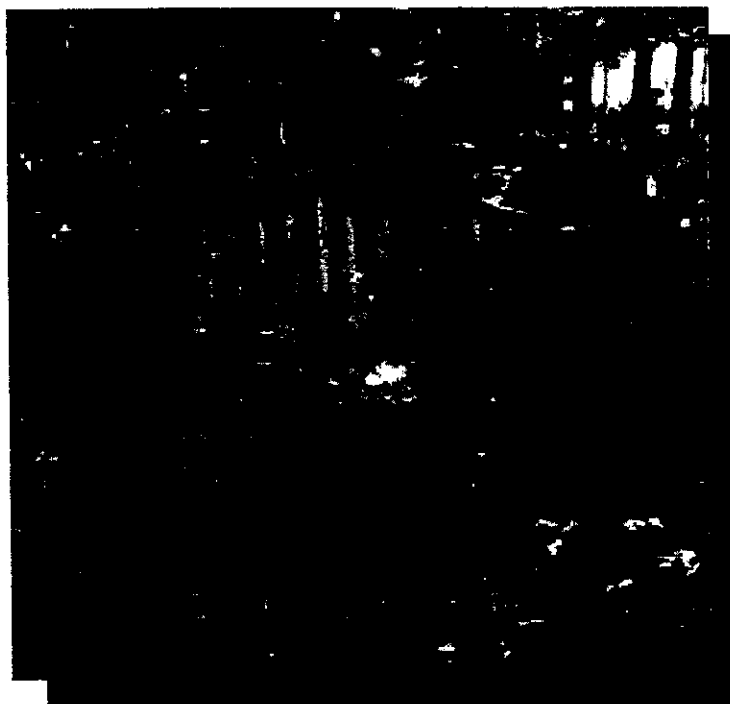
Data Requirements

Fish Categories

Boating Account Verification

Special Status Specifics

Outlier Verification



Application

Apply to NRL1 watercourses in the database catalog

Resulting Datasets

RL2: Watercourses which are unlikely to be susceptible to navigation

NRL2: Watercourses which merit quantitative engineering analysis at Level 3



Criteria

How Important
 4 - Major Preference
 3 - Medium Preference
 2 - Minor Preference
 1 - Letter/Letter
 No Preference - each scored one point.

Criteria Scoring Matrix

A.	Historical Boating									
B.	Modern Boating									
C.	Perennial								A	
D.	Dam-Impact								4	
E.	Special Status									
F.	Fish									
G.										
			G	F	E	D	C	B	A	
	Raw Score									
	Weight of Importance (0-10)									
										Total



Criteria

How Important

4 - Major Preference

3 - Medium Preference

2 - Minor Preference

1 - Letter/Letter

No Preference - each scored one point.

Criteria Scoring Matrix

		G	F	E	D	C	B	A
A. Historical Boating								
B. Modern Boating								
C. Perennial							A	
D. Dam-Impact							B	
E. Special Status								
F. Fish								
G.								
	Raw Score							
	Weight of Importance (0-10)							Total



Criteria

Criteria Scoring Matrix

How Important
 4 - Major Preference
 3 - Medium Preference
 2 - Minor Preference
 1 - Letter/Letter
 No Preference - each scored one point.

	A	B	C	D	E	F	G
A. Historical Boating							
B. Modern Boating	2						
C. Perennial	4	4					
D. Dam-Impact	4	4	4				
E. Special Status	2	3	3				
F. Fish	3	2					
G.							
	G	F	E	D	C	B	A
Raw Score							
Weight of Importance (0-10)							
							Total





Level 3 Evaluation

Goal

- Fine Sort
- Eliminate Watercourses Non-Susceptible to Navigation

Methodology

- Quantitative Engineering Methodologies
- Detailed Hydrologic and Hydraulic Analysis

Data Requirements

- Flow Rate
- Flow Characteristics
- Obstacles

Application

- Apply to NRL2 watercourses in the database catalog



Resulting Datasets

- RL3: Watercourses which are not susceptible to navigation
- NRL3: Watercourses which are susceptible and merit more detailed study





Detailed Study

Goal

Final Sort

Perform Detailed Fact-Finding Study
Addressing Susceptibility and
Actual/Historical Navigation

Methodology

Same as for Major River Studies
Qualitative and Quantitative Detailed Study
Test for Navigation In Fact - Actuality
Apply the criteria contained in ARS 37-1128 (D)

Data Requirements

Extensive
Technical Data
Historical Information

Application

Apply to NRL3 watercourses in the database catalog

Resulting Datasets

RDS: (Rejected Detailed Study)- Watercourses which are not susceptible to navigation, and with no evidence of actual/historical navigation
ADS: (Accepted Detail Study)- Watercourses which are susceptible and/or show evidence of actual/historical navigation



Small and Minor Watercourses in Arizona



Total No. of Watercourses (Statewide):

39,039

Unnamed Washes:

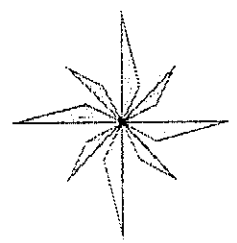
36,798 (94.3%)

Named Washes:

2,241 (5.7%)



Statewide RL1 Data Set



Total No. of Watercourses (Statewide):

39,039

RL1 Data Set (No. of Watercourses):

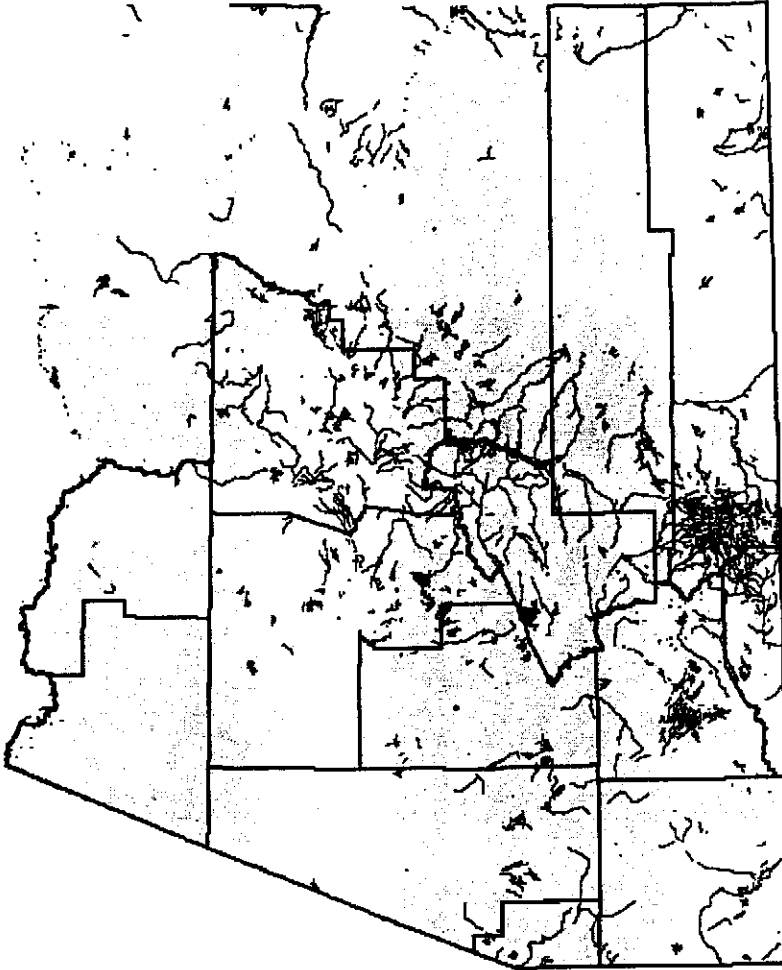
38,014

RL1 Data Set (Percentage):

97.4%



Statewide NRL1 Data Set



Map created by the North Carolina Department of Environment and Natural Resources

Total No. of Watercourses (Statewide):

39,039

NRL1 Data Set (No. of Watercourses):

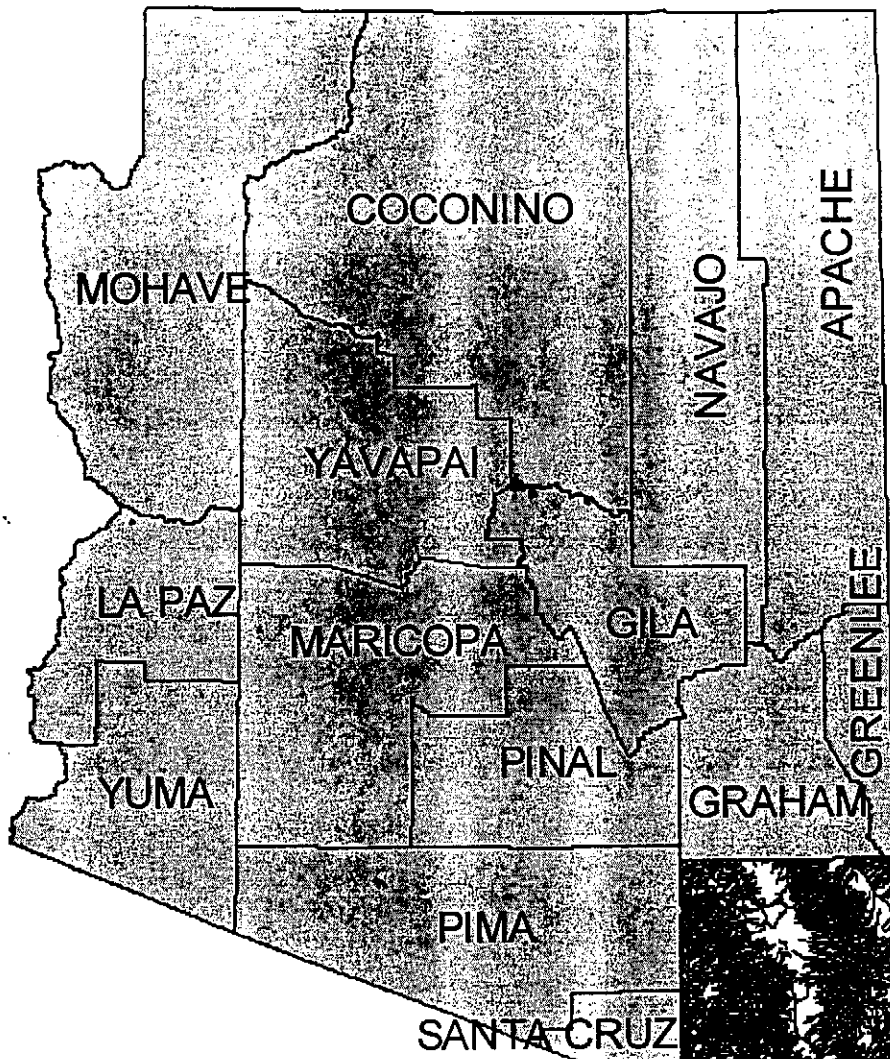
1,025

NRL1 Data Set (Percentage):

2.6%



Cochise County

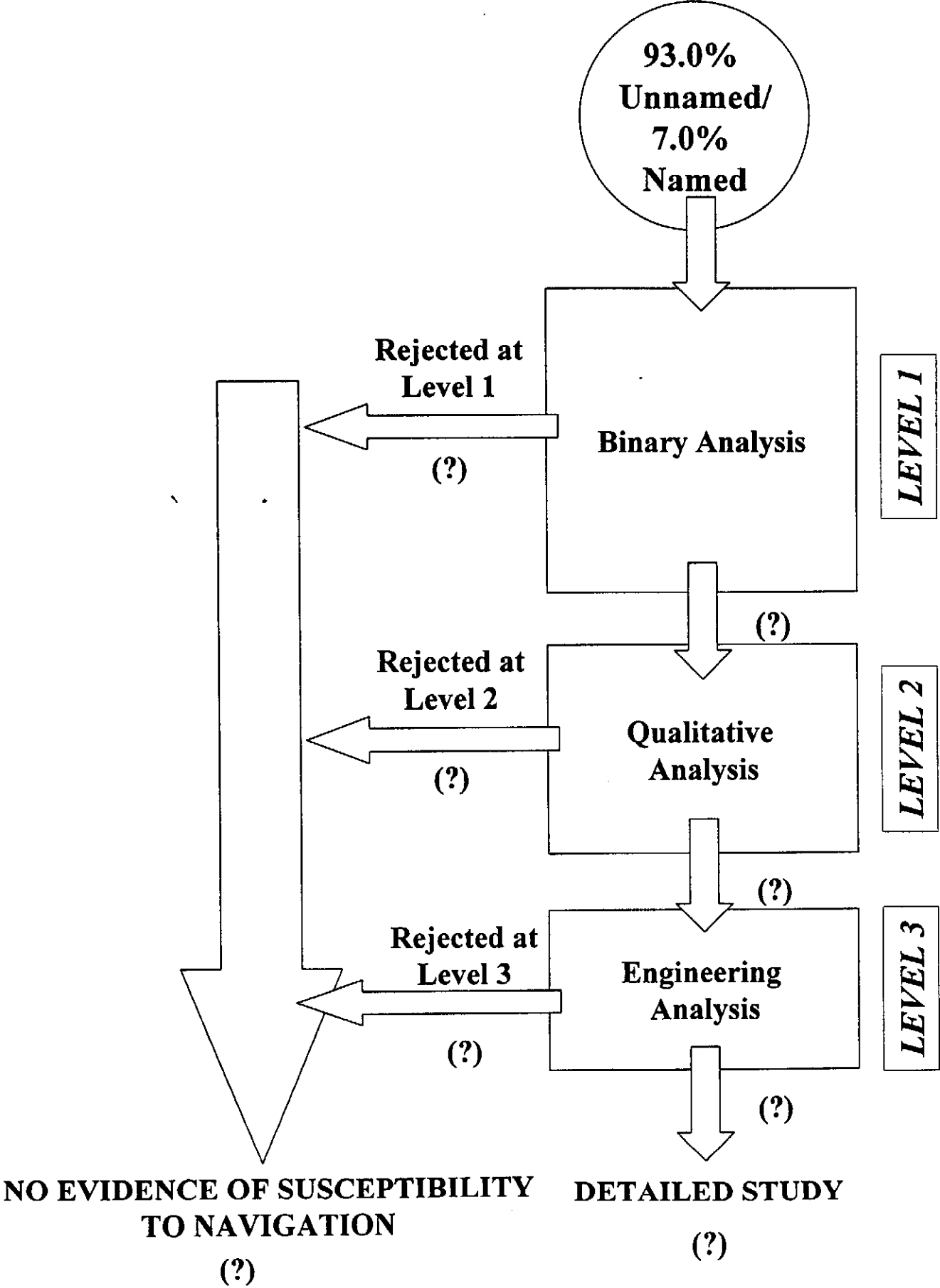


COUNTY DESCRIPTION:

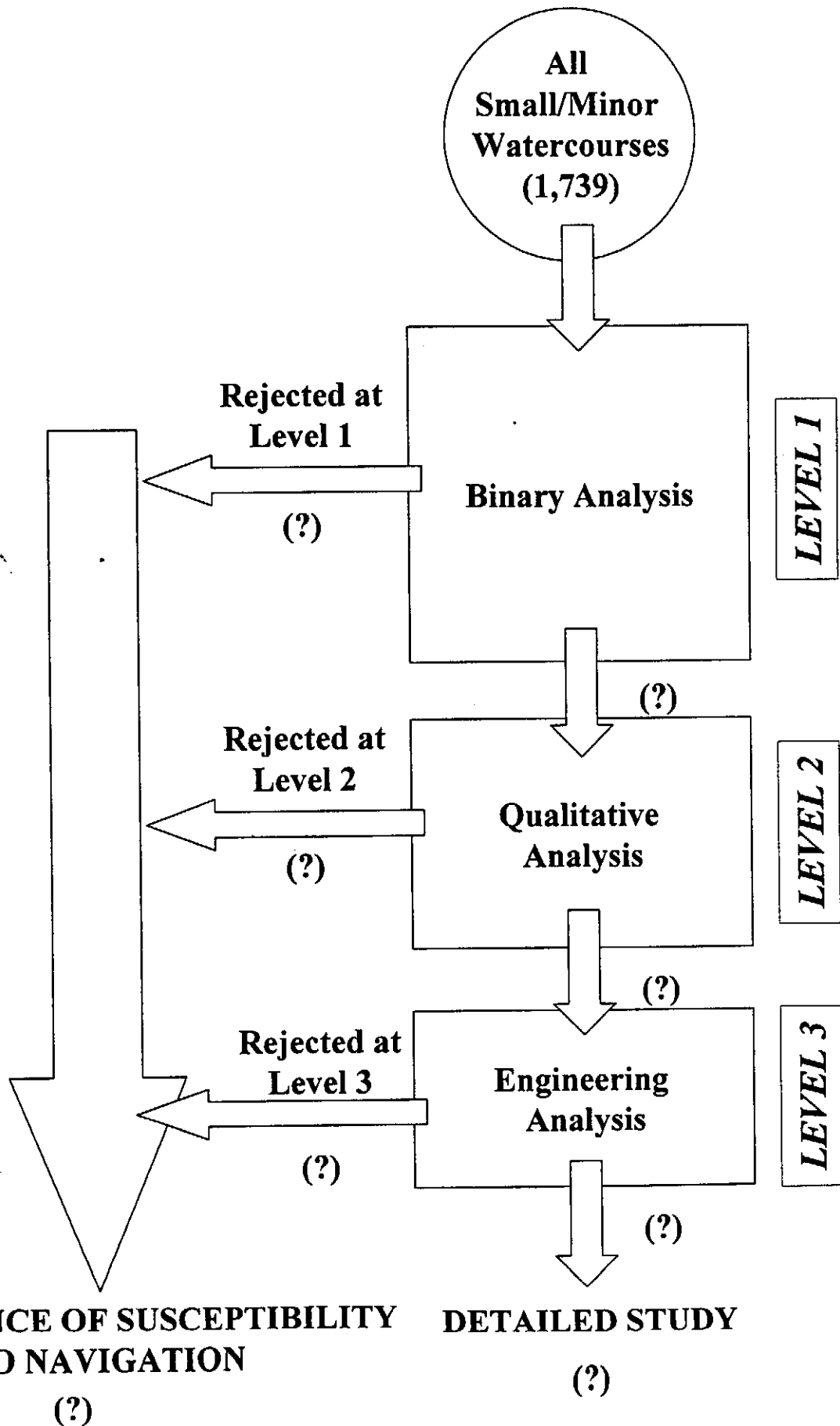
- Located in the southeast portion of the State.
- Borders the state of New Mexico to its east and the counties of Graham and Greenlee to its north and Pima and Santa Cruz to its east.
- Land area is approximately 6,215 sq. mi.
- It consists of about 1,739 small & minor watercourses.



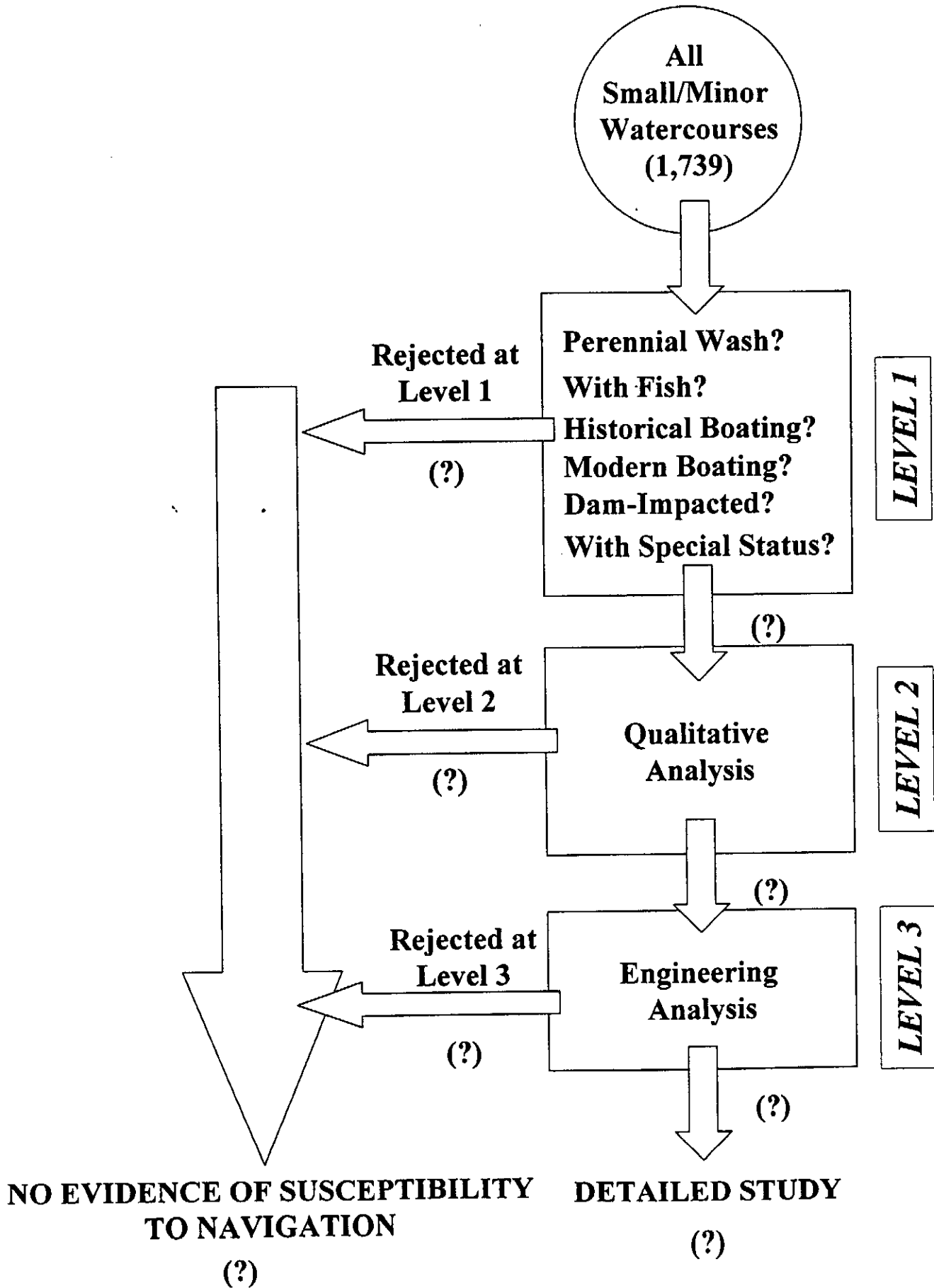
Watercourse Evaluation Analysis for Cochise County



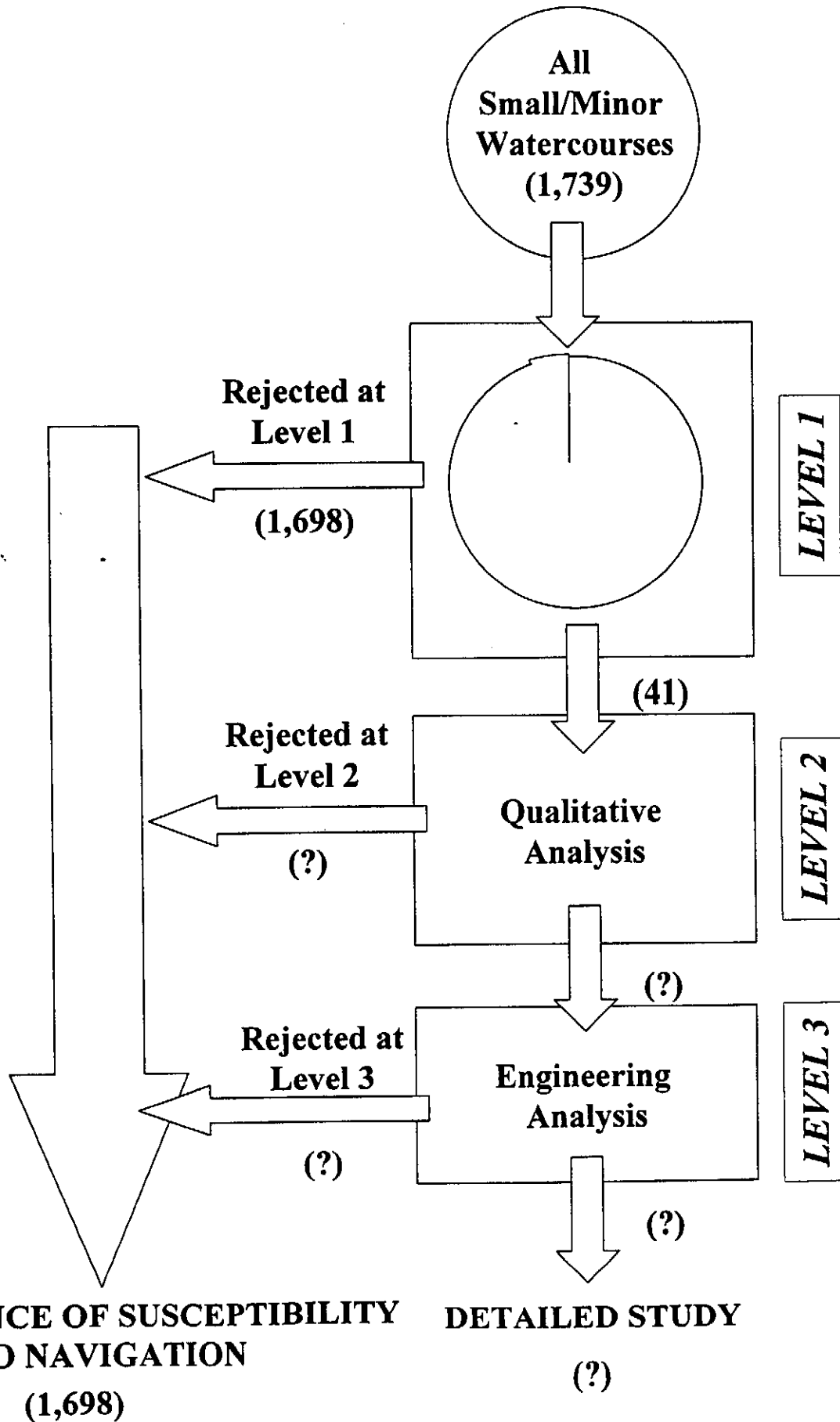
Watercourse Evaluation Analysis for Cochise County



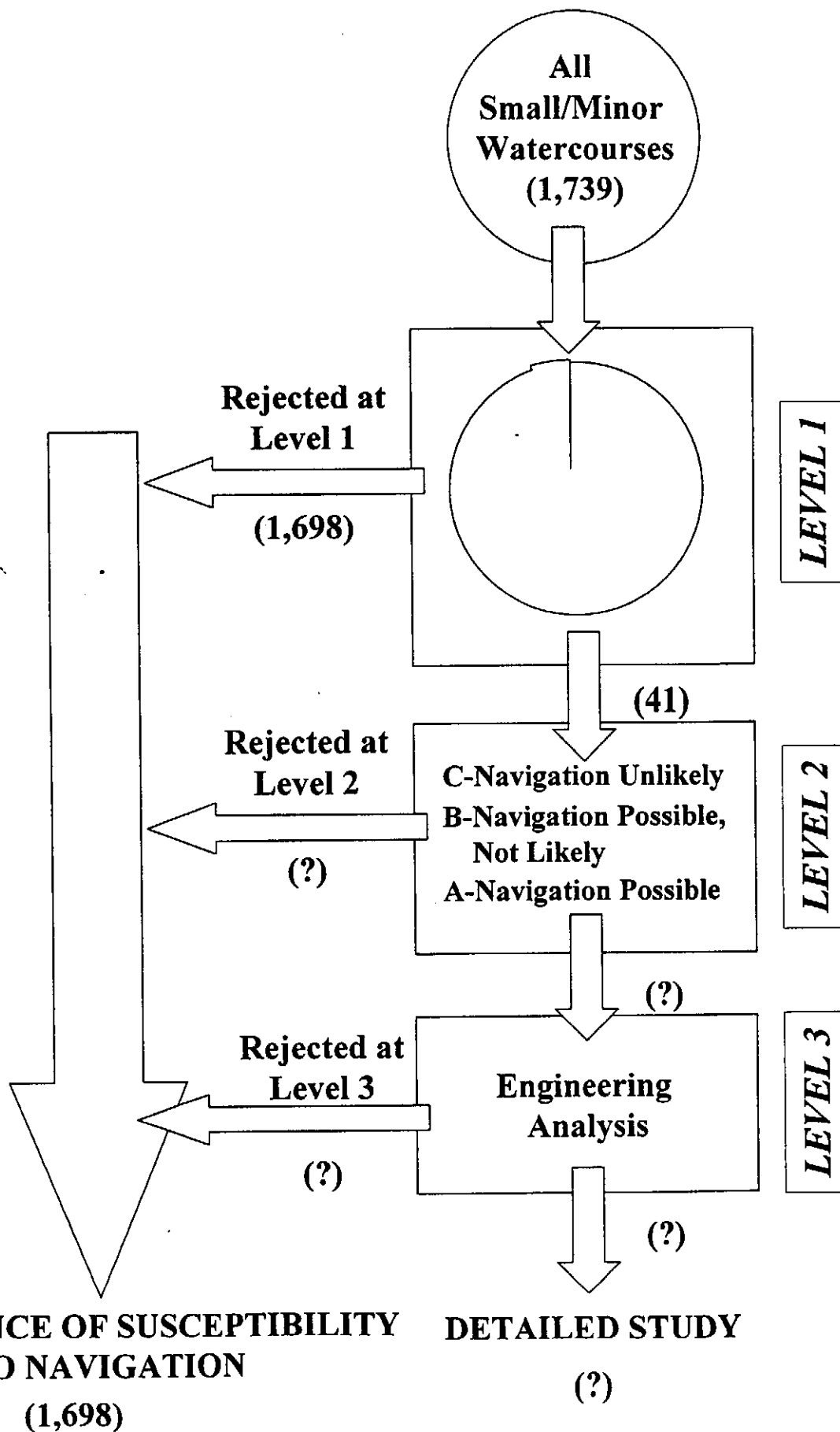
Watercourse Evaluation Analysis for Cochise County



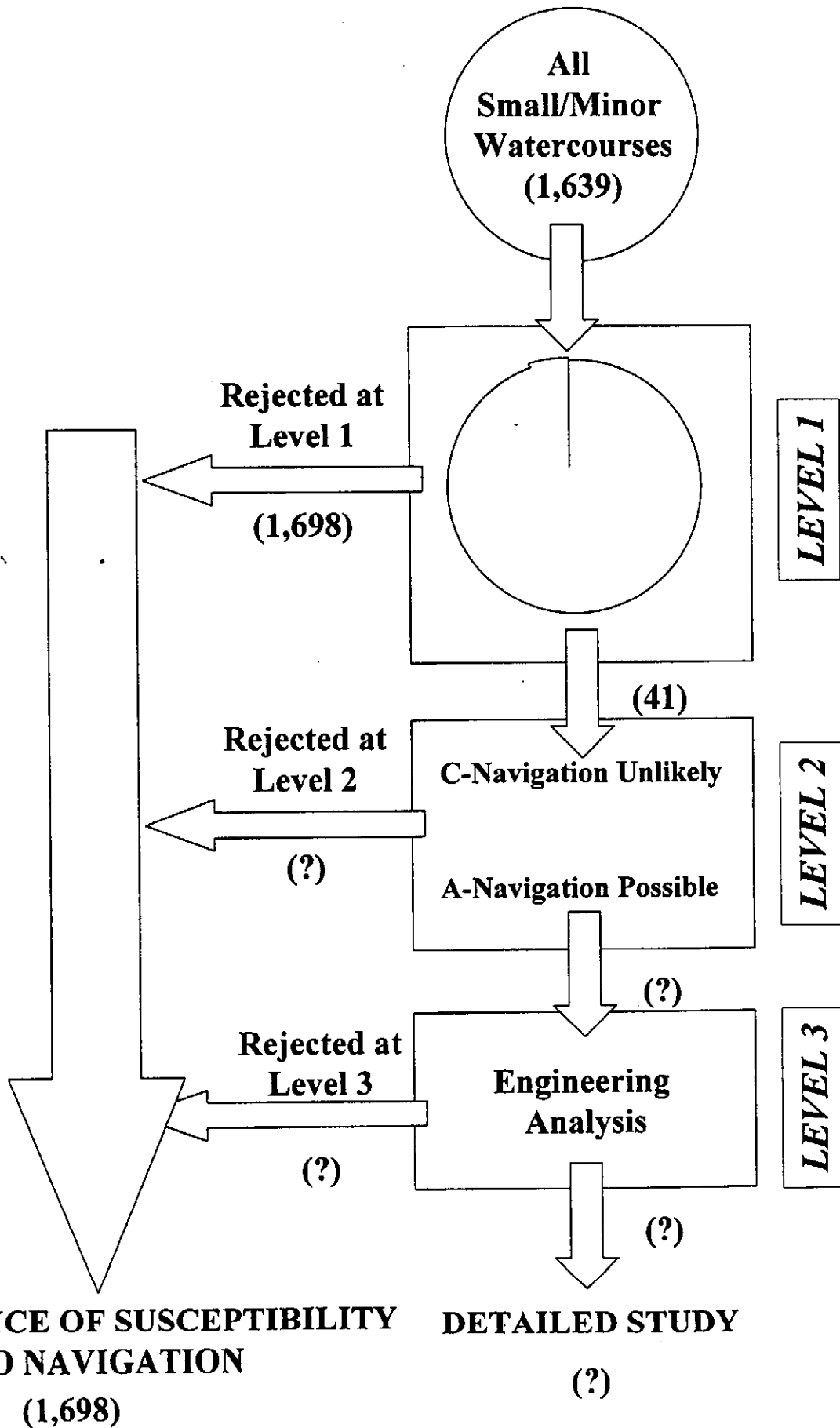
Watercourse Evaluation Result for Cochise County (after Level 1 Analysis)



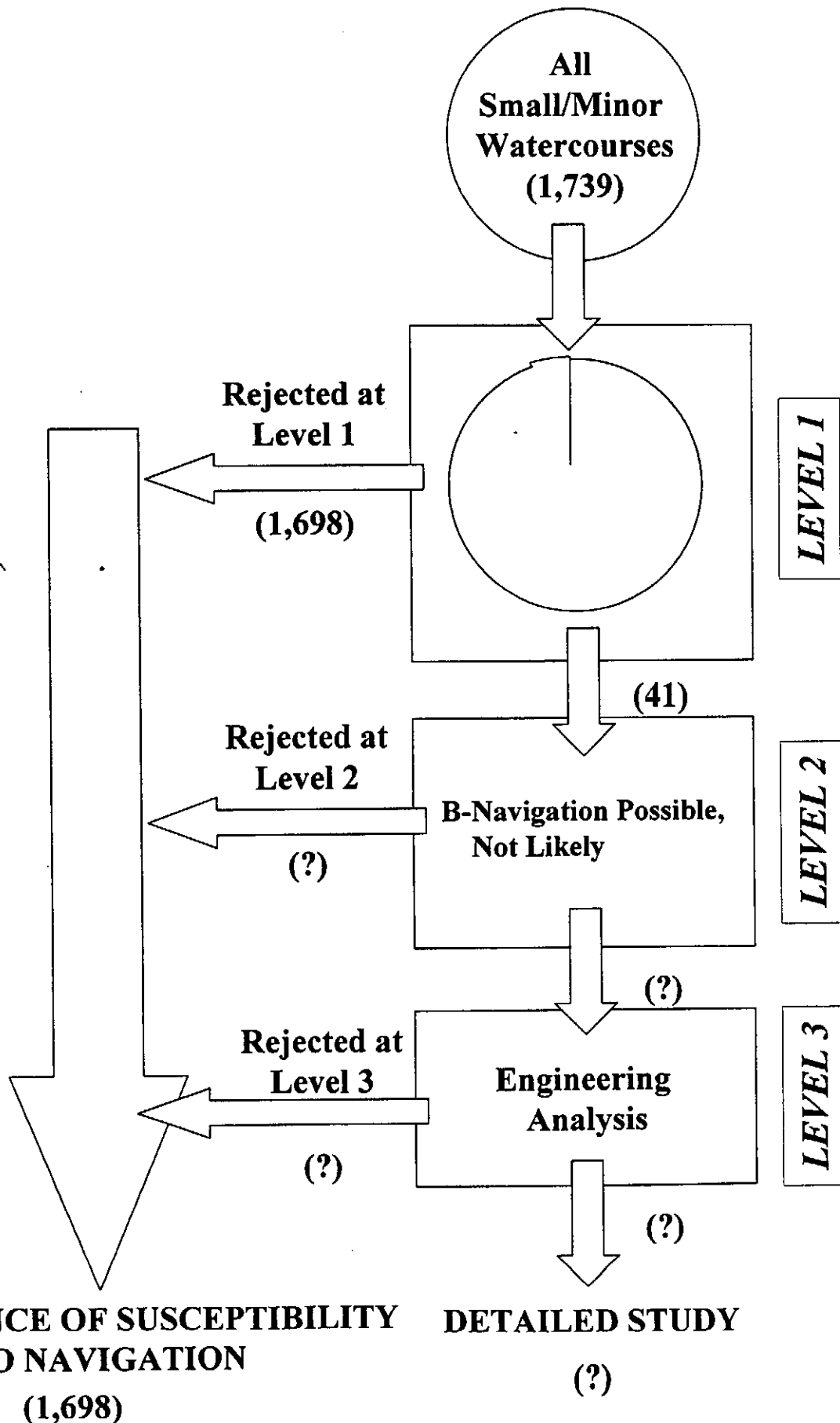
Watercourse Evaluation Result for Cochise County (after Level 1 Analysis)



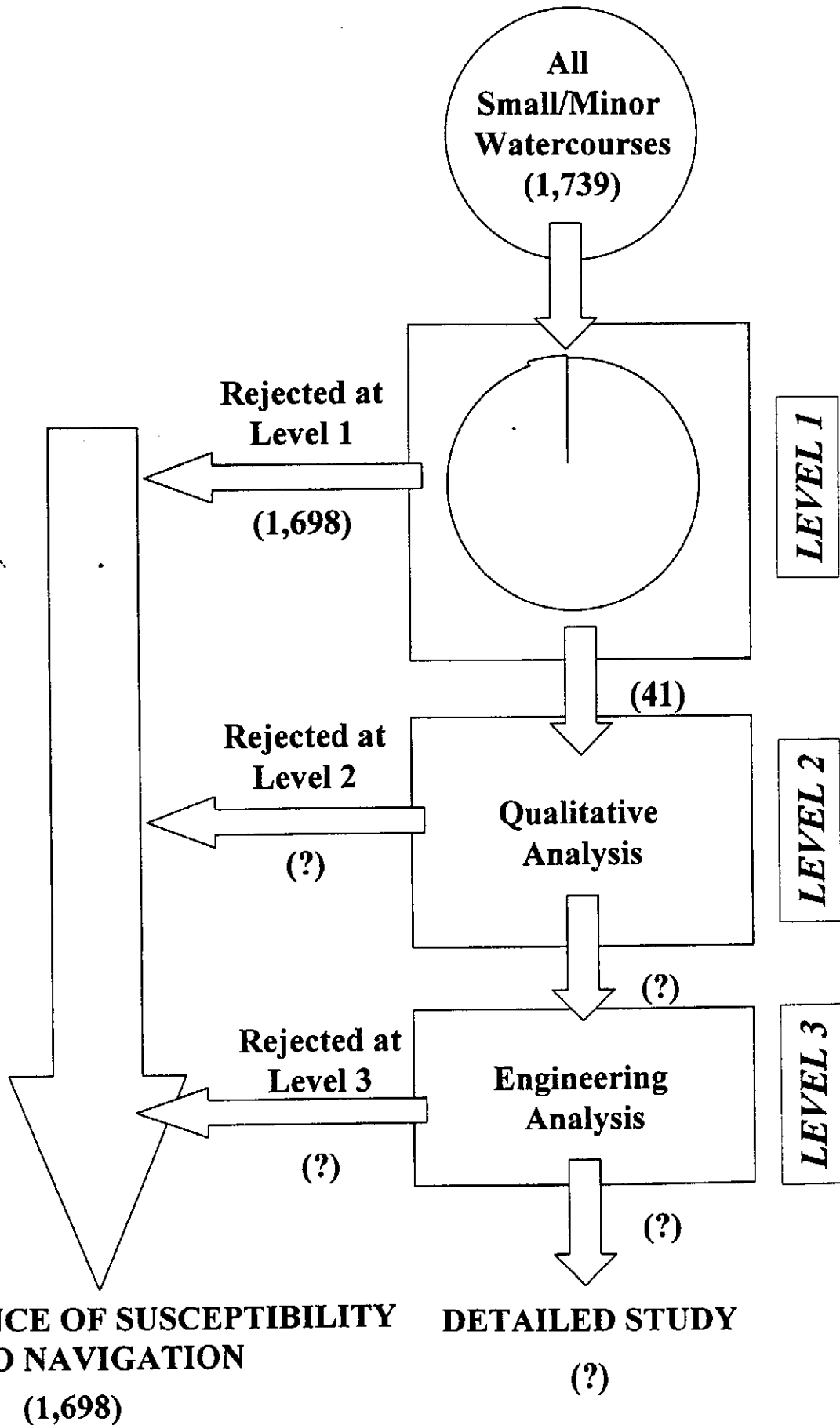
Watercourse Evaluation Result for Cochise County (after Level 1 Analysis)



Watercourse Evaluation Result for Cochise County (after Level 1 Analysis)



Watercourse Evaluation Result for Cochise County (after Level 1 Analysis)

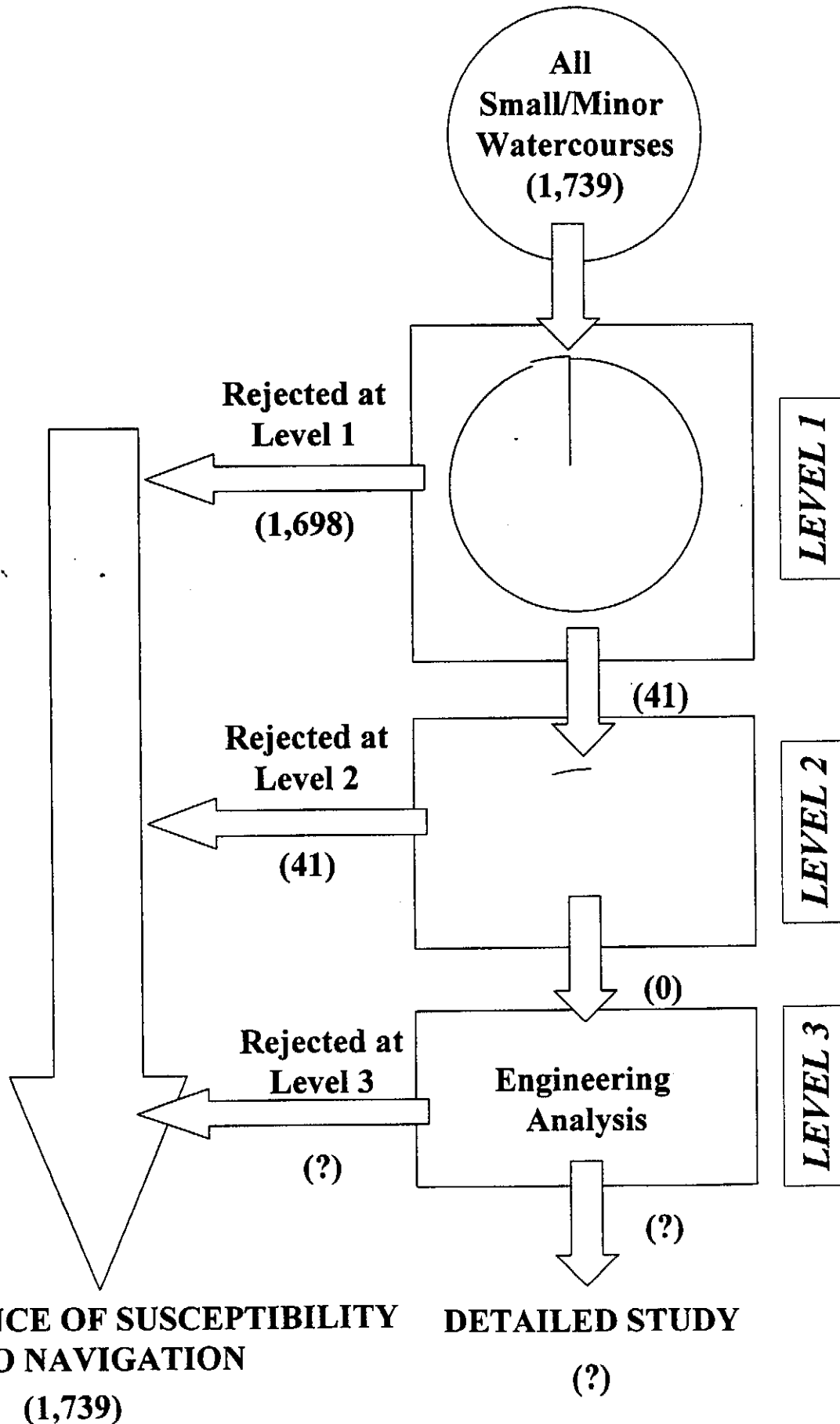


**NO EVIDENCE OF SUSCEPTIBILITY
TO NAVIGATION
(1,698)**

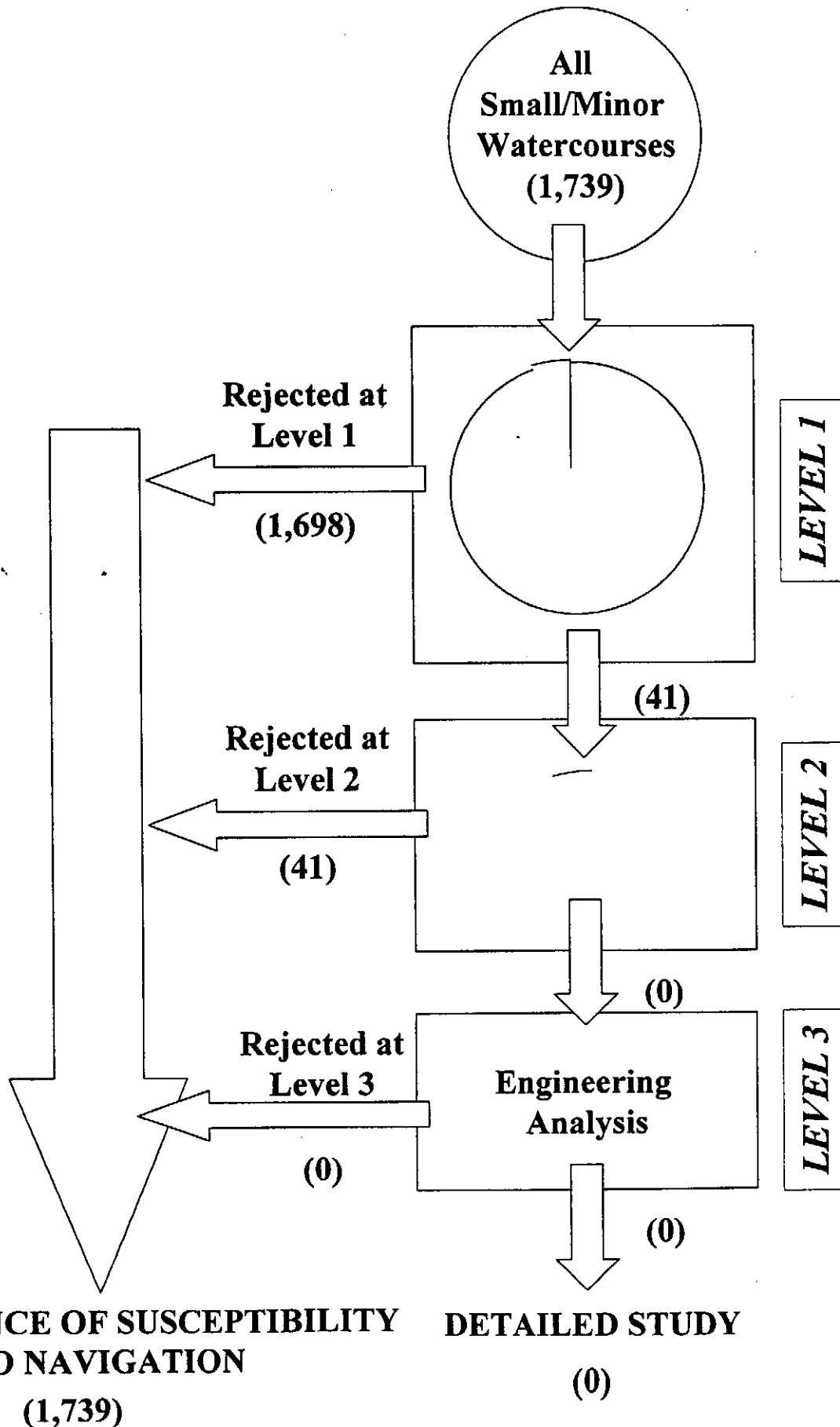
**DETAILED STUDY
(?)**



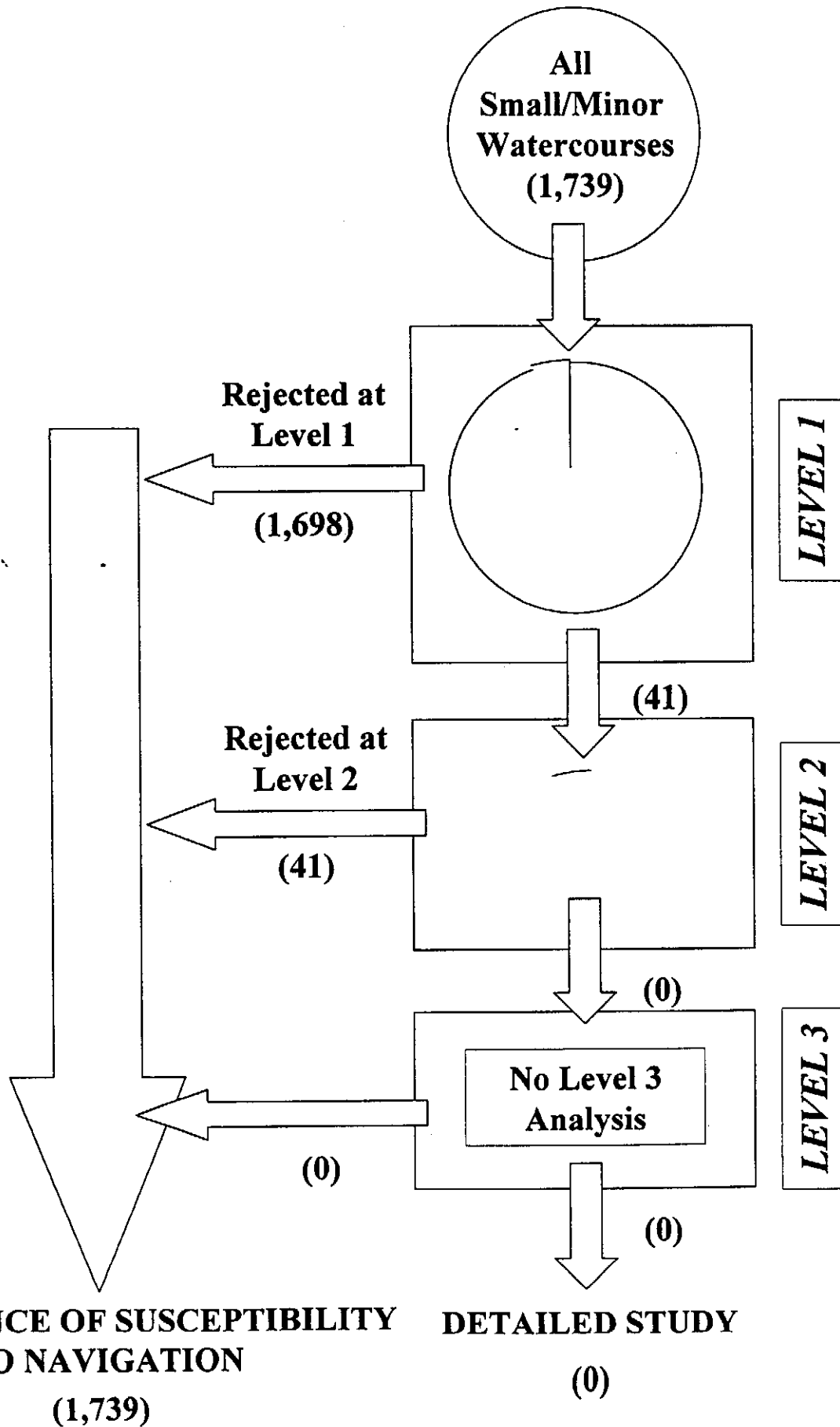
Watercourse Evaluation Result for Cochise County (after Levels 1 & 2 Analyses)



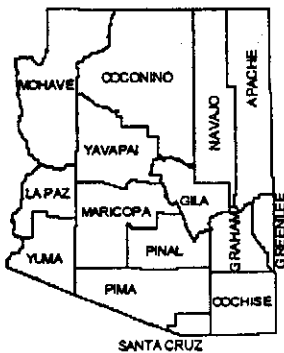
Watercourse Evaluation Result for Cochise County (after Levels 1 & 2 Analyses)



Watercourse Evaluation Result for Cochise County (after Levels 1 & 2 Analyses)



Small and Minor Watercourses in Cochise County



Arizona Map

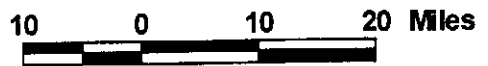
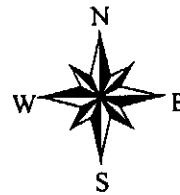
LEGEND:



Cochise Watercourses



Cochise County

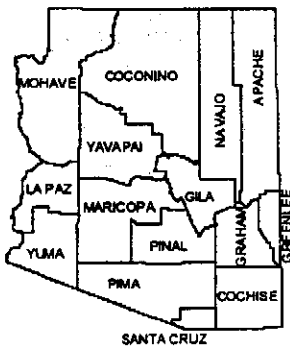


Total No. of Watercourses (Cochise):

1,739






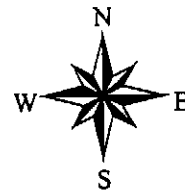
NRL1 and RL1 Data Sets from Level 1 Analysis for Cochise County



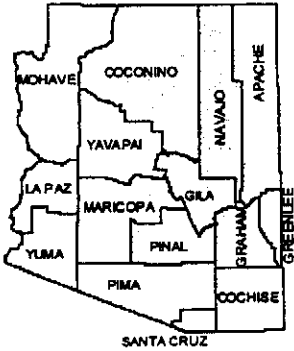
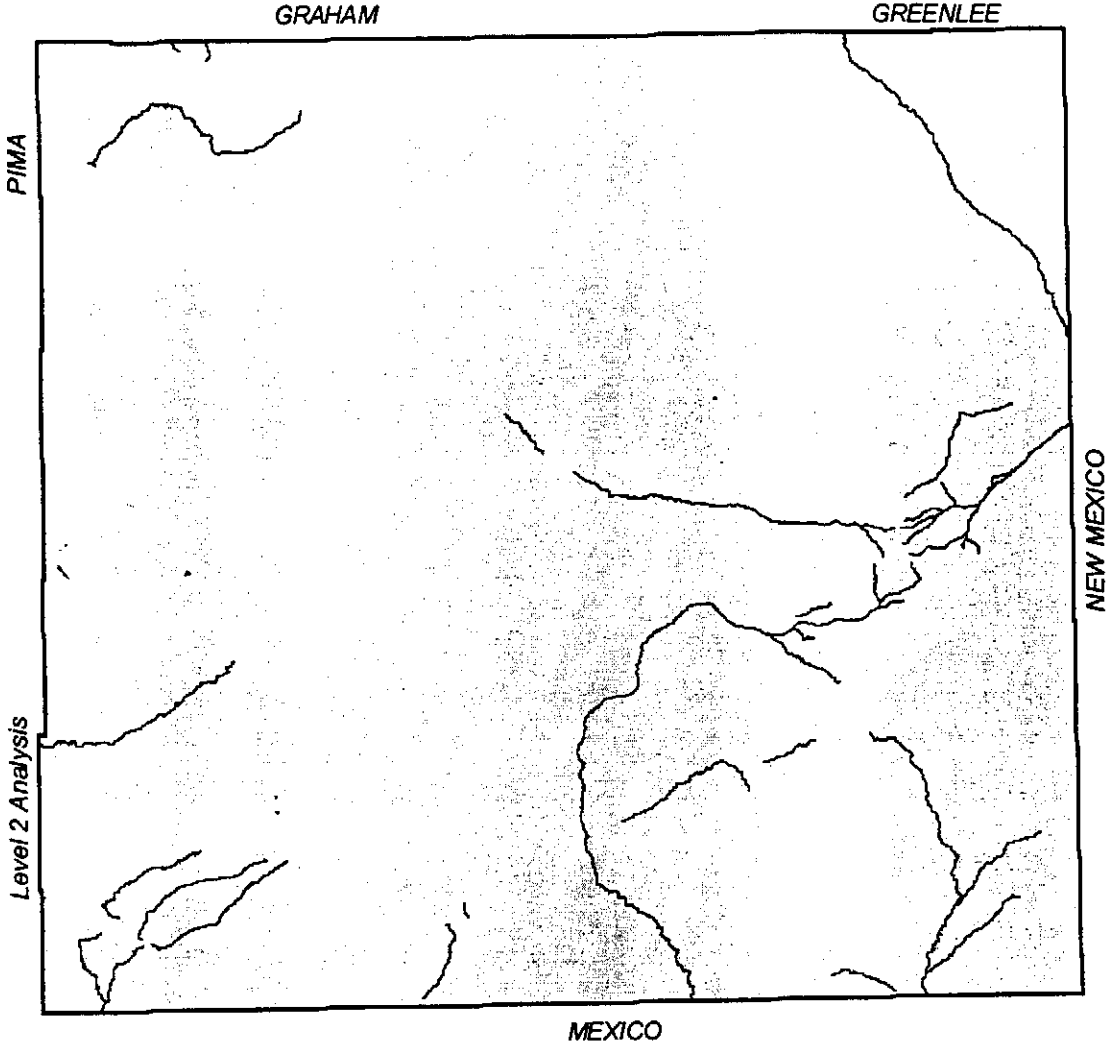
Arizona Map

LEGEND:

-  NRL1 Data Set
-  RL1 Data Set
-  Cochise County






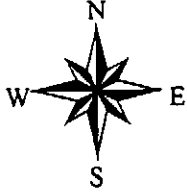
NRL2 and RL2 Data Sets from Level 2 Analysis for Cochise County



Arizona Map

LEGEND:

-  NRL2 Data Set
-  RL2 Data Set
-  Cochise County



SUMMARY

(1) Small and minor watercourses in Cochise County:

Total:	1,739	
Named:	121	(7.0%)
Unnamed:	1,618	(93.0%)

(2) Level 1 Analysis:

Total:	1,739	
RL1 Data Set:	1,698	(97.6%)
NRL1 Data Set:	41	(2.4%)

(3) Level 2 Analysis:

Total:	41	
RL2 Data Set:	41	(100%)
NRL2 Data Set:	0	(0%)

(4) Level 3 Analysis:

Total:	0	
RL3 Data Set:	0	
NRL3 Data Set:	0	

(5) For Detailed Study:

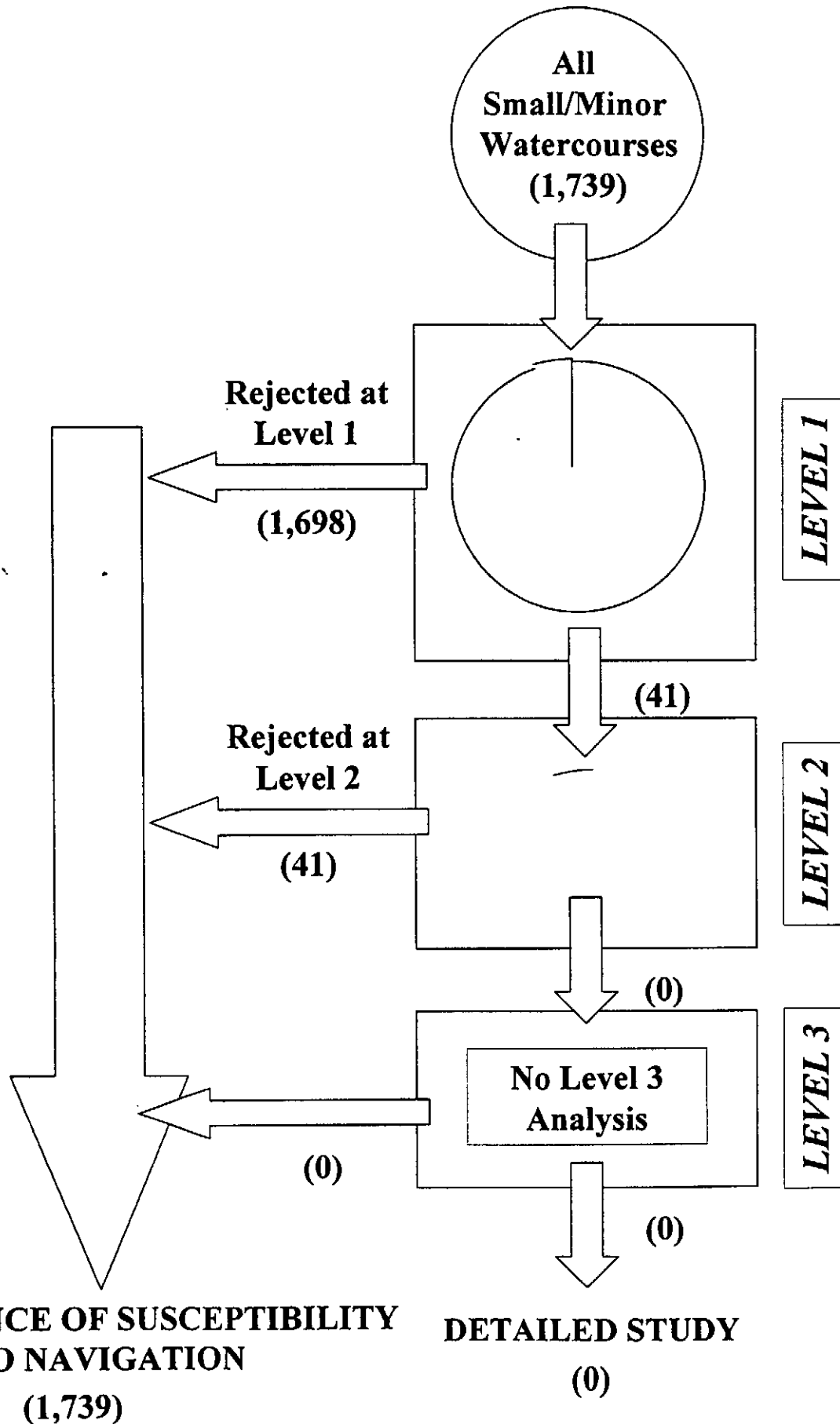
Total:	0	
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(6) Watercourses not susceptible to navigation:

Total:	1,739	
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Watercourse Evaluation Result for Cochise County (after Levels 1 & 2 Analyses)



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FOR
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**END
OF
PRESENTATION**

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