

*State of Nevada*

**DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES**

***Division of Water Resources***

**MEMORANDUM**

**TO:** Lisa Haldane, Eagle Nest Engineering

**FROM:** Kim Groenewold, Program Officer, Floodplain Management

**DATE:** April 2, 2003

**SUBJECT:** RWPC REGIONAL FLOODPLAIN MANAGEMENT PLAN

I've been looking at the plan and my comments have primarily to do with organization. My suggestion is to organize the plan chapters into headings that represent the seven **required** steps of the CRS 10-step process for floodplain management planning.

For your information, the 10 steps are:

1. **Organize to prepare the plan (required)**
2. Involve the public
3. Coordinate with other agencies
4. **Assess the hazard (required)**
5. **Assess the problem (required)**
6. **Set goals (required)**
7. **Review possible activities (required)**
8. **Draft action plan (required)**
9. Adopt the plan
10. **Implement, evaluate, and revise (required)**

According to the CRS Coordinators Manual (see attached Section 510 from the CRS Coordinators Manual) the seven **required** steps must be documented in the plan to receive CRS credit. Consequently I suggest the following headings:

- 2.6 for Sect 5 -
- Overview of Planning Process - Sect 2
  - Types of Flood Hazards in Washoe County 3
  - Flood Related Problems and Concerns 4
  - Goals and Objectives 6
  - [Review of Possible Activities] 1
  - Recommended Actions
  - Implementation Plan

I think you have everything covered but reorganization into these categories would help FEMA's review process. The only possible exception is the Review of

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April 2, 2003

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2 Possible Activities. According the CRS Coordinators Manual the objective of this step is to ensure that all possible measures are explored, not just the traditional approaches of flood control, acquisition and regulation of land use. They want you to describe those activities that were considered and note why they were or were not recommended. You may not have time or resources to spend much time with this so perhaps the heading should be just eliminated.

Region IX has recommended that the CRS guidance on Floodplain Management Planning is probably the best thing out there for people to use even for the FMA program so I think you can't go wrong. Besides, one of our objectives is to make this thing eligible for CRS credit if the Cities and County decide to pursue CRS.

Regarding reorganization, I would like to make the following suggestions:

- Your sections 1.3 *Local Regulatory Context for Floodplain Management* and 2.2 *Public Involvement* as well as much of Chapter 5.0 *Review of Existing Flood Related Plans and Programs* could be combined under the first recommended heading of Overview of Planning Process. Actually, you have so much to talk about here that you may want to break up that first recommended heading into subheadings or add additional headings to cover the steps 2 and 3 of the CRS 10-step process which would be Public Involvement and Coordination With Other Agencies. I also think the plan would benefit from having much of this explained up front.
- A lot of what could go under the Recommended Actions heading is already described in your Chapter 5.0 *Review of Existing Flood Related Plans and Programs*, in Section 4.2 as *Developed Areas Requiring Additional Flood Damage Reduction Planning and Project Implementation*, and also in Chapter 6.0 *Goals, Objectives and Recommended Actions* in a succinct summary fashion.

There appears to be 33 items in the Implementation Plan that really end up being the Recommended Actions. RA2a.4, RA2b.1, RA2b.2, RA2b.3, RA2c.1, and RA2c.2 were not included in the Implementation Plan – maybe these are appropriate for the Review of Possible Activities section if they will not be recommended for implementation.

Other suggestions that I have are:

- 3 On pages 13, 15, and 21 where you have identified specific areas or locations (Boynton Slough, Dry Creek, Evans Creek, Eastside Subdivision, Swan Lake, etc.), include a map or maps that help the reader locate these. I recommend a Riverine Flooding figure and just show those locations listed on page 13, an Alluvial Fan / Flash Flood figure and show locations listed on page 15, etc.
- 4 Regarding the locations identified in Section 4.2 on page 21, these should probably included in the list of identified hazards in the Section on Types of

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Flood Hazards in Washoe County if we are going to recommend mitigation for them.

- 5 • On pages 25 – 28, the excerpts from the Regional Plan need to be italicized or somehow made different from the rest of the text. I got very confused about the headings "Planning Principle #1: . . ." and so on thinking that they were organizational headings of the plan itself.
- 6 • As a personal preference, I have heartburn with an Executive Summary that is broken up into sections. I think that it should be its own section, appear before the Table of Contents, and should not contain any information that is not covered elsewhere in more detail in the body of the report.

I am really impressed with how much substance is in this plan. I think it reflects the amount of hard work and many meetings that have gone into this planning process. I really like your Goals, Objectives, and Recommended Actions and Implementation Plan tables since they cross reference all of this myriad of information and clearly tie each action item to a Goal and Objective. Good work!



# DISTRICT HEALTH DEPARTMENT

April 8, 2003

Eagle Nest Engineering LLC  
8610 Eagle Nest Rd  
C/O Lisa Haldane  
Sparks, NV 89436

Dear Lisa,

We appreciate the opportunity in providing comments on the draft RWPC Regional Floodplain Management Plan and recommend the following additions.

1. Page 24 Restoration and River Parkway

Add bullet Minimize nuisance insect habitat in the design of river parkways.

2. Page 24 5.2

The program is still under development and will etc, after structural controls for new development add vector control standards.

3. Page 26 Planning Principle #2

The bullet that reads The regional plan will require a regional approach etc, add at the end without contributing nor promoting the creation of breeding habitats for nuisance insects.

2-1

4. Page 27 Goal 2.4(b)

Protect water resources from degradation by storm water runoff and nuisance insect concerns.

5. Page 34 12. a

Suggest working with Reno and Washoe County add District Health Vector Control.

6. Page 34 5.7.4 (2.)

Work with Reno staff to modify the Significant Hydrologic Resources etc, add and District Health Vector Control.

7. Page 42 RA 4a.1

Add at the end of the statement add Health Vector officials.

8. Page 52 4a.1

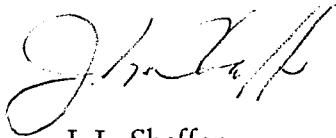
Add at the end of statement add Health Vector officials.

April 8, 2003

By adding the language on our comments for 5, 6, 7 and 8 will broaden the spectrum of fields in the management strategies including the hydrologic and hydraulic design criteria in streams and watershed protection.

Again thank you for our participation as a stake holder in the Floodplain Management Planning Committee.

Sincerely,



J. L. Shaffer  
Vector-Borne Diseases  
Environmental Health division

**Lisa Haldane**

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**From:** "Susan Lynn" <sbl@gbis.com>  
**To:** "Lisa Haldane" <haldane@ecologic-eng.com>  
**Sent:** Thursday, April 03, 2003 2:49 PM  
**Subject:** A couple of little niggles

Lisa: I am re-reading your floodplain management report. I think you did a really good job.  
There were just a couple of little niggles that might help clarify or alleviate some sensitivities.

1 On page 23, the second clear bullet. Should we specifically mention Storey County in some way as they complain that we always leave them out of things? This might be one of the places to acknowledge them.

2 On page 52, the right column. Part of the letters, top and bottom are eeked out. (New terminology--eeked out!)

On page 14. This is no niggly, but I thought it was interesting to notice the number of years between floods that you have listed at the top of the page.

The shortest number of years between floods is 3, the longest number is 23. 8 of the floods occurred at less than 10 year intervals. 5 were at more than 10 years and only 1 was over a 20 years interval. Nothing needed here except that it opened my eyes to the frequency interval.

**Lisa Haldane**

**From:** "Ziegler, Dave" <dziegler@TMRPA.co.washoe.nv.us>  
**To:** "Lisa Haldane" <lhaldane@earthlink.net>  
**Sent:** Friday, April 25, 2003 12:27 PM  
**Subject:** RE comments  
 Hi Lisa--

Thank you for your nice comment. Regarding the additional language you suggest, I agree, and also note that there is actual authority for this (!) in NRS 540A.060.

And yes, it does all seem circular, doesn't it! The diagram on my sketch pad includes arrows going every which way. That is why I summed it up as I did, saying that all the plans need to be consistent with and supportive of each other. Otherwise, the paragraph would go on forever!

:-)  
 Dave

-----Original Message-----

**From:** Lisa Haldane [mailto:lhaldane@earthlink.net]  
**Sent:** Thursday, April 24, 2003 9:46 PM  
**To:** Ziegler, Dave  
**Subject:** Re: Re Flood plain management--comments

Hi Dave,

I really appreciate the time you take to think things through. I had to chuckle to myself after reading your email because it all sounds very circular. Would you be okay with adding the following wording after the paragraph you've provided?

"In addition to providing for the regional coordination of water related infrastructure to support implementation of local master plans, the RWMP provides technical recommendations to local governments regarding the availability and management of water resources."

Lisa

----- Original Message -----

**From:** Ziegler, Dave  
**To:** 'Lisa Haldane'  
**Sent:** Thursday, April 24, 2003 2:10 PM  
**Subject:** RE: Re Flood plain management--comments

Lisa--

A very interesting question, and one that demands some thought and some judgment.

I have sat down with a pad of paper and sketched out the conformance relationships and some other relationships, as follows:


- (1) The RWMP must conform with the TMRP (i.e., "Regional Plan"), per NRS 540A.200
- (2) The master plans, facility plans, and similar plans of local governments and affected entities must conform with the TMRP, per NRS 278.028 and 278.0282.
- (3) Local master plans may include public service and facilities plans, per NRS 278.160(1)(i).
- (4) Affected entity defined: NRS 278.026(1) -- note that "affected entity" does NOT include water/sewer purveyors!

4-1  
 4/28/2003



- (5) Conformance defined: NRS 278.0282(3).
- (6) Local ordinances and regulations must conform with local master plans, per NRS 278.0284.
- (7) Local annual capital improvement programs must conform with local master plans, per NRS 278.0226.
- (8) The RWMP must be consistent with and must carry out local master plans, per NRS 540A.150.
- (9) A proposal to construct certain water facilities must conform with the RWMP, per NRS 540A.230.
- (10) Local annual capital improvement programs must be submitted to TMRPA, for purposes of summarization, per NRS 278.0274(5)(d).
- (11) Water, sewer, stormwater, and flood control entities must review and submit their facility plans to the TMRPA, per TMRP policy 3.2.2. (Note, Lisa, that this policy stops short of saying that these facility plans must conform with the Regional Plan, due to the fact that the term "affected entity" does not include these water entities.)
- (12) Water, sewer, stormwater, and flood control facility plans must identify necessary infrastructure consistent with the RWMP, per TMRP policy 3.2.2.

So . . . is it possible to draw any conclusions from this, and to sum it up? Let me take a shot at some language that might work on page 4 of your report:

 "The [RWMP] must conform with the Regional Plan, and must carry out and be consistent with local master plans. Proposals to construct certain water facilities (including flood control facilities) must conform with the RWMP. Generally speaking, under the requirements of chapters 278 and 540A of NRS, the Regional Plan, the RWMP, local master plans and facility plans, and local annual capital improvement programs must be consistent with, and mutually supportive of, each other."

How does that work for you!? No pride of authorship here!

: -)  
Dave Z.

-----Original Message-----

**From:** Lisa Haldane [mailto:haldane@eaglenesteng.com]

**Sent:** Thursday, April 24, 2003 7:00 AM

**To:** Ziegler, Dave

**Subject:** Re: Re Flood plain management--comments


Hi Dave,

That's fine. The one thing I was wondering about was your question on the page 4 wording, and whether local government master plans must conform to the RWMP. This is something I've been trying to understand myself and so I took my best shot at it.

The transportation and water plans, to my way of thinking, lay out the infrastructure pieces of the regional plan, providing for the coordinated planning and management of resources and facilities. The question has come up before, informally, on what would happen if a local government plan did receive a finding of conformance with the RWMP. I don't think anyone has challenged it yet, perhaps TMWA's drought standard will be the first such case of this if the RWPC chooses not to change the drought standard in the RWMP.

What do you think, should I modify the wording? If so, what would you recommend?

Thanks,

  
4/28/2003

Lisa

----- Original Message -----

**From:** Ziegler, Dave

**To:** 'Lisa Haldane'

**Sent:** Wednesday, April 23, 2003 10:31 AM

**Subject:** Re Flood plain management--comments

Hello Lisa--

You may have noticed that I have not transmitted formal comments by the April 18 deadline. Can you utilize my informal e-mail comments for the time being?

Let me know if there's anything else I can do to help.

:~)

Dave Z.

4-3

4/28/2003

**Lisa Haldane**

From: "Ziegler, Dave" <dziegler@TMRPA.co.washoe.nv.us>  
 To: <haldane@ecologic-eng.com>  
 Sent: Friday, April 11, 2003 1:05 PM  
 Subject: Flood plain management plan  
 Hello Lisa--

This e-mail is a preliminary response to your request for comments. My plan is to submit more formal comments by the 18th (is that OK?), but for starters . . .

I have read the entire draft plan, dated March 2003.

Page 4

Under the TMRPA heading near the top of the page, that information is accurate. It may be worth mentioning that another purpose of the Development Constraints Area is to protect steep slopes.

1 Under the RWPC heading, near the middle of the page, I need to think about the second and third sentences. ("The [RWMP] is incorporated by reference in, and must conform to, the Regional Plan. By extension, then, local government water resource plans must conform to the the [RWMP].") Specifically, I am not sure about the words "incorporated by reference," and the third sentence is a [legal] conclusion, which I take no issue with, but want to think about some more.

4/13  
Page 10

2 Regarding the sentence that says "This concept should be applied to existing developed areas that are adversely impacting downstream properties, as well as to areas of new growth," my comment is simply "how?" In other words, the sentence seems to beg for more detail or explanation.

Page 14

3 Re the sentence that says, "Washoe County and the City of Reno have also adpted the [SHR] ordinance that was developed by the RWPC Stream Advisory Committee," the footnote (#6) provides some detail about this statement that qualifies it, as to Reno's action. As I understand it, Reno's action applies only to the co-op planning area.

Page 17

4 In the numbered list, #4, can you cite an example of a protective measure that a property owner could implement on an alluvial fan?

Page 24

5 Under the Floodplain Management heading, second line, there is a typo, "project" for "protect."

Re recommendations for modifications to the Regional Plan:

6 In general, I do not object to the recommendation. It makes sense. My comment is simply that we would need to think about what this means, procedurally. Basically, I think an amendment to the DCA definition and the map would be a Regional Plan amendment. That means there would be some process steps and timing questions to consider. The definition could possibly be clarified with a policy interpretation or some such vehicle, but I shy away from that, since I would rather amend the Regional Plan for clarification, rather than start down the slippery slope of "interpreting" the plan.

And one general comment:

7 After the 1997 flood, I was extremely concerned about toxic and hazardous materials washed away downstream. In my humble opinion, the floodplain management plan could place more emphasis on this issue.

4/17/2003

Well--I need to run off to the Legislature. Hope this helps--as an interim answer anyhow.

Yours,  
Dave Z.

(45)

4/17/2003

Rec'd 4/16/03

**U.S. FISH AND WILDLIFE SERVICE INFORMAL COMMENTS ON THE MARCH 2003 DRAFT OF THE REGIONAL WATER PLANNING COMMISSION'S REGIONAL FLOODPLAIN MANAGEMENT PLAN.**

**GENERAL COMMENTS**

1 Several sections of the document indicate that the plan will be reviewed for conformance with other plans, or that other plans will be reviewed for conformance with the Floodplain Management Plan. However, there is no information on the process required to ensure conformance among these plans. We recommend such a process be developed if it does not exist and that it be specified in the document.

**SPECIFIC COMMENTS**

2 Section 1.3. Local Regulatory Context for Floodplain Management. Pages 2 and 3. The section on the Federal Emergency Management Agency (FEMA) states that FEMA will review the plan for conformance with grant funding requirements. The section on Nevada Division of Water Resources (NDWR), Floodplain Management Program, states that NDWR will also review the plan for conformance with grant funding requirements. In addition, the Truckee Meadows Regional Planning Agency also will review the plan for conformance with the Regional Plan. The document should specify what would occur if the plan is not in conformance with these requirements or the Regional Plan.

This section should explain the role of the cities of Reno and Sparks in this process and how the plan will be used in land use decisions by them and Washoe County.

3 Section 2.8. Plan Implementation. Page 13. This section states that once accepted by the Regional Water Planning Commission, the plan will be recommended for adoption by local governments. This likely would include incorporation of recommendations into development codes of Reno, Sparks, and Washoe County. However, it is not clear what would happen if these local governments do not adopt the plan or if they adopt something different. This should be explained.

4 Section 3.1. Types of Flood Hazards in Washoe County. Riverine Flooding. Page 13. This section describes rain-on-snow weather events that may occur in the future. We are interested in knowing the extent to which there has been any analysis of the potential for greater frequency of such events with global warming and, if so, what are the conclusions of such analysis.

5 Section 3.1.1. Historical Riverine Flooding in Washoe County. Page 14. The last paragraph on this page states that it is preferred to preserve natural functions of the system, but where perennial streams traverse developed lands, it will be necessary to proactively stabilize the water course due to changed hydrology from development. We recommend additional information be provided on what is meant by "proactively stabilize" a water course. Some discussion should also be provided on the extent to which the 100-year flood zone is expected to change, if at all,

5

16

5-1

with future development.

① Section 3.2.2. Alluvial Fan Flooding Management Strategies. Page 17. We concur that an evaluation of the alluvial fan flood hazard and planned land uses in alluvial fan flood hazard areas should be performed. However, such an evaluation should be done in conjunction with a study that evaluates the contribution of runoff on the alluvial fan to groundwater recharge and maintenance of downgradient wetlands. Covering portions of the alluvial fan with impermeable surfaces and redirecting water flow in association with development may adversely affect these processes and resources and should be part of this study. This would be consistent with Objective 4a on page 42.

② Section 4.1. Flood Related Problems and Concerns: Issues of General Concern in Washoe County. Page 19. We agree with the issues identified in this section. However, we urge that the biological values of areas with natural flood storage potential always be evaluated as part of the decision making process to determine whether to protect the flood storage capabilities of a potentially impacted area or to allow it to be modified along with providing compensatory flood storage elsewhere. This would be consistent with Objective 4a on page 42.

③ The paragraph on Issue 2 states that projects are typically not required to mitigate the increase in run-off volume that is created by new impervious surfaces. At least some local governments are now requiring such mitigation. It is not clear the extent to which these mitigation measures would completely alleviate the problem of increased impervious surfaces in the watershed. Although implied in Plan Element 6 - RA 3a.2 on page 51, we recommend that this measure include the modeling necessary to determine run-off volumes from new impervious surfaces throughout the entire watershed will be conducted, possibly by the Corps of Engineers as part of their flood control project planning process, and incorporated into a cumulative effects analysis. It appears this would be an important component of implementing Plan Element 5, Mitigation of the Cumulative Effects of Development, in the Implementation Plan.

If you have any questions, please contact Mary Jo Elpers at (775) 861-6300.

**Lisa Haldane**

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**From:** <NeilUpc@aol.com>  
**To:** <haldane@eaglenesteng.com>; <haldane@ecologic-eng.com>  
**Cc:** <pbowker@nimbusengineers.com>; <markay@pyramid.net>; <franco.crivelli@igt.com>;  
<alphaomega@gbis.com>; <PUrban@MAIL.co.washoe.nv.us>  
**Sent:** Friday, April 18, 2003 6:19 PM  
**Subject:** Draft-Floodplain Mgt. Plan  
Lisa:

I Have not been able to attend any meetings of anything lately. I am concerned about the Floodplain Storage Volume statement on Page 35 of the draft (Article 416-4): "No net loss of floodplain storage volume in critical flood storage areas ..." I feel strongly that this wording should be retained. Although Peggy B. suggested a change, I am sure that she had no intention of weakening the statement. I hope that you will retain this statement as is and insert Peggy's suggested statement in addition to it. For example: "No net loss of floodplain storage volume or other activity that would negatively impact the base flood level in critical flood storage areas ..."

Thank you for the great value you have been to this project.

Neil Upchurch

6-1

4/28/2003

Lisa Haldane

From: "Bob Ramsey" <alphaomega@gbis.com>  
 To: "Lisa Haldane" <laldane@eaglenesteng.com>  
 Cc: "Rose Strickland" <rosenreno@gbis.com>; "Neil Upchurch" <NeilUpc@aol.com>  
 Sent: Tuesday, April 22, 2003 2:58 PM  
 Subject: Floodplain Management Plan: Notes.

Lisa Here are some of my notes. Some of these are suggestions to make it flow a little better. I hope it will read clear to people not familiar with our flood language.

P 1.1 Sentence is too long. Change (with) "through the" Second (with) "Included"

Floodplain management Sentence is difficult, it is too long. Also it talks about reducing flood damage. We can't reduce flood damages directly, but we can take measures that would reduce the risk of flood damages. Or build facilities that give us "flood damage reduction". The COE use this description for the project.

1.2 Also of concern "is" not (are) Next Sentence is well stated.

1.4.2 The approach to reducing potential "flood" damages----

4. "Require lower-density (or low-density) development in floodplains."

5. Development of mitigation programs to prevent any increase in flood damages to properties that will not be protected by proposed, or future flood damage reduction projects.

6. Development of an on-going community based program to inform the public, and elected officials on pro-active flood damage reduction strategies.

Page 20

Issue 13: Local governments failure to participate in the FEMA CRS programs that could (or would) reduce flood insurance premiums for home owners and business establishments,

Page 32

8) Zone AE (**base flood elevation determined**) residential properties: "FF" finished floor elevation to be a minimum of 2 FT above BFE. Industrial and commercial properties to flood proofed or flood protected to a minimum level above BFE in accordance with State recommendations.

9) Zone A (**base flood elevation not determined**)-----studies----

Page 35

4) Flood Plain storage volume: No net loss of floodplain storage volume or any activity that would increase the BFE in -----

Page 39

RA1d.2 Development of a continuing public information program-----

(my point here is this should be a broad based program that would be cost effective. It may be brochures, billboards, school programs. public service announcements through weather forecasters, lectures at senior citizens centers, ETC) This program has to be continuous to qualify for credits under the CRS. (This repeats for Washoe County and Sparks goals.)

Over all I think you did a good job on this plan. It seems to be coming together very well. I admire your courage in promoting some of the sensitive measures we need in order to accomplish flood damage reduction in our communities.

4/28/2003



**Regional Water Planning Commission  
Floodplain Management Planning Committee  
Summary of Thirteenth Meeting  
April 29, 2003**

**Notice**

Next Meeting Date: 3:00 – 5:00 pm, Thursday, June 5th, 2003 at the Washoe County Department of Water Resources, 4930 Energy Way, Reno, NV

Topic for June meeting: review of comments on Floodplain Management Plan

**Group Discussion Items**

***Floodplain Management Plan comments and completion schedule:***

The City of Reno and City of Sparks have requested more time to review the draft Floodplain Management Plan. The committee decided to request that all comments on the plan be received by May 28<sup>th</sup>, 2003.

The grant under which the plan is being funded requires a final plan be submitted to the state within 60 days of adoption. For the purposes of the grant, approval by the RWPC by June 30<sup>th</sup> would meet the requirement for adoption. To meet this schedule, the draft plan would need to come forward to the RWPC at its June 18<sup>th</sup> meeting.

A number of items were discussed during the meeting that should be noted by all those who are reviewing the draft plan:

- Some issues that are not resolvable in the near term can be left open ended within the plan, as it is intended to be a living document that will undergo periodic update.
- ① • The floodplain management plan is an advisory document for local governments. It does not establish requirements. This differs from the RWPC Interim Water Policies that were developed under the settlement agreement.
- ② • Issues with the Interim Water Policies need to be settled at the Regional Water Planning Commission level, and are independent of the Floodplain Management Plan.
- ③ • There was consensus that the portion of the plan that contains recommendations for modifications to local government development codes (pgs 31,33,35) could be more softly worded so that local governments could individually choose whether to adopt the recommendations to their individual development codes in due course and after the appropriate review with affected parties.
- Lisa offered to meet with City staffs to go through areas of concern within the plan and work through suggested modifications.
- ④ • The County has recently changes a significant amount of land from General Rural to Open Space. The land use maps need to be updated to reflect this change.

Questions or Comments:

Please contact Lisa Haldane, Facilitator, Floodplain Management Planning Committee,  
775 425-5777. Email [haldane@eaglenesteng.com](mailto:haldane@eaglenesteng.com).

8-2

**Lisa Haldane**

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**From:** "Marilyn Brainard" <marilynangel@earthlink.net>  
**To:** <lhaldane@eaglenesteng.com>  
**Sent:** Tuesday, May 27, 2003 3:38 PM  
**Subject:** Input

Hi, Lisa

I don't have any new specific comments for you, but do urge you to incorporate many of the comments you made in your summary of the 4/29 meeting.

Perhaps it can be as an addendum or part of an executive review. They are important points which should not be "lost" or committed only to the memories of those present [speaking for myself on the latter particularly :-)]

It is so easy to have essential consensus later refuted by others, both those in attendance and those reading the document.

See you on June 5th!

Marilyn

q-1

5/29/2003

# WASHOE COUNTY

## Department of Public Works

"Dedicated to Excellence in Public Service"



TOM GADD, Public Works Director

1001 East 9<sup>th</sup> Street PO Box 11130 Reno, Nevada 89520 Telephone: (775) 328-2040 Fax: (775) 328-3699

DATE: May 27, 2003  
TO: Lisa Haldane, Eagle Nest Engineering  
THRU: Bill Whitney, Department of Community Development  
FROM: Kimble O. Corbridge, P.E., Washoe County Engineering Division  
**SUBJECT: RWPC REGIONAL FLOODPLAIN MANAGEMENT PLAN**

I have reviewed the March 2003 Draft of the referenced plan. My comments include the following:

### *Page 4*

- ① The Summary of Recommendations should be revised to be a Summary of Suggestions. All of the agencies will need to determine how they wish to implement the program and it may vary from the suggestions.

### *Page 5*

- ② Participation in the CRS will also be determined by the agencies. There are costs associated with being on the program which are not reflected in the reported potential Premium Reductions on Table 2.

### *Page 10*

- ③
- If we are to adopt a "No Adverse Impact" for flood storage, then we must calculate the potential development that would be allowed under existing zoning and account for that development in the community-based plan.
  - ④ • Delete the sentence "This concept should be applied to existing developed areas that are adversely impacting downstream properties, as well as to areas of new growth." It could be argued that all existing development in the flood plain adversely impacts others.

⑩-1

- 5
- *Preserve Floodplain storage volumes.* The plan should account for the loss of storage volumes based on existing zoning or land use, not just existing development. If the zoning is not acceptable, change the zoning before the adoption of "no loss in storage volume".

**Page 11**

- 6
- *Zero base flood elevation increase.* Same comment as in previous paragraph.
- 7
- *Cumulative effect.* First there needs to be a baseline study completed against which all future studies of runoff can be compared.

**Page 19**

- 8+9
- *4.0 Flood Related Problems and Concerns.* The issues should state the problem or concern, but should not recommend or suggest the solution. Again, baseline studies need to be completed as a first step. The suggestion, when stated, should include changes in land use that restricts development in the flood plain.

**Page 22**

- 10
- *6<sup>th</sup> paragraph.* The increase should be allowed or the land use changed.
- 11
- *Last paragraph.* I don't understand the comment.

**Page 29**

- 12
- There may need to be more discussion on the Interim Water Policies and what is required by that document and what the agencies are doing with the recommendations. We should get the Interim Program up and running before we add on all the other programs. This would help the public understand what policies are mandatory (court ordered) and which policies can be argued.

**Page 34**

- 13
- *Section 5.7.* All references to "recommended" should be changed to "suggested".

10-2

Goal 6. The fact that there is a cost of manpower to the agencies to implement the CRS should be noted.



May 27, 2003

**Washoe County  
Department of  
Community  
Development**

1001 E. Ninth St., Bldg. A  
Post Office Box 11130  
Reno, NV 89520-0027  
Tel: 775-328-3600  
Fax: 775-328-3648

TO: Lisa Haldane, Eagle Nest Engineering  
FROM: Bill Whitney, Washoe County Department of Community Development  
SUBJECT: RWPC Regional Floodplain Management Plan (Draft)

Staff members of Community Development have reviewed the March 2003 Draft of the referenced plan. We have combined our comments into general and specific comments, they include the following:

**Specific Comments:**

- ① Page 35 (1) Critical facilities definition should additionally be broken into whether they are "permanent" or "transitory" in nature (i.e. a use that will not change or one such as a business that might store different substances at different times).
- ② Page 35 (5) This would not be a Development Code Amendment.
- ③ Page 35 (5) Change wording to read the "county's floodplain manager".
- ④ Page 35 (6) A definition of "low density zoning" is needed. The cities will most likely have a different definition than the county.
- ⑤ Page 34 (Article 418) This article is crafted to address development measures designed to protect specifically identified "hydrologic resources" (i.e., perennial streams). Neither the county, nor the general public that helped craft the regulations, would want to broaden that Article to include drainage ways and wetlands. Rather, the Floodplain Management Plan should note that the desired goal is to merge all three jurisdictions codes as they apply to streams, wetlands, drainage ways, etc (choosing the best practices from each jurisdiction) and place those into the appropriate section of the Development Code; rather than focusing on a specific Article that may not be the best final resting place for those changes.

**General Comments**

- ⑥ The draft contains a general statement that a review of the Truckee Meadows Regional Plan (TMRP) indicates general consistency between the floodplain plan and the TMRP. The draft plan should contain assessments of how it does or does not conform with the TMRP Planning Principles listed on pages 26-27 of the draft.
- ⑦ Not clear how the TMRP intensification within the core of Reno/Sparks fits with the plans policies? Especially the statement about doing no harm in the central Truckee Meadows.
- ⑧ The plan should include an analysis if any of the recommendations will result in the cities or county being found "not in conformance" with the TMRP.

Adrian P. Freund,  
AICP, Director



"Dedicated to Excellence in Public Service"

11-1

Memo to: Lisa Haldane  
Subject: Floodplain Management Plan  
Date: May 27, 2003  
Page 2

- 9 Include an analysis of how the TMRP would need to be amended in-order to make the plans recommendations implementable. One suggestion is to map the different flood zones, critical facilities and floodplain storage areas on a consistent scale and format to allow TMRPA to identify these areas as constrained.
- 10 The plan should include text about liability of local government if recommendations are not implemented.
- 11 The plan should detail the order in which the recommendations should be implemented and an analysis of the consequences.
- 12 The draft plan could include recommendations to the three local governments that would keep intensification of land use in check so that development doesn't happen in critical areas prior to the recommendations of the draft plan being implemented.
- 13 Not clear how the draft plan addresses critical facilities that are presently in the floodplain.

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Senior Planner

WHW



**Lisa Haldane**

**From:** "Joiner, Rob" <rjoiner@ci.sparks.nv.us>  
**To:** "Lisa Haldane" <haldane@ecologic-eng.com>  
**Cc:** "Powell, Margaret" <mpowell@ci.sparks.nv.us>; "Gooch, Shawn" <sgooch@ci.sparks.nv.us>; "Seidel, Wayne" <wseidel@ci.sparks.nv.us>  
**Sent:** Wednesday, May 28, 2003 4:42 PM  
**Attach:** image001.gif; image001.gif; image001.gif; image001.gif; image001.gif  
**Subject:** RE: Comments due on Floodplain Management Plan

Lisa: Thank you, no, I have the copy and the appendices. My only comments then are that, with the last changes made removing the code amendment requirements etc., and with the meeting on May 15 where we agreed to a "blueprint" for continuing development of the process, I believe that we are on the right track.

I had meetings today with the State demographer's steering committee or I would have been at the modeling committee meeting today.

The notes from the May 15 meeting, and the chart developed by Terry, reflect the current consensus of the process to follow. Finally, I do not believe that anything in the report should be "adopted" by the RWPC until the process is completed, as outlined by Terry and Elisa.



-----Original Message-----

**From:** Lisa Haldane [mailto:haldane@ecologic-eng.com]  
**Sent:** Wednesday, May 28, 2003 10:29 AM  
**To:** Joiner, Rob  
**Subject:** Re: Comments due on Floodplain Management Plan

Hi Rob,

There is only one version of the draft plan, we haven't done any updates yet. The file for the document is too large to email. If you need another copy of the draft plan, I can get you one from Jeanne that doesn't include the appendices.

Let me know,

Lisa

----- Original Message -----

**From:** Joiner, Rob  
**To:** Lisa Haldane  
**Sent:** Wednesday, May 28, 2003 9:47 AM  
**Subject:** RE: Comments due on Floodplain Management Plan

Lisa: Would you please send me the version that you are working from. thank you

-----Original Message-----

**From:** Lisa Haldane [mailto:haldane@ecologic-eng.com]  
**Sent:** Tuesday, May 27, 2003 8:50 AM  
**To:** Lisa Haldane  
**Subject:** Comments due on Floodplain Management Plan

Hello Folks,

Just a reminder that comments are due on the RWPC draft Floodplain Management Plan this Wednesday, May 28th. I need to actually have the comments in hand on Wednesday so I can compile them for an internal staff review meeting on Thursday afternoon.

5/29/2003

**Lisa Haldane**

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**From:** "Gooch, Shawn" <sgooch@ci.sparks.nv.us>  
**To:** "Lisa Haldane" <haldane@ecologic-eng.com>  
**Sent:** Wednesday, May 28, 2003 4:21 PM  
**Subject:** Comments on the Floodplain Management Plan

Lisa,

Generally, my comments on the plan have been included in the plan throughout its development by the process of involvement.

① I wish to add my desire to remove direct inclusion of the interim policys in the Floodplain Management Plan including them by reference only.

② I do have an editorial comment on Section 1.2 Background on the bottom of page 1. The term "INITIAL (stormwater)" should be repalced with term "MINOR (stormwater)". This is generally how a 5-year storm and a 100-year storm are refered to with respect to design events. For instance, the stormdrain system in the streets in the City of Sparks is designed for the minor storm (5-year) whereas flood control facilities are designed for the major storm (100-year).

Cheers,  
-Shawn

Shawn K .Gooch, P.E.  
Flood Control Manager  
City of Sparks, Public Works  
431 Prater Way  
Sparks, Nevada 89432

Phone: 775-353-7824  
Fax: 775-353-1635  
Cell: 775-691-9580

13-1  
5/29/2003

**City of Reno Comments Regarding the RWPC  
Regional Floodplain Management Plan  
May 28, 2003**

1 The purpose of the plan is not clear. The driving forces behind the development of the plan should be clear at the outset. Acknowledge the grant provided through NDWR to assist the community to develop a floodplain management plan to meet the FEMA directive: For disasters declared after Nov 1, 2004, a local government must have a mitigation plan approved in order to receive HMGP project grants. Elaborate on where and how our community has benefited from these grants in the past and the consequences of not having them available. The FEMA mitigation plan requirements are clearly defined. This could set forth layout and purpose of the plan.

2 *There is a need to make an upfront statement clarifying that this plan is intended to serve as a guidance document, to be accepted by the RWPC as a work in progress. Development of this plan has served as a first step.*

3 From the City's perspective, there are legal concerns that should this plan be adopted into the RWP and subsequently into the RP, then the plan would no longer serve to provide guidance to the local governments, to being mandatory. The City of Reno recognizes that there are a benefit to the development of a plan, however, also recognizes that it must be done in a fiscally responsible manner that considers the cost/benefit ratios, impacts to development and economics of the region.

4 Other benefits or driving forces for the community to develop a Floodplain Management Plan is the Army Corps of Engineers requirements for the Truckee River Flood Control Project. Tying this plan into a project of this magnitude raises many concerns regarding overall "process".

5 To date there has been no program to fuse all of the components of the flood program into a package that includes the Regional Plan elements, financial components related to who pays issues, flood easements, or required land purchases and design and construction processes. This proposed Flood Plain Management Plan further confuses the issues because it has been developed prior to any knowledge of the relative impacts of future land uses on the flood program elements except within the flood plain area itself. Thus many elements may be too conservative or not needed.

*RP's Resource constrained*

The following language in italics is suggested to be added to the Final Plan Executive Summary and Chapter 6.

6 *The Floodplain Management Plan (FMP) is one of the key elements required by the Corps of Engineers prior to entering into the Project Cost Agreement (PCA) for the Truckee River Flood Project and is an element of the All Hazard Mitigation Plan required of all communities under the Disaster Mitigation Act of 2000 (DMA-2000). The FMP also recommends ideas and policies which will allow each entity to participate in the Community Rating System (CRS), reduce National Flood Insurance Program rates,*

*and receive increased assistance from FEMA in times of disaster when the FMP is approved.*

*The FMP is a "living document" that may be amended or changed as conditions change. Periodic amendment of the plan is also a condition of the Flood Mitigation Assistance grant from FEMA.*

*Key recommendations to be implemented as soon as possible include:*

- 1) A study and/or program to quantify and assess development impacts to the flood storage pool under full build out of the Regional Plan and Interim Policies approved by the Regional Planning Governing Board on February 14, 2003 . This study will identify flood volumes (capacity) and timing elements at various locations while concurrently identifying needs and mitigation strategies (e.g. building elevations, lowest floor vulnerability, detention storage or unimpeded flows, etc.)*
- 2) A second study and/or program would tie all the "who pays" issues together including, if required, development impacts. Financial analysis would include facilitation and cost allocations of "who pays" between existing flood prone areas and also include land development interests that could impact the flood control project. The links between implementing land uses and the flood control program and those cause and effect connections would be addressed.*

*Each sponsoring entity would approve these recommended actions as the final elements of the full flood mitigation plan that effects and initiates implementation of the Truckee River Flood Management Plan. It is a measure by which the flood mitigation plan is considered complete. This plan is intended to be advisory and not directive and as a tool to achieve effective flood plain management.*

*\*Chapter 6 of the FMP will be revised to set priorities to include the above recommendations.*

When this flood program financial and mitigation package is complete, developers would know their fair share, and existing land owners within the flood prone areas would understand their required contributions. Furthermore, a better understood financial program, with specific and identified funding would be in place, completed in sync with implementation of all other required program elements. The reasoning for this process is as follows:

1. Accepted and approved regional hydraulic modeling is required to establish base line conditions to develop all these program elements.
2. Impacts from new and changed land use on the flood program elements must be ascertained to be fair and equitable to all before charging for such impacts.

3. The fair allocation of costs and a rationale for both within and outside the existing flood prone areas that will be removed from flooding by the project need resolution. (Special Assessment Districts, impact fees, 1/8 cent sales tax)
4. Possible reconsideration of including mitigation in the existing Flood Control Project resulting from possible future land use impacts, and how that may be accomplished.
5. Allow affected parties to have their say on the flood program once the full impacts relative to the Regional Plan are understood.

Note: The five points are not an all-inclusive itemization. Development proponents may create their own mitigation, if required, unless there is a cost-effective, structured program in place which meets their needs.

Staff is trying to make clear that properly executed program elements are critical to the success of the regional plan and the Truckee River Flood Control Project.

Land use issues are tied to the Regional Plan and since there is direct link between implementing land uses and the flood control program, those cause and affect connections should be well understood and analyzed. The mitigation required providing for zero impacts to the flood pool or flood volume is linked to the impacts from land use changes or new development.

The Truckee River Flood Control Project does not allow for any future impacts from growth or development related activities past the year 2002. The Regional Water Planning Commission (RWPC) included language in their interim policies to protect the flood control project. One Interim Policy approved by the Regional Water Planning Commission, Policy 3.1.b, Floodplain Storage within the Truckee River Watershed, requires that a project not increase the 100-year volume runoff at the boundary of the property unless it "be mitigated in a regional project without adverse impact to hydrologically connected and downstream properties." "(Until an acceptable storage mitigation plan is in place with respect to" *this policy* "no floodplain storage mitigation will be required.)" Staff believes the program elements, the hydraulic modeling delineating impacts to the Regional Plan including an impact analysis report from the modeling, mitigation development, impact fees and related cost sharing plan and finally a flood plain management plan, must all be put in place as part of a complete package. This would go far to foster the cooperative planning that the Cities and Washoe are to be doing to positively support the direction of the approved Regional Plan.

This draft floodplain management plan ties none of the above issues together. This makes it very difficult to support the floodplain management plan without knowledge of the impacts including impacts to the Regional Plan. If the floodplain management plan is to be part of the Regional Water Plan by which the Cities and Washoe County must conform, then staff believes that prior to acceptance of the flood management plan there be a more thorough process put in place.

More specific comments and questions generated by staff:

7. Page 3 - chart appears incorrect regarding legal relationship between regional planning, regional water planning and local governments. Despite considerable discussion of the regional plan, no mention is made of the requirement for conformance review of the regional water plan under the regional plan. The document incorrectly indicates that local land use plans are required to be in conformance with the regional water plan. This appears to be an attempt to redefine the hierarchy of local plans with the County BCC being on top as the "water board"
8. Page 4 - RWPC discussion also has the same issues as #1 above.
9. Page 4 - 1.4.1 - Is the strictest standard necessarily the best? Were differences between urban issues and needs vs. rural issues and needs evaluated? Different codes may be appropriate in different development environments.
10. Page 5 - 1.4.2 - #4 - why low density development as an issue? Isn't the real issue impermeable cover/impact on flooding? Much can be addressed with design features.
11. Page 5 - 1.4.3 - chart needs clarification re. Washoe County figures being only for the unincorporated area and should identify the geographic extent of the chart (was tahoe basin included?)
12. Pages 5-7 - 1.4.3 - plan appears to give existing development cost savings and pass expenses to new development. Shouldn't those benefiting from the project contribute as well. The assessment district proposed later in the document may address this???
13. Page 7 - Stakeholder list doesn't include impacted property owners - have they had the opportunity to participate? What recruitment efforts have been made to include the impacted property owners or developers? How about the Associated General Contractors or Builders of Northern Nevada.
14. page 10 - what is an "adopted community based plan"?
15. page 11 and elsewhere - question the appropriateness and impact of the "zero allowable increase" provision. Would this prohibit any development in areas? Is that a taking? Was the impact of minor increases evaluated?
16. page 11 - Reno already has the recommended cluster development ordinance.
17. page 22 - similar concern as #10 above - is assumption of no change to base flood elevation a good idea and what is the impact?
18. page 25 - same problem as #s 1 and 2 above. Also, in the regional plan section, no analysis was provided regarding the impact of recommendations on regional plan priority development areas (centers, corridors, infill, etc). The water plan appears to prohibit development in areas where the regional plan promotes development. This should be addressed.
19. page 31 - 5.5.5: #2 - has the impact of this recommendation been evaluated - how many properties are currently out of conformance with this. Should complete cost/benefit analysis.
20. Page 31 - Recommended Modifications to the Reno Municipal Code - the word recommended should be changed to suggested.
21. #4 - same issue as comment #10 above.

- 22 16. #6 - same issue as comment #4 above.
- 23 17. Page 32 - why do ordinances need to be the same - would it not be appropriate to have different regulations for urban vs. rural areas?
- 24 18. Implementation plan - most costs appear to be passed to local governments - shouldn't 1/8 cent tax fund more?
- 25 19. appendixes b and d - TMSA boundary is incorrect (doesn't reflect rollbacks). Can't read maps of land uses, but have noted significant errors on previous maps - should verify.
- 26 20. Appendix B = the RWPC interim policies should be removed from this document.

## Truckee River Water Management Council

### Comments on Floodplain Management Plan

The Floodplain Management Plan is a required element of the Truckee River Flood Management Plan. The Truckee River Water Management Council has been a proponent of the Flood Management Plan since its inception and has been an advocate for the 1/8 cent sales tax and contributed to the project planning effort by remaining involved over the past three years. We have also actively pursued the federal and local funding required to continue the planning effort.

We congratulate the committee on its excellent work and thank them for their time and dedication to this project. Our comments on the draft document are as follows:

- ① • The role of ISO within the NFIP is as a FEMA Contractor to evaluate communities' efforts to participate in FEMA's Community Rating System. ISO is not an independent flood management agency. This should be clarified within the text and on the chart on page 3.
- ② • On page 12, clarification is needed for the second bullet if economic analyses are to be required. What type and size of projects should be subject to this analysis? Why is economic analysis not required for other measures?
- ③ • Issues 10, 11 and 12 on page 20 are included in other issues previously discussed. We suggest that these be eliminated.
- ④ • Issues 8 and 13 should have some additional explanation.
- ⑤ • We suggest that section 4.2 should be eliminated because it is too specific and particular projects should be included in the Master Plan. There are probably other areas that need planning and including this list may cause them to be overlooked.
- ⑥ • Bullet number 4 in section 5.4.5 should be eliminated in this section. If analysis of alternatives is required it should be done at the planning level not the design level. This sort of effort might be more appropriately included in Development Codes.
- ⑦ • Bullet number 7 in section 5.4.5 is also not appropriate for a Design Manual.
- ⑧ • For AO zones, is the recommendation for finish flood to be 3 feet above adjacent grade? Please clarify.
- ⑨ • In general, within the Goals, Objectives and Recommended Actions, many actions are assigned as responsibility of the Design Manual and the Flood Control Master Plan. In some cases we feel the assignment is not appropriate, such as



providing planning guidance when that is the purpose of this document. There does not seem to be a clear definition of purpose of those other documents. We suggest that those purposes and the proposed uses for the documents be very clearly defined prior to such assignments.

- (21) We strenuously object to RA 1a.3 as a recommended action in this document. It has always been understood that an assessment district might be formed to assist in maintenance of the flood control project, and we are in general agreement with that concept. We do not feel it appropriate to single out this portion of *a future action that might be taken if the flood control project is funded and built and would strongly object to an assessment district if the project does not come to fruition.*
- (11) RA 4a.4 should be eliminated, as that is not a design function.
- (2) No costs are given within the implementation plan. For a document and program as ambitious as this, some projected costs should be available, so that prior to adoption, the local governments can identify and/or budget appropriate funding.
- (13) An undertaking such as the flood control project and this floodplain management plan would seem to need oversight by an entity with a more global perspective than the individual local governments. No such entity appears to be contemplated or identified. How will this be addressed?

We thank you for the opportunity to provide our comments and look forward to your response in the next document.

## Floodplain Management Plan Comment Log – March 2003 first draft

1. Kim Groeneweld, April 2 2003
2. Jim Shaffer, April 8 2003
3. Susan Lynn, April 3 2003
4. Dave Ziegler, April 11 and 24, 25 2003
5. Mary Jo Elpers, April 16 2003
6. Neil Upchurch, April 18 2003
7. Bob Ramsey, April 22 2003
8. FMP Committee Meeting, April 29 2003
9. Marilyn Brainard, May 27 2003
10. Kimble Corbridge, Washoe County, May 27 2003
11. Bill Whitney, May 27 2003
12. Rob Joiner, May 28 2003
13. Shawn Gooch, May 28 2003
14. City of Reno, May 28 2003
15. Truckee River Water Management Council, May 29, 2003