SUMMARY: An ordinance amending Washoe County Code to establish a financial assistance program to provide grants to owners of public and private property in certain areas to make such property resistant to flood damage.

BILL NO. 1618

ORDINANCE NO. 1439

AN ORDINANCE AMENDING THE WASHOE COUNTY CODE BY ADDING SECTIONS 40.450 THROUGH 40.460 CREATING THE TRUCKEE RIVER FLOOD PROTECTION FINANCIAL ASSISTANCE PROGRAM TO PROVIDE FINANCIAL ASSISTANCE TO OWNERS OF PUBLIC AND PRIVATE PROPERTY IN CERTAIN AREAS IN ORDER TO MAKE SUCH PROPERTY RESISTANT TO FLOOD DAMAGE.

THE BOARD OF COUNTY COMMISSIONERS OF THE COUNTY OF WASHOE DO ORDAIN:

SECTION 1 Chapter 40 of the Washoe County Code is hereby amended by adding thereto the provisions set forth as sections 2 to 11, inclusive, of this ordinance.

SECTION 2

40.450 Sections 40.450 through 40.460 shall be known as the Truckee River Flood Protection Financial Assistance Ordinance.

SECTION 3

40.451 Recitals.

1. In May of 2009, the Nevada Legislature enacted Assembly Bill 54 which, upon approval by the Governor, became Chapter 325, Statutes of Nevada, 2009, beginning at page 1428 (the "Act");

2. In Section 3 of the Act, this board of county commissioners is authorized to (a) establish by ordinance a program to provide financial assistance to owners of public and private property in areas likely to be flooded in order to make such property resistant to flood damage; (b) accept gifts, grants and other sources of money to pay the costs associated with such a program; and (c) pay costs

associated with such a program through the use of:(1) revenue and bond proceeds derived from a flood management project, except that no bond proceeds may be used to provide any loans pursuant to the program;(2) funds from the infrastructure fund of the county; and(3) Gifts, grants and other sources of money available to the board of county commissioners; and

3. In Subsection (4) of Section 3 of the Act, this board of county commissioners may delegate the authority to administer such a program to a flood management authority as defined in the Act; and

4. By interlocal cooperative agreement entered into by Washoe County and the cities of Reno and Sparks and the University of Nevada System in 2005, the Truckee River Flood Management program was established and is overseen by the Flood Project Coordinating Committee, which committee has asked this board of county commissioners to establish a financing program under the Act as provided herein;

SECTION 3

40.452 Findings

1. Public Purpose and Benefit.

(a) Based on evidence provided at public hearings, this board finds and determines as follows:

(b) Significant flooding has occurred ten times in the last 100 years, in Washoe County most recently causing (i) hundreds of millions of dollars in property damage; (ii) injuries and the loss of life;(iii) health hazards as flood waters become contaminated with sewage and hazardous substances that become mobile during a flood;(iv) the disruption of essential services for the safety of the public such as police, fire and ambulance services; and(v) the disruption of commerce, transportation, communication and essential utility services;

(c) In areas likely to be flooded, the adverse effect of flooding may be reduced by (i) building flood control structures such as levees, floodwalls, flood prevention facilities, ground and river bank terracing and the like, or (ii) by nonstructural methods such as elevating or otherwise flood proofing individual buildings, or(iii)by

relocating structures outside of an Area Likely to be Flooded;

(d) In the case of the residential Approved Areas described in Attachment A to this ordinance, the adverse effects of flooding to the public health, safety and welfare may be reduced by elevating structures to be above the floodwaters or relocating structures outside the flood zone altogether so to remove property and persons from coming into contact with health and safety hazards of flood waters and assure that properties remain self-contained and continue to receive essential utility services during a flood event, thus reducing the need for public safety calls and services. Further, removing buildings from the floodplain or elevating them so water can pool underneath them allows the natural flows and temporary storage of flood waters over natural floodplains thus reducing depth and velocity of flood waters, and reducing public health and welfare damages to other areas; These public health, safety and welfare benefits may be provided at a fraction of the cost of building flood control structures;

(e) Providing financing for individualized non-structural flood-proofing of the multifamily or commercial buildings in downtown Reno in Approved Areas identified in Attachment A is also a more functional, cost effective and reasonable alternative to protect people and property from the health and safety hazards of floodwaters rather than building and maintaining massive floodwall or levee structures which would be costly, aesthetically and functionally out of place, and would increase flooding downstream; and

(f) As a result of the foregoing, this Commission finds that the creation of this program to provide financial assistance to owners of public and private property in areas that are likely to be flooded is necessary to promote and protect the public health, safety and welfare.

2. Flood Management Authority

Based on a review and approval on February 1, 2010 of key provisions to be included in an interlocal cooperative agreement between Washoe County, the city of Reno and the city of Sparks establishing the Truckee River Flood Management Program, this Commission finds that if the Truckee River Flood Management Authority is established

pursuant to such agreement that it would be a "flood management authority" as defined in the Act.

SECTION 4

40.453 Definitions.

1. Except where the context otherwise requires, the definitions set forth in this section govern the construction of Sections 40.450 through 40.460.

2. Administrative Agency means the agency charged with administering this financing Program.

3. Administrator means the head of the Administrative Agency.

4. Approved Area means an area which has been approved for grants under this program as provided in this Chapter.

5. Area Likely to be Flooded is any area that has actually flooded or is determined by the Administrator (based on results of hydraulic models used by the Administrator) as likely to flood during a flood characterized as a "117 year event."

6. Base Floor of a building is the lowest floor which is occupied by human beings or intended to be occupied by human beings.

7. Building Flood Pool Area means any area beneath the Base Floor of a structure. The Building Flood Pool Area is created, in part, by elevation of the structure so that flood waters can accumulate underneath the structure without damaging the Base Floor. Garages, carports, storage areas and other spaces that are underneath a Base Floor which has been elevated under this financial assistance program are specifically included in this definition.

8. Flood-proofing means building of barriers around or making improvements to buildings to make them resistant to flood damage. It does not include elevation or relocating buildings.

SECTION 5

40.454 Establishment and Administration of Financial Assistance Program.

1. Establishment of Voluntary Program.

(a) There is hereby established a program to provide financial assistance to owners of public and private property in certain areas in order to make such property resistant to flood damage. The program shall be known as the Truckee River Flood Protection Financial Assistance Program, and shall be subject to and administered in accordance with the Act and this ordinance.

(b) This program expires and no financial assistance may be provided to any person or entity after all applications received on or before June 30, 2019 have been acted on by the Administrator.

(c) Nothing in this ordinance shall be construed to require the board of county commissioners to provide any financial assistance or to require any property owner to apply for or accept financial assistance pursuant to this program. Grants under this program shall be sought by voluntary application and approval shall be under the administrative discretion of the Administrator and subject to availability of funds.

2. General Program Requirements and Administration

a) Grants Only. Financial assistance under this program shall be in the form of grants.

(b) Administering Agency. This program shall be administered by the Truckee River Flood Management Project Department of Washoe County created under this chapter, unless and until the Truckee River Flood Management Authority is duly established and the administration of the program is delegated in accordance with this chapter. For purposes of this Ordinance, the "Administrator" is the department head or chief executive officer of the Administering Agency.

(c) Delegation to Flood Management Authority. When (i) an interlocal cooperative agreement has been entered into by this board of county commissioners establishing the

Truckee River Flood Management Authority; (ii) Directors have been appointed to represent Washoe County on such Authority; (iii) the Authority has been duly established; and (iv) the Authority has adopted a resolution accepting responsibility for the administration of this program under this ordinance and as provided by law, then the Authority is, without further action by this board, deemed to be delegated all the rights, powers and obligations of the Administering Agency under this Ordinance. Such delegation may be revoked by this board of county commissioners if the Act is amended or repealed or this board of county commissioners finds that the Authority is violating this ordinance or applicable law.

(d) Grants. The Administrator is authorized to accept gifts, grants and other sources of money to pay the costs associated with this program.

(e) Costs. The Administrator is authorized to pay costs associated with the program through the use of: (1) revenue and bond proceeds derived from the Truckee River Flood Management Project, except that no bond proceeds may be used to provide any loans; (2) the Infrastructure Fund established pursuant to NRS 377B.150, but subject to requirements and limitations set forth in applicable law and in the Infrastructure Tax Plan adopted and amended from time to time under NRS 377B.100 and NRS 377B.160; and (3) gifts, grants, and other sources accepted as provided in this chapter.

(f) Regulations. The Administering Agency may, by resolution, adopt regulations regarding the administration of the program so long as they do not conflict with the provisions of this Ordinance.

(g) Relocation Expenses under Uniform Relocation Act. If an owner-occupant, a tenant, or a business is required to relocate temporarily in connection with the elevation or relocation of a dwelling or place of business, the Administrator shall determine whether or not any person is eligible for benefits under the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (42 U.S.C. 4601 et seq) and implementing regulations (49 CFR Part 24) "URA" and if required, shall comply with the URA. See 49 CFR 24 Appendix A Section 24.2(a)(9)(ii)(D). Payments made under the URA are not considered part of any grant made hereunder but are

payments separately and directly required by federal and state law.

(h) Designation of Approved Area.

(1) The areas described in Attachment A to this ordinance are Approved Areas.

(2) Subsequent Approved Areas may be approved by amendment to this Ordinance, except that if the Truckee River Flood Management Authority is the Administering Agency, the governing body of the Authority may add or withdraw an "Approved Area" by resolution, provided that a copy of that resolution is promptly submitted to the Washoe County Clerk.

(3) Approved Areas must be within Washoe County. Before designating an Approved Area, the governing body of the Administering Agency must make a written finding and determination that the Approved Area is in an Area Likely To Be Flooded and that the providing of financial assistance to owners of public and private property in such area is necessary to promote and protect the public health, safety and welfare.

SECTION 6

40.455 General Eligibility for Grants.

1. General. In addition to requirements, limitations or provisions in this ordinance or in regulations of the Administering Agency, financial assistance under this program must meet all the following criteria.

2. Approved Area. Financial assistance must be for projects that are within an Approved Area designated as set out in this chapter.

3. Buildings constructed before July 2009. Financial assistance may not be awarded to protect any building, structure or improvement unless the building, structure or improvement existed or construction had begun on the building, structure or improvement on or before July 1, 2009.

4 Relocation to area not likely to be flooded. Financial assistance may not be used to relocate any

building, structure or improvement to a new location that is in an Approved Area or an Area Likely to be Flooded.

5. Other financial assistance. Financial Assistance may not be awarded unless the property owner has not received and agrees not to apply for any financial assistance to make his property resistant to flood damages from a tourism improvement district established pursuant to NRS 271A.070, a tax increment area created pursuant to NRS 278C.155, a redevelopment area established pursuant to NRS 279.426, a program for the rehabilitation of residential neighborhoods established pursuant to NRS 279A.030 or a program for the rehabilitation of abandoned residential properties established pursuant to NRS 279B.030.

6. Value exceeds Cost. Financial assistance may not be awarded if in the opinion of the Administrator the estimated cost of making property improvements resistant to flood damage exceeds the total value of the structures on the land.

7. Below flood elevation. Financial assistance may be provided only to property improvements whose Base Floor has actually been flooded in the past or is below the predicted flood elevation established by the Administrator for a 117 year flood event. The Administrator shall reevaluate and establish predicted flood elevations from time to time using current models and information. When considering a property for financial assistance, the Administrator shall use the most recently established predicted flood elevation when the application is being considered, and if the Administrator determines at that time that the property is eligible under the most recently established predicted flood elevation criteria, that determination remains in effect even if the predicted flood elevation is later changed.

8. No structural flood protection. Financial assistance shall not be provided to any property if the property is anticipated to be protected by a structural facility (levee, floodwall, bank stabilization or terracing, detention facility or the like) designated in the Living River Plan.

9. Other criteria. The Administering Agency may, by regulation, provide for other limitations and requirements.

SECTION 7

40.456 Application Process and Fees

1. Deadline. All applications for financial assistance under this program must be submitted to the Administrator on or before June 30, 2019, unless another date is established by state law.

2. Forms. Application forms shall be prescribed by the Administrator. No application forms may require personal information as defined in NRS 603A.040 (Social Security Number, Drivers license or identification number, or any account or credit card number.)

3. Fees. A standard fee of $500.00 shall be paid with each application. If the Administrator determines that the subject property is not eligible for financial assistance because the elevation of its Base Floor does not meet eligibility requirements set out in this Chapter, the fee will be refunded. Otherwise, the fee is non-refundable. The Administrator may negotiate additional fees from applicants and may change the standard fee by regulation provided that the total fee amount may not exceed the estimated costs of processing the application including all costs of obtaining title reports, environmental studies, surveys, engineering reports or certifications, and appraisals necessary to make determinations under the application.

4. Review and Approval of Applications. Upon submission of an application and payment of the required fees:

(a) The Administrator shall first obtain an elevation survey and determine if the applicant and the property are eligible for financial assistance under the program.

(b) If the applicant and property are eligible for financial assistance, the Administrator shall, at the Administering Agency's expense, obtain structural evaluations, appraisals, rough renderings of the elevation or relocation, and cost estimates to determine that the cost of the proposed project is less than the value of the improvements.

(c) The Administrator shall have complete administrative discretion and may take any action (approve,

disapprove, rank, hold, delay or place on waiting lists) on applications based on any legally permissible reason, including, but not limited to, eligibility, location of property, severity of flooding, degree of flood protection being provided, grouping of contracts to maximize contract opportunities, compliance with program priorities or policies, costs verses benefits being provided, and availability of funding. Approval of an application is only a determination of general eligibility of a property for financial assistance and does not constitute or imply a commitment of the Agency to provide such financial assistance as further determinations must be made before a Grant Commitment is entered into.

(d) An applicant may decline financial assistance or withdraw an application at any time for any reason or no reason at all.

(e) When funding is available and the Agency is ready to proceed with finalizing a Grant Commitment, the Agency shall advise the Applicant to obtain detailed plans and specifications for the elevation or relocation project (the cost of which may be a part of the grant) and solicit bids for the project (which bids should be contingent upon entering into a Grant Commitment) and when bids are received, the Administrator shall compare the bids to the cost estimates previously obtained and make a determination whether the cost of the project is reasonable and consistent with the goals and priorities of the program.

(f) If the Administrator declines an application for financial assistance, the decision may be appealed to the governing body of the Administering Agency.

(g) If the Administrator approves the project, a Grant Commitment may be entered into.

SECTION 8

40.457 Grant Commitments; Owner Responsibilities.

1. Grant Commitment. A grant commitment may be entered into between the Administering Agency and the property owner, subject to the Administering Agency's contract approval procedures. The commitment must specify what will be paid for with grant money, state the total amount of the commitment, specify a payment sequence (based on

percentage of completion of the work to the satisfaction of Administrator), and state a termination date beyond which grant payments will not be made. Grant payments will be made directly and only to the property owner as work is completed, and the Grant Commitment is not assignable.

2. Contract between property owner and contractor. When a Grant Commitment is issued, the building owner shall enter into appropriate contracts with each contractor. The Administrative Agency shall not be a party or a third party beneficiary to that contract but may review it to determine if the contract is acceptable for financial assistance under the program. The building owner's contract with the contractor may include additional work not to be paid for by the grant provided that invoices and inspections distinguish between eligible and ineligible costs for the grant.

3. Payment. Grant payments will be made to the building owner who shall be responsible for making payments to all contractors.

4. Quality Control. The property owner is responsible for assuring that the quality of construction is satisfactory and up to required building and other codes. Inspections by the Administrative Agency are only for the purpose of determining that work has been accomplished in accordance with the sequence contemplated by the Grant Commitment.

SECTION 9

40.458 Contractor Registry and Training

1. General. The Administrator shall keep a registry of and offer training to contractors as follows.

2. Contractor registry. The Administrator shall keep a registry of contactors who have indicated an interest in providing construction or other services relating to elevating, relocating, or flood-proofing properties and have submitted information about their qualifications. The registry and all information submitted is a public document and will be provided to all applicants for financial assistance. The Administrator may withdraw a contractor's name from the registry if the contractor's performance under this program has been unsatisfactory to the

Administrator. Applicants for financial assistance may use any contractor of their choice provided that the Administrator may decline to provide grants if any work is to be done by a contractor or subcontractor who is unlicensed or whose performance under this program has been unsatisfactory to the Administrator.

3. Training. Each contractor in the registry shall be offered training to be provided by or approved by the Administrator regarding the program requirements and construction standards and techniques.

SECTION 10

40.459 Residential Elevation or Relocation Assistance.

1. General In addition to the general provisions set forth above, the following standards and requirements apply to grants under this program to single family residences or duplexes.

2. Additional Eligibility and Grant Requirements

(a) Elevation or Relocation. Residential properties shall be eligible only for elevation or relocation. A residence that is relocated will not be elevated.

(b) Eligible costs. Financial assistance under this program for residences may only be used to pay for the actual and necessary costs of either elevating or relocating residential properties, as specified in Attachment B or otherwise approved by the Administrator.

(c) Construction standards and training. The Administrator shall prepare a constructions standards manual for elevation and relocation projects and shall offer training to contractors.

(d) Deed Restrictions. Financial assistance shall not be provided unless the property owner executes and records a declaration of covenants, conditions and restrictions to run with the land and improvements being elevated or relocated. Said CC & Rs are to be on a form approved by the Administrator and must, to the satisfaction of the Administrator include the following provisions which must be binding on the owner and all subsequent owners:

(1) That all improvements will be continuously insured against damage by flood for the value of improvements and contents by an insurer who is qualified to underwrite insurance in the State of Nevada;

(2) That the Building Flood Pool Area shall not be improved for occupation by human beings or used as temporary or permanent living space for human beings;

(3) That all vents or openings intended to accommodate the flowage of flood waters through the Building Flood Pool Area shall never be blocked or altered in a way that impairs the free flowage of water through the Building Flood Pool Area;

(4) That a permanent flowage easement is granted permitting the drainage and flow of storm waters or flood waters over, under and across the land without limitation as to volume, flow or depth.

SECTION 11

40.460 Commercial Building Flood Proofing Assistance

1. General. In addition to the general provisions set forth above, the following standards and requirements apply to grants under this program to multifamily buildings (except duplexes) and commercial properties.

2. Additional Eligibility and Grant Requirements. Multifamily and commercial buildings shall be eligible only for flood proofing, and shall not be eligible for elevation or relocation.

3. Eligible costs. Financial assistance under this program for multifamily buildings or commercial buildings may only be used to pay for the actual and necessary costs of floodproofing properties, as specified in Attachment B or otherwise specified by the Administrator.

4. Construction standards and training. The Administrator shall prepare a constructions standards manual for flood-proofing projects and shall offer training to contractors who are listed in the Contractor Registry.

6. Deed Restrictions. Financial assistance shall not be provided unless the property owner executes and records a declaration of covenants, conditions and restrictions to run with the land on which improvements are being flood-proofed. Said CC & Rs are to be on a form approved by the Administrator and must, to the satisfaction of the Administrator include the following provisions which must be binding on the owner and all subsequent owners:

(a) That the building owner shall at owner's expense, inspect, repair and replace, and maintain the flood proofing facilities to keep them operational at all times. Because the facilities are being financed with public funds for the purpose of promoting public safety, health and welfare, the Agency may enforce this provision by seeking equitable remedies, or through code enforcement proceedings including enforcement of codes relating to dangerous buildings.

(b) That the building owner agrees to indemnify and hold the Agency harmless from all claims and liability arising from the construction and operation of the flood-proofing facilities, including liability arising from the impact that the facilities may have on flooding on other land.

(c) That a permanent flowage easement is granted permitting the drainage and flow of storm waters or flood waters over, under and across the land without limitation as to volume, flow or depth.

SECTION 12.

1. All actions, proceedings, matters and things heretofore taken, had and done by the County and its officers not inconsistent with the provisions of this Ordinance are ratified and approved.

2. The officers of the County are authorized and directed to take all action necessary or appropriate to effectuate the provisions of this ordinance, including without limitation the generality of the foregoing, the preparation of all necessary documents, legal proceedings and other items necessary or desirable for the providing of financial assistance. The County Clerk is authorized to make non-substantive edits and corrections to this Ordinance.

3. All ordinances, resolutions, bylaws and orders, or parts thereof, in conflict with the provisions of this ordinance are hereby repealed to the extent only of such inconsistency. This repealer shall not be construed to revive any ordinance, resolution, bylaw or order, or part thereof, heretofore repealed.

4. This ordinance shall be in effect from and after its publication as hereinafter provided, and after this ordinance is signed by the Chairman of the Board and attested and sealed by the County Clerk, this ordinance shall be published by title only, together with the names of the Commissioners voting for or against and with a statement that typewritten copies of said ordinance are available for inspection by all interested parties at the office of the County Clerk, such publication to be made in the Reno Gazette Journal, a newspaper published and having general circulation in the County, at least once a week for a period of two weeks by two insertions as required by NRS 244.100 and any other enabling laws.

5. Each term and provision of this ordinance shall be valid and shall be enforced to the extent permitted by law. If any term or provision of this ordinance or the application thereof shall be deemed by a court of competent jurisdiction to be in violation of law or public policy, then it shall be deemed modified, ipso facto, to bring it within the limits of validity or enforceability, but if it cannot be so modified, then it shall be excised from this ordinance. In any event, the remainder of this ordinance, or the application of such term or provision to circumstances other than those to which it is invalid or unenforceable, shall not be affected.

[Business Impact Note: The Board of County Commissioners hereby finds that this ordinance does not impose a direct and significant economic burden upon a business, not dies it directly restrict the formation, operation or expansion of a business.]

Passage and Effective Date

This ordinance was proposed on 4-27-10 by Commissioner Humke.

This ordinance was passed on the 25 day of May, 2010.

Those voting "aye" were Humke, Larkin, Jung, Weber, Bretemitz
Those voting "nay" were none.
Those absent were none.
Those abstaining were none.

This ordinance shall be in force and effect immediately upon the date of the second publication of such ordinance as required by NRS 244.100.

David E. Humke, Chairman
Board of County Commissioners
Washoe, County, Nevada

ATTEST:

Amy Harvey
County Clerk

1439

Attachment A

Approved Areas

Attachment A -- Potential Candidates for ABSH Grant Funding: Hidden Valley

Attachment A – Potential Candidates for AB54 Grant Funding: Eastside

Attachment A -- Potential Candidates for AB64 Grant Funding: Downtown
N
0
500
Feet

Attachment B

Eligible Costs for Reimbursement

Financial assistance under the Truckee River Flood Project Flood Protection Financial Assistance Program may only be provided for those costs which are actual, reasonable and necessary for making a property resistant to damage by flood. Below is an initial list of the types of eligible and ineligible costs. The Administrator may amend this list by regulation.

1. **ELIGIBLE PLANNING AND PERMIT COSTS** for all types of projects (elevation or relocation of residential properties and floodproofing of commercial properties) include but are not limited to:

   a) Costs of preparing plans and specifications and the certifications required.
   b) Costs of building permit applications
   c) Costs of certificates required for flood insurance applications and determinations.

2. **ELIGIBLE HOME ELEVATION COSTS** include but are not limited to:

   a) Jacking up Base Floors; installation and removal of beams for lifting the house, cribbing for raised house while the new foundation system is being built;
   b) Disconnecting and reconnecting existing utilities.
   c) Elevating all utilities and service equipment (hot water heater, furnace, outlets for electricity, air conditioning, cable, communications etc) and providing meter reading service if needed; This cost includes construction of a utility room above the Base Flood Elevation but only if there is not existing space within the house or if there is no other more cost effective way to elevate the utilities. If new utility room space must be constructed, it cannot be greater than 100 sq ft in gross floor area.
   d) Constructing foundations so the Base Floor is 3 feet above the predicted flood elevation established by the Administrator under this chapter, including seismic upgrades per local codes as required

1439

(including bolting the home to the foundation and/or cripple walls, and the seismic bracing of any water heaters). Repair to existing foundation but only if necessary (as determined by the design engineer) for the safe elevation of the structure.

e) Replacement of termite damaged or dry rotted wood framing members if such members are directly associated with elevating the home or are required for the recommended seismic bolting or bracing.

f) Lowering base floors and connecting to foundations.

g) Minimum costs of exterior sheathing associated with what was damaged or removed during the elevation process.

h) Building driveways.

i) Building of new wooden stairs and landings to access the elevated living space per the minimum code requirements. Note: grant funds may not be used to elevate any existing deck; however if an existing deck must be removed to accommodate the lifting of the house, the costs of repair/replacement at its previous level is eligible.

j) A residence with an attached garage may be eligible for certain costs associated with relocating the garage under the elevated house. However, if the predicted flood elevation established by the Administrator under Subsection 2.03 (g) of the Ordinance, would only require the house to be elevated four (4) feet, grant money may not be used pay any costs associated with elevating the house above that level to accommodate the garage.

k) Where the owner or members of the owner's family are physically handicapped, certain access facilities are granted eligible upon written confirmation from a physician. Such facilities may include an access ramp or mechanical lift where ramps are not technically feasible.

l) Rough grading of the yard and the seeding of grass if these areas were damaged by equipment during the elevation process or where the elevation process affects slopes and/or stabilization of the structure or surrounding structures.

m) Insulation of water pipes within 5 feet of the water heater.

n) New roofing where roof lines are altered by elevation of improvements.

o) Costs associated with repair or replacement of items damaged by contractor's operations, provided such

operations are actual, reasonable and necessary for the completion of the home elevation, relocation, or floodproofing project and provided that the contractor did not damage such items through negligent acts or failure to take proper precautions in protecting such items from damage.

3. **INELIGIBLE HOME ELEVATION COSTS** include but are not limited to:

a) Costs which are not actual, reasonable and necessary to make property resistant to flood damage.
b) Painting of foundations or the walls around Building Flood Pool Areas of structures elevated.
c) Insulation and drywall for walls of the Building Flood Pool Area.
d) Upgraded driveways, ramps and entryways.
e) Siding, except for siding that was damaged in the elevation process.
f) Landscaping, except landscaping to replace landscaping that was removed.
g) Costs for elevating the home to any elevation higher than three feet above the predicted flood elevation established by the Administrator under this chapter.
h) Repairs, rehabilitation, additions, expansions, or elevation of appurtenances except noted in eligible costs above.
i) Construction or repair of decks or porches except as noted in the "eligible costs" above.
j) In cases where existing floor systems have been adequately designed or constructed with undersized materials, the homeowner must bear all costs of rehabilitation related to such inadequacies.
k) Costs of replacement of utility service components which are undersized, of inadequate capacity, or are unsafe, shall be borne by the owner unless directly related to the action of elevating (i.e. well pumps).
l) Where HVAC systems are expanded or increased in size and capacity, the owner shall bear any such costs beyond the HVAC's capacity to service the home's original square footage prior to elevation.
m) Where existing underground utility lines have deteriorated, or if such lines do not meet code requirements, additional costs to repair such facilities shall not be eligible for grant funding.

n) Replacement of flood damaged floor coverings, wall coverings, appliances, cabinets etc are not eligible for grant funding.

4. **ELIGIBLE RELOCATION COSTS** for residential buildings include but are not limited to:

a) Jacking up and moving the structure to a new site.
b) Disconnecting from utilities.
c) Minor grading and constructing foundations, including making them comply with current seismic requirements.
d) Connecting with new utilities.
e) Lowering Base Floors and connecting to foundations.
f) Building driveways.
g) Replacing existing stairs, landings, ramps and handicap facilities if needed.

Note: As provided in subsection 2.02 (g) of this Ordinance, relocation benefits to be provided under the NRS Chapter 342, or the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, if any, are provided separately and not considered as a part of the financial assistance under this program.

5. **INELIGIBLE RELOCATION COSTS** when a residential structure is relocated to another site:

a) Costs that are not actual, reasonable and necessary to relocate the property.
b) Home Elevation costs at new site.
c) Upgraded driveways, ramps and entryways.

6. **ELIGIBLE FLOOD PROOFING OF COMMERCIAL BUILDINGS COSTS** include but are not limited to:

a) Cost of excavating and preparing land for and installing approved barriers or other flood proofing facilities or devices and replacing existing landscaping.
b) Cost of installing sealants, seals, watertight materials and techniques to improvements.
c) Cost of preparing existing buildings (including removing existing improvements such as windows, doors, etc) for and installing approved flood proofing improvements.

7. INELIGIBLE FLOOD PROOFING COSTS.

a) Costs that are not actual, reasonable and necessary to make property resistant to flood damage or for flood proofing facilities or improvements that are not approved by the Administrator.

The Administrator shall have administrative discretion to determine suitable home elevation or relocation methods, and the appropriate flood proofing barriers, facilities or improvements on a building by building basis taking into account criteria including, but not limited to:

(i) experience with elevations and relocations in other areas, or under this program,
(ii) product history and reliability,
(iii) warranties and manufacturer support,
(iv) flood proofing effectiveness,
(v) cost and cost effectiveness,
(vi) ongoing costs of operations and maintenance,
(vii) impact on surrounding buildings or properties, and
(viii) aesthetic effects.

(Rev. 4-15-10#4)

Attachment C

Eligible Costs for Reimbursement

Financial assistance under the Truckee River Flood Project Flood Protection Financial Assistance Program may only be provided for those costs which are actual, reasonable and necessary for making a property resistant to damage by flood. Below is an initial list of the types of eligible and ineligible costs. The Administrator may amend this list.

1. ELIGIBLE PLANNING AND PERMIT COSTS for all types of projects (elevation or relocation of residential properties and floodproofing of commercial properties) include but are not limited to:

   a) Costs of preparing plans and specifications and the certifications required.
   b) Costs of building permit applications
   c) Costs of certificates required for flood insurance applications and determinations.

2. ELIGIBLE HOME ELEVATION COSTS include but are not limited to:

   a) Jacking up Base Floors; installation and removal of beams for lifting the house, cribbing for raised house while the new foundation system is being built;
   b) Disconnecting and reconnecting existing utilities.
   c) Elevating all utilities and service equipment (hot water heater, furnace, outlets for electricity, air conditioning, cable, communications etc) and providing meter reading service if needed; This cost includes construction of a utility room above the Base Flood Elevation but only if there is not existing space within the house or if there is no other more cost effective way to elevate the utilities. If new utility room space must be constructed, it cannot be greater than 100 sq ft in gross floor area.
   d) Constructing foundations so the Base Floor is 3 feet above the predicted flood elevation established by the Administrator under this chapter, including seismic upgrades per local codes as required (including bolting the home to the foundation and/or cripple walls, and the seismic bracing of any water heaters). Repair to existing foundation but only if necessary (as determined by the design engineer) for the safe elevation of the structure.

e) Replacement of termite damaged or dry rotted wood framing members if such members are directly associated with elevating the home or are required for the recommended seismic bolting or bracing.
f) Lowering base floors and connecting to foundations.
g) Minimum costs of exterior sheathing associated with what was damaged or removed during the elevation process.
h) Building driveways.
i) Building of new wooden stairs and landings to access the elevated living space per the minimum code requirements. Note: grant funds may not be used to elevate any existing deck; however if an existing deck must be removed to accommodate the lifting of the house, the costs of repair/replacement at its previous level is eligible.
j) A residence with an attached garage may be eligible for certain costs associated with relocating the garage under the elevated house. However, if the predicted flood elevation established by the Administrator under Subsection 2.03 (g) of the Ordinance, would only require the house to be elevated four (4) feet, grant money may not be used pay any costs associated with elevating the house above that level to accommodate the garage.
k) Where the owner or members of the owner's family are physically handicapped, certain access facilities are granted eligible upon written confirmation from a physician. Such facilities may include an access ramp or mechanical lift where ramps are not technically feasible.
l) Rough grading of the yard and the seeding of grass if these areas were damaged by equipment during the elevation process or where the elevation process affects slopes and/or stabilization of the structure or surrounding structures.
m) Insulation of water pipes within 5 feet of the water heater.
n) New roofing where roof lines are altered by elevation of improvements.
o) Costs associated with repair or replacement of items damaged by contractor's operations, provided such operations are actual, reasonable and necessary for the completion of the home elevation, relocation, or floodproofing project and provided that the contractor did not damage such items through negligent acts or failure to take proper precautions in protecting such items from damage.

3. INELIGIBLE HOME ELEVATION COSTS include but are not limited to:

a) Costs which are not actual, reasonable and necessary to make property resistant to flood damage.
b) Painting of foundations or the walls around Building Flood Pool Areas of structures elevated.
c) Insulation and drywall for walls of the Building Flood Pool Area.
d) Upgraded driveways, ramps and entryways.
e) Siding, except for siding that was damaged in the elevation process.

f) Landscaping, except landscaping to replace landscaping that was removed.
g) Costs for elevating the home to any elevation higher than three feet above the predicted flood elevation established by the Administrator under this chapter.
h) Repairs, rehabilitation, additions, expansions, or elevation of appurtenances except noted in eligible costs above.
i) Construction or repair of decks or porches except as noted in the "eligible costs" above.
j) In cases where existing floor systems have been adequately designed or constructed with undersized materials, the homeowner must bear all costs of rehabilitation related to such inadequacies.
k) Costs of replacement of utility service components which are undersized, of inadequate capacity, or are unsafe, shall be borne by the owner unless directly related to the action of elevating (i.e. well pumps).
l) Where HVAC systems are expanded or increased in size and capacity, the owner shall bear any such costs beyond the HVAC's capacity to service the home's original square footage prior to elevation.
m) Where existing underground utility lines have deteriorated, or if such lines do not meet code requirements, additional costs to repair such facilities shall not be eligible for grant funding.
n) Replacement of flood damaged floor coverings, wall coverings, appliances, cabinets etc are not eligible for grant funding.

4. ELIGIBLE RELOCATION COSTS for residential buildings include but are not limited to:

a) Jacking up and moving the structure to a new site.
b) Disconnecting from utilities.
c) Minor grading and constructing foundations, including making them comply with current seismic requirements.
d) Connecting with new utilities.
e) Lowering Base Floors and connecting to foundations.
f) Building driveways.
g) Replacing existing stairs, landings, ramps and handicap facilities if needed.

Note: As provided in subsection 2.02 (g) of this Ordinance, relocation benefits to be provided under the NRS Chapter 342, or the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, if any, are provided separately and not considered as a part of the financial assistance under this program.

5. INELIGIBLE RELOCATION COSTS

a) Costs that are not actual, reasonable and necessary to relocate the property.
b) Home Elevation costs at new site.
c) Upgraded driveways, ramps and entryways.

6. ELIGIBLE FLOOD PROOFING OF COMMERCIAL BUILDINGS COSTS include but are not limited to:

a) Cost of excavating and preparing land for and installing approved barriers or other flood proofing facilities or devices and replacing existing landscaping.
b) Cost of installing sealants, seals, watertight materials and techniques to improvements.
c) Cost of preparing existing buildings (including removing existing improvements such as windows, doors, etc) for and installing approved flood proofing improvements.

7. INELIGIBLE FLOOD PROOFING COSTS.

a) Costs that are not actual, reasonable and necessary to make property resistant to flood damage or for flood proofing facilities or improvements that are not approved by the Administrator.

The Administrator shall have administrative discretion to determine suitable home elevation or relocation methods, and the appropriate flood proofing barriers, facilities or improvements on a building by building basis taking into account criteria including, but not limited to:

(i) experience with elevations and relocations in other areas, or under this program,
(ii) product history and reliability,
(iii) warranties and manufacturer support,
(iv) flood proofing effectiveness,
(v) cost and cost effectiveness,
(vi) ongoing costs of operations and maintenance,
(vii) impact on surrounding buildings or properties, and
(viii) aesthetic effects.

Attachment D

Maps of Areas Potentially Eligible for Truckee River Flood Project Financial Assistance Program

Attachment A -- Potential Candidates for AB#4 Grant Funding: Hidden Valley
DRAFT
1 of 2

Attachment A – Potential Candidates for AB54 Grant Funding: Eastside
DRAFT
4/7/15

Attachment A – Potential Candidates for AB54 Grant Funding: Downtown
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STATE OF NEVADA
COUNTY OF WASHOE

Being first duly sworn, deposes and says: That as the legal clerk of the Reno Gazette-Journal, a daily newspaper of general circulation published in Reno, Washoe County, State of Nevada, that the notice referenced below has published in each regular and entire issue of said newspaper between the dates: **05/28/2010 - 06/04/2010**, for exact publication dates please see last line of Proof of Publication below.

Signed: _____

Subscribed and sworn to before me
LINDA ANDERSON
Notary Public - State of Nevada
Appointment Recorded in Washoe County
No: 08-5430-2 - Expires January 16, 2012

JUN 04 2010

Linda Anderson

Proof of Publication

NOTICE OF ADOPTION WASHOE COUNTY ORDINANCE NO. 1439 BILL NO. 1618 An Ordinance amending the Washoe County Code by adding Sections 40.450 through 40.460 creating the Truckee River Flood Protection Financial Assistance Program to provide financial assistance to owners of public and private property in certain areas in order to make such property resistant to flood damage (Bill No.1618) PUBLIC NOTICE IS HEREBY GIVEN that typewritten copies of the above-numbered and entitled ordinance are available for inspection by the interested parties at the office of the County Clerk of Washoe County, Nevada, at her office at the County Courthouse, 75 Court Street, Reno, Nevada; and that said ordinance was proposed by Chairman Humke on April 27, 2010, and following a public hearing, was passed and adopted without amendment at a regular meeting on May 25, 2010, by the following vote of the Board of County Commissioners: Those Voting Aye: David Humke, Bonnie Weber, Bob Larkin, John Breternitz, Kitty Jung Those Voting Nay: None Those Absent: None This Ordinance shall be in full force and effect from and after June 4, 2010, i.e., the date of the second publication of such Ordinance by its title only. IN WITNESS WHEREOF, the Board of County Commissioners of Washoe County, Nevada, has caused this Ordinance to be published by title

only. DATED: May 26, 2010 AMY HARVEY, Washoe County Clerk and Clerk of the Board of County Commissioners No. 701397 - May 28, June 4, 2010

WASHOE COUNTY

"Dedicated To Excellence in Public Service"
www.washoecounty.us

CM/ACM KS
Finance DC
DA DC
Risk Mgt. N/A
HR N/A
Other N/A

STAFF REPORT
BOARD MEETING DATE: April 27, 2010

DATE: April 6, 2010

TO: Board of County Commissioners

FROM: Jay Aldean, P.E., Deputy Director, Truckee River Flood Management Project, 850-7470, jaldean@washoecounty.us

THROUGH: Naomi Duerr, Director, Truckee River Flood Management Project, 850-7420, nduerr@washoecounty.us

SUBJECT: Recommend that the Board of County Commissioners commence with the Introduction and First Reading of an Ordinance to amend Chapter 40 of the Washoe County Code to add new Sections 40.450 through 40.460 creating the Truckee River Flood Protection Financial Assistance Program to provide financial assistance to owners of public and private property in certain areas in order to make such property resistant to flood damage, and set a public hearing date for a second reading and possible adoption of the proposed ordinance for May 25, 2010. Further, that the Board approve the Financial Assistance Program so proposed as a TRAction Project with initial funding set at $2,000,000. (Commission Districts 1, 2, and 3).

SUMMARY

Introduction and first reading of an ordinance to create a financing program as authorized by Assembly Bill 54 of the 2009 Legislature to provide financial assistance to owners of public and private property in certain areas in order to make such property resistant to flood damage.

The proposed ordinance establishes a voluntary financial assistance program to enable individual public and private property owners that are located within the boundaries of the Locally Preferred Plan of the Corps of Engineers Truckee Meadows Flood Project (Federal Project) and that meet certain requirements to elevate or relocate their homes to protect the property from probable flood damage. It also allows for floodproofing of commercial and multi-family structures. The ordinance establishes the program, sets criteria for qualification for participants, and describes Flood Project administrative responsibilities and the responsibilities of participants. The ordinance establishes a method in which the cost associated with home elevation/relocation work for each property may be quantified in a fair and impartial way, and further, specifically sets which costs associated with elevating or relocating a home are covered under this program and allows for payment of 100% of those costs.

1439

AGENDA ITEM # 22

The full cost of this program is undetermined but the program is expected to be funded regularly throughout the coming years, given the financial ability of the Flood Project to apply funding to this program. During the January 21, 2010 Flood Project Coordinating Committee meeting, the FPCC approved this project as a TRAction[1] project and further approved an initial project budget of $2,000,000. A rough estimate for the cost estimate of the home elevation program has been previously determined at approximately $10,000,000 dollars. Currently the cost estimate for the floodproofing is not available.

County Priorities supported by this item: Improve Public Safety, Security and Health.

PREVIOUS ACTION

March 10, 2006	FPCC adopted the Community (Locally) Preferred Plan (LPP) including a levee in the Hidden Valley area.
November 17, 2006	FPCC approved the Hidden Valley Traction project (Phase I-Feasibility)
February 9, 2007	FPCC approved a contract with HDR, Inc. for a Preliminary Engineering Study
February 27, 2007	BCC approved a contract with HDR, Inc. for a Preliminary Engineering Study
March 14, 2008	FPCC approved an amendment to the engineering contract for the Hidden Valley Project to expand the feasibility project to include evaluation of home elevation and the potential for buyouts.
April 15, 2008	BCC approved an amendment to the engineering contract for the Hidden Valley Project to expand the feasibility project to include evaluation of home elevation and the potential for buyouts.
June 2009	The Nevada Legislature approved AB 54 to allow Washoe County and the Flood Project to award grants to individuals to assist with elevation of their homes
November 13, 2009	FPCC adopted the Second Amendment to the Infrastructure Sales Tax Plan, which amended the flood project description (LPP) to include non-structural alternatives and the possibility of elevating homes in lieu of construction of a levee

[1] TRAction Projects are those projects which the local sponsors undertake in advance of the Federal Corps of Engineers' Flood Project. Funding for these projects is provided entirely by the local sponsors. If the requirements of the Corps' Section 104 are met, the Corps will approve the project for future cost sharing pending authorization of the federal flood project.

January 21, 2010 The FPCC approved the Truckee River Flood Project Home Elevation Program as a TRAction Project in an amount not to exceed $2,000,000 for Phase I

BACKGROUND & DISCUSSION

The Board of County Commissioners was authorized by the 2009 Legislature (Chapter 325, Statutes of Nevada, 2009, page 1428, AB 54) to establish by ordinance a program to provide financial assistance to owners of public and private property in areas that are likely to be flooded in order to make such property resistant to flood damage if the BCC finds that the creation of the program is necessary to promote the public health, safety and welfare. Attachment A establishes the Basis for the Ordinance and Findings. Attachment B is the Flood Project Financial Assistance Program Ordinance. Attachment C lists out the proposed list of Eligible Costs for Reimbursement. Attachment D identifies areas which are potentially eligible for funding from this program if approved.

FISCAL IMPACT

The budget for the entire home elevation program is currently estimated at $10 million. Approximately $2 million is included in the current FY09-10 budget for this program, as approved by the FPCC at their March 12, 2010 meeting.

There is sufficient funding from the Flood Project's 1/8 cent sales tax to fund the financial assistance program (Fund 494).

Assuming that a Section 104 application is approved by the Corps of Engineers, local contributions will qualify for crediting against the local sponsor's 35% share of the overall Truckee River flood project cost.

RECOMMENDATION

Staff recommend that the Board of County Commissioners commence with the Introduction and First Reading of an Ordinance to amend Chapter 40 of the Washoe County Code to add new Sections 40.450 through 40.460 creating the Truckee River Flood Protection Financial Assistance Program to provide financial assistance owners of public and private property in certain areas in order to make such property resistant to flood damage, and set a public hearing date for a second reading and possible adoption of the proposed ordinance for May 25, 2010. Further, that the Board approve the Financial Assistance Program so proposed as a TRAction Project with initial funding set at $2,000,000.

POSSIBLE MOTION

A possible motion would be for the Board of County Commissioners commence with the Introduction and First Reading of an Ordinance to amend Chapter 40 of the Washoe County Code to add new Sections 40.450 through 40.460 creating the Truckee River Flood Protection Financial Assistance Program to provide financial assistance owners of public and private property in certain areas in order to make such property resistant to

flood damage, and set a public hearing date for a second reading and possible adoption of the proposed ordinance for May 25, 2010. Further, that the Board approve the Financial Assistance Program so proposed as a TRAction Project with initial funding set at $2,000,000.

ATTACHMENTS

Attachment A: Basis for the Ordinance
Attachment B: Flood Project Financial Assistance Program Ordinance
Attachment C: Eligible Costs for Reimbursement
Attachment D: Maps of Areas Potentially Eligible for Financial Assistance

WASHOE COUNTY

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www.washoecounty.us

CM/ACM
Finance
DA
Risk Mgt. DT
HR N/A
Other N/A

STAFF REPORT
BOARD MEETING DATE: May 25, 2010

DATE: May 5, 2010

TO: Board of County Commissioners

FROM: Jay Aldean, P.E., Deputy Director, Truckee River Flood Management Project, 850-7470, jaldean@washoecounty.us

THROUGH: Naomi Duerr, Director, Truckee River Flood Management Project, 850-7420, nduerr@washoecounty.us

SUBJECT: Second Reading and possible adoption of an Ordinance to amend Chapter 40 of the Washoe County Code to add new Sections 40.450 through 40.460 creating the Truckee River Flood Protection Financial Assistance Program to provide financial assistance to owners of public and private property in certain areas in order to make such property resistant to flood damage, Bill Number 1618. (Commission Districts 1, 2, and 3).

SUMMARY

Second reading and adoption of an ordinance to create a financing program as authorized by Assembly Bill 54 of the 2009 Legislature to provide financial assistance to owners of public and private property in certain areas in order to make such property resistant to flood damage.

The proposed ordinance establishes a voluntary financial assistance program to enable individual public and private property owners that are located within the boundaries of the Locally Preferred Plan of the Corps of Engineers Truckee Meadows Flood Project (Federal Project) and that meet certain requirements to elevate or relocate their homes to protect the property from probable flood damage. It also allows for floodproofing of commercial and multi-family structures. The ordinance establishes the program, sets criteria for qualification for participants, and describes Flood Project administrative responsibilities and the responsibilities of participants. The ordinance establishes a method in which the cost associated with home elevation/relocation work for each property may be quantified in a fair and impartial way, and further, specifically sets which costs associated with elevating or relocating a home are covered under this program and allows for payment of 100% of those costs.

The full cost of this program is undetermined but the program is expected to be funded regularly throughout the coming years, given the financial ability of the Flood Project to apply funding to this program. During the January 21, 2010 Flood Project Coordinating

Committee meeting, the FPCC approved this project as a TRAction[1] project and further approved an initial project budget of $2,000,000. A rough estimate for the cost estimate of the home elevation program has been previously determined at approximately $10,000,000 dollars. Currently the cost estimate for the floodproofing is not available.

County Priorities supported by this item: Improve Public Safety, Security and Health.

PREVIOUS ACTION

March 10, 2006	FPCC adopted the Community (Locally) Preferred Plan (LPP) including a levee in the Hidden Valley area.
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June 2009	The Nevada Legislature approved AB 54 to allow Washoe County and the Flood Project to award grants to individuals to assist with elevation of their homes
November 13, 2009	FPCC adopted the Second Amendment to the Infrastructure Sales Tax Plan, which amended the flood project description (LPP) to include non-structural alternatives and the possibility of elevating homes in lieu of construction of a levee
January 21, 2010	The FPCC approved the Truckee River Flood Project Home Elevation Program as a TRAction Project in an amount not to exceed $2,000,000 for Phase I

[1] TRAction Projects are those projects which the local sponsors undertake in advance of the Federal Corps of Engineers' Flood Project. Funding for these projects is provided entirely by the local sponsors. If the requirements of the Corps' Section 104 are met, the Corps will approve the project for future cost sharing pending authorization of the federal flood project.

April 27, 2010 — The BCC approved the Truckee River Flood Protection Financial Assistance Program as a TRAction Project and approved the initial funding for $2,000,000 and approved the first reading of the enabling county ordinance.

BACKGROUND & DISCUSSION

The Board of County Commissioners was authorized by the 2009 Legislature (Chapter 325, Statutes of Nevada, 2009, page 1428, AB 54) to establish by ordinance a program to provide financial assistance to owners of public and private property in areas that are likely to be flooded in order to make such property resistant to flood damage if the BCC finds that the creation of the program is necessary to promote the public health, safety and welfare. Attachment A establishes the Basis for the Ordinance and Findings.

FISCAL IMPACT

The budget for the entire home elevation program is currently estimated at $10 million. Approximately $2 million is included in the current FY09-10 budget for this program, as approved by the FPCC at their March 12, 2010 meeting.

There is sufficient funding from the Flood Project's 1/8 cent sales tax to fund the financial assistance program (Fund 494).

Assuming that a Section 104 application is approved by the Corps of Engineers, local contributions will qualify for crediting against the local sponsor's 35% share of the overall Truckee River flood project cost.

RECOMMENDATION

Staff recommends adoption of an Ordinance to amend Chapter 40 of the Washoe County Code to add new Sections 40.450 through 40.460 creating the Truckee River Flood Protection Financial Assistance Program to provide financial assistance to owners of public and private property in certain areas in order to make such property resistant to flood damage.

POSSIBLE MOTION

Should the Board agree with staff's recommendation, a possible motion would be to move to adopt an Ordinance to amend Chapter 40 of the Washoe County Code to add new Sections 40.450 through 40.460 creating the Truckee River Flood Protection Financial Assistance Program to provide financial assistance to owners of public and private property in certain areas in order to make such property resistant to flood damage.

ATTACHMENTS

Attachment A: Basis for the Ordinance

Attachment A

Basis for Ordinance - Findings

Hidden Valley Project – Home Elevation

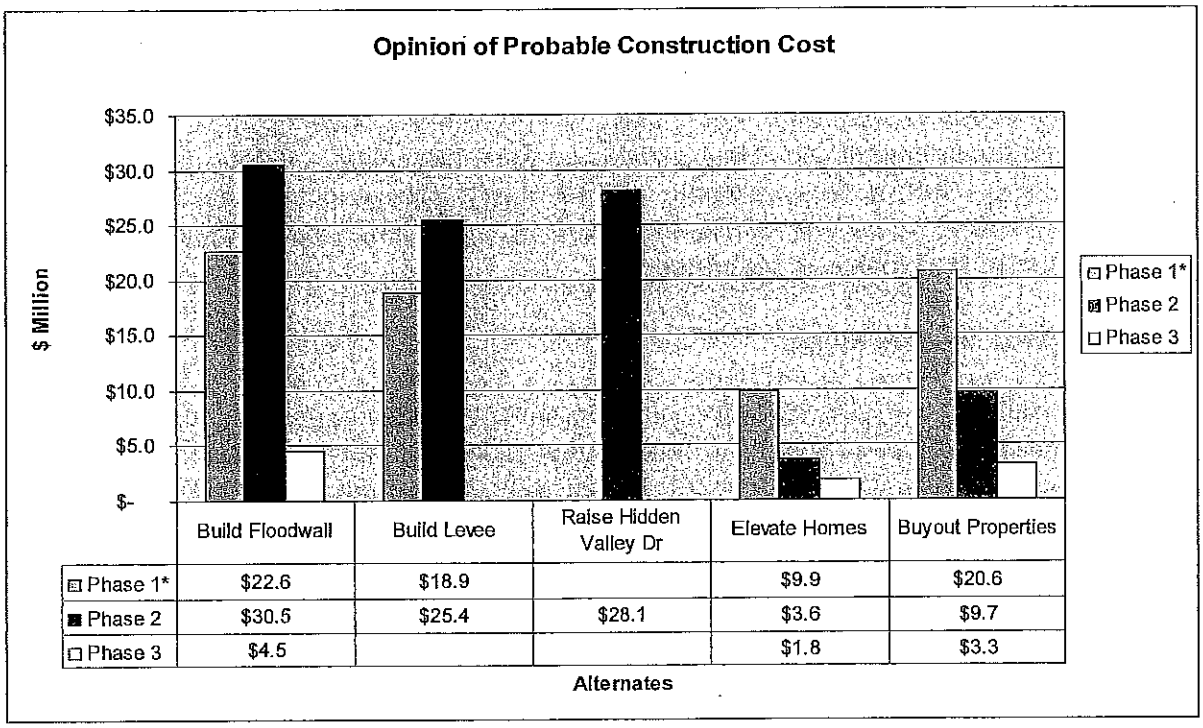
A portion of the original Hidden Valley development is currently protected by a substandard, non-certified levee (berm) originally constructed with the first phase of the subdivision during the early 1960s. The FPCC approved a TRAction project to accelerate implementation of the flood protection for the approximately 55 Hidden Valley homes which flood frequently. When the Hidden Valley TRAction Project was originally conceived it was thought that the existing levee could be expanded or enhanced to provide the recommended design level of storm protection for the adjacent structures.

HDR was hired by the flood project to analyze various alternatives to protect the homes. The study considered as many as five alternatives for each of the three areas of the project. The two figures below show the locations of the originally proposed levee/floodwall (**Figure 1**) and the associated cost comparison of the various alternatives analyzed during the HDR study (**Figure 2**).

After thoroughly evaluating various flood protection alternatives and costs, the Hidden Valley Project Preliminary Engineering Report, dated August 2008, by HDR Inc. proposed elevating the homes in the area instead of building a levee around them as the preferred and most economical solution to reduce flood damages. A floodwall or levee would have a high initial cost, as well as permanent "on-going" maintenance costs; raising homes would provide the necessary flood protection yet reduce construction and maintenance costs as well as reduce liability exposure to the Flood Project.

The homeowners from Hidden Valley were invited to participate in the study by attending five stakeholder meetings during which they were educated on conditions of the project, encouraged to ask questions, and learned about the issues associated with each of the proposed solutions. At the conclusion of the stakeholder process, a straw poll revealed the stakeholders first flood protection choice to be the "non-structural" property buy-out option; there was only minimal support for the structural solutions in the form of levees or floodwalls.

Figure 1 - Levee/Floodwall alignments for Hidden Valley Subdivision



	Build Floodwall	Build Levee	Raise Hidden Valley Dr	Elevate Homes	Buyout Properties
Phase 1*	$22.6	$18.9		$9.9	$20.6
Phase 2	$30.5	$25.4	$28.1	$3.6	$9.7
Phase 3	$4.5			$1.8	$3.3

Figure 2 - Cost comparison for various alternatives for Hidden Valley Subdivision

It is clear from the cost table that the sum of the buyout option at $33.6 million is less than any of the structural alternatives which cost in the range of $48.8 - $57.6 million. Of note, the structural alternatives were less preferred than the buyout option by the stakeholders.

The other non-structural alternative, home elevation, was estimated at $15.3 million for all three phases (or areas) of the project, and is the obvious least cost alternative. This alternative also received numerous positive comments from the stakeholders, but was not as highly supported as the buyout option. The estimate for the Hidden Valley home elevation option has since been re-calculated with revised information from other communities and the Corps. The cost is now expected to be in the range of $100,000 per home or about $5.5 million total. This represents a significant reduction in the earlier $15.3 million cost estimate and represents an obvious, cost effective solution to protect this area from flood damages.

Eastside Subdivision Home Elevation

Home Elevation and Floodproofing have been part of both the Truckee River Flood Project's Locally Preferred Plan (LPP) and National Economic Development Plan (NED) since their inception circa 2005. In each of these plans, the area initially targeted for home elevation included approximately 60 residences located within the Eastside Subdivision, **Figure 3**.

Home elevation was chosen by the Corps of Engineers as a solution for the protection of Eastside Subdivision residents based on anticipated costs for various options. The number of homes that may qualify for the program in the Eastside Subdivision is roughly the same as for Hidden Valley (60), yet the massive floodwall or levee structure that is needed to protect this area is on the order of two to three times the length of the facility that would be needed to protect Hidden Valley. Based on this understanding it is reasonable to assert that there would even be a greater economic incentive to recommend the non-structural home elevation options as a flood protection solution for the Eastside Subdivision residents as compared to Hidden Valley. Based on the revised information as noted in the Hidden Valley discussion (above), the cost of elevating homes in Eastside Subdivision is estimated at $6 million.

Downtown Floodproofing

Additionally, five structures in downtown Reno have been proposed for "dry[1]" floodproofing (**Figures 4 and 5**). This method of flood protection is well suited to non-residential areas, including commercial, industrial and multifamily facilities which can not be elevated. The economic analysis conducted for Hidden Valley and Eastside relies on the concept that constructing massive structures along the river for protection of just a

[1] Dry Floodproofing refers to protecting a structure from flooding without elevating or moving the structure. It includes a number of techniques among which include special floodproof doors and windows with enhanced water seals, special sealants for the walls, or construction of "on-site" barriers in the form of earthen berms or watertight walls around the structure's perimeter. The goal of each technique is to protect the structure in place.

few buildings is not economical nor is it a wise and efficient use of public funding. The downtown floodproofing is proposed for identical reasons.

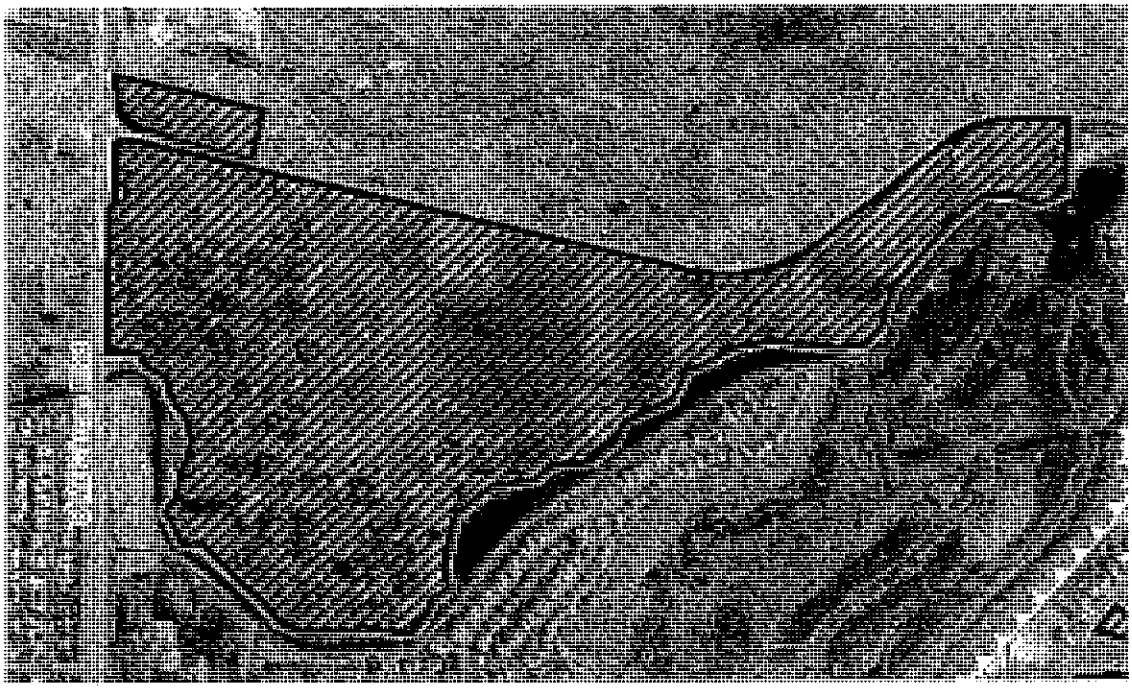


Figure 3 - Eastside Subdivision

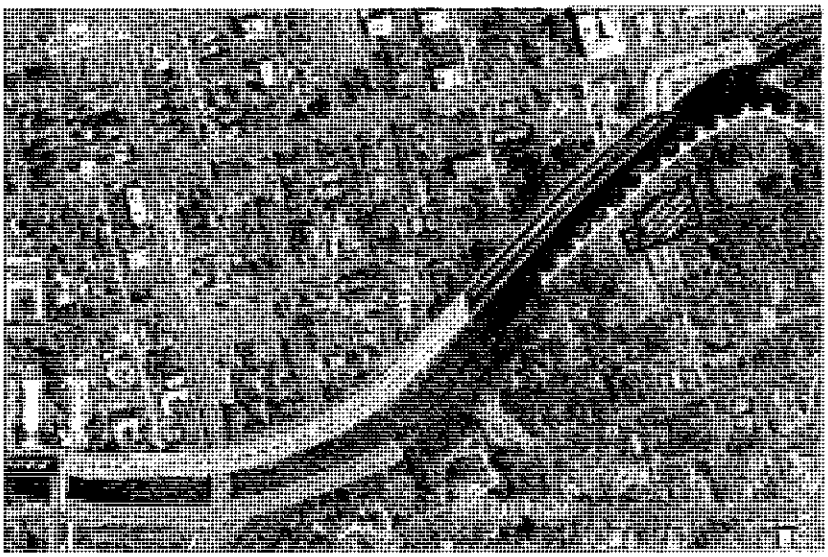


Figure 4 - Downtown Floodproofing – Court Street

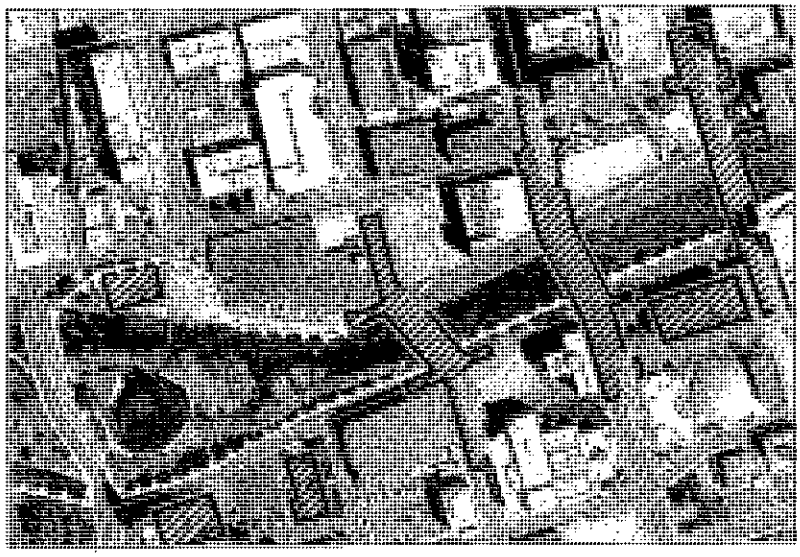


Figure 5 –Additional Downtown Floodproofing

Home Elevation and Relocation – General

Home elevation and floodproofing fall into the category of non-structural flood protection solutions. The general concept is to protect individual structures and allow flood waters to circulate around, or in some cases beneath, the structure. The structural solutions generally include construction of a flood barrier such as a levee embankment or floodwall to confine the floodwaters within the bed and banks of the river.

The benefits for each category of solutions are not equivalent; however when considering the tremendous amount of property damage caused by each significant storm event, both solutions will prevent the excessive monetary loss due to flood damage. In areas where non-structural types of solutions are constructed, it is possible for flood waters to engulf the streets and property landscaping. This can pose a dangerous situation but public safety is based on the principal that individuals evacuate prior to the event or remain in the structures that have been floodproofed and are safe for occupancy during the storm event. Although structural solutions prevent water from circulating through local streets, etc., flood swollen rivers are extremely dangerous and curious individuals can find danger whether structural or non-structural solutions are used.

Flood Project staff have meet with the Hidden Valley Homeowners Association and Rosewood Lakes homeowners and discussed the potential for the home elevation program going forward; as a result, home elevation has become a very popular option. Fourteen homeowners have already registered their interest to be "first in line" to

participate in the home elevation program. More than likely, when others see the success of the first few projects it will generate further interest and more will apply.

Buyout

Only a few residential structures are expected to be found technically infeasible for elevation; this could trigger a potential consideration for buyout. Since the County already has procedures for the purchase of properties, this element of the program is not discussed further, nor is it referenced in the accompanying ordinance. As with home elevation, buyouts are considered voluntary.

Assuming a total of five homes might be ineligible for elevation and potentially eligible for buyout, the buyout part of program is estimated to cost about $1,500,000.

Costs

The total cost of the home elevation and buyout project is estimated at $13 million (5.5M + 6M + 1.5M). Since not all homeowners are expected to participate in the home elevation project, staff discounted the estimate by 8% resulting in an estimate of about $10 million for the entire project.

TRAction Project and Criteria

The Flood Project is requesting that the Financial Assistance Program also be approved as a TRAction[2] project.

Since the inception of the TRAction Program, Flood Project staff has evaluated each project application using the following basic criteria to determine whether the proposed project:

- ✓ Is sponsored by a public/government agency?
- ✓ Is included in both the NED Plan and the LPP?
- ✓ Would cause no adverse impact to others?
- ✓ Provided benefit as a stand-alone project (i.e., will provide value even if other Flood Project elements are not built)?
- ✓ Is technically feasible, cost-effective and affordable?

[2] TRAction Projects are those projects that the local sponsors undertake in advance of the Federal Project. Funding for these projects is provided entirely by the local sponsors and if the requirements of Section 104 are followed the Corps will send notification that the individual project may be considered for future cost sharing pending construction of the Federal Project.

The proposed Home Elevation Program meets all of the above stated criteria.

Sponsor: The properties considered for this Financial Assistance Program are all located within Washoe County. Currently the area being proposed for floodproofing is also located within the City of Reno, as is a portion of the home elevation program area. Due to dual jurisdictions, it is recommended that the Flood Project itself be the governmental sponsor of this TRAction Project. It is also expected that respective jurisdictional public works and building department staff may be employed for assistance.

NED and LPP plans: Currently, the NED and LPP plans contain both the Eastside Subdivision home elevation and the downtown Reno floodproofing. However, the Hidden Valley elevation project is currently only included in the LPP plan, not the NED plan. The Corps has acknowledged that the home elevation solution for Hidden Valley should be included in the NED in lieu of the proposed floodwall that is now proposed. The Corps is taking the necessary steps to make this change before completion of the GRR. The FPCC formalized the substitution of the home elevation program for the floodwall option in Hidden Valley for the LPP during the approval of the NRS 377B amendments in November 2009.

Adverse Impact: Implementation of the Home Elevation Program will have no impact to the flood elevation. Since the nature of home elevation is to lift the structure in-place and provide for inundation of the structure beneath, the cumulative flood storage created will more than offset any storage lost during the collective elevation process.

Standalone: This project will reduce flood impacts to the homeowners who participate and will not induce flooding to any other residents or businesses. In fact, by creating more flood storage overall, the program will reduce flooding on other properties even if the rest of the LPP is never constructed.

Feasibility and Cost Effectiveness: A variety of home elevation projects have been completed throughout the country. Flood Project staff have recently visited three separate programs: New Orleans, LA; Tehama, CA; and Placer County, CA. Examples of these projects will be shown during the presentation on this item. Clearly, the technical issues have been resolved in other communities.

The affordability and flexibility of the proposed program allows for minimum expenditure amounts in the thousands of dollars per home instead of multi-millions of dollars for structures. As shown in Figure 1, in the Hidden Valley example, shifting from constructing a floodwall to elevating homes is estimated to save approximately $42 million dollars ($57.6 million for the floodwall vs. $15.3 million for home elevation.) Actual costs for the home elevation program are expected to be even less than estimated, potentially increasing the cost savings to the program budget to about $50 million. Since not all individual projects must be undertaken at once, a reasonable and flexible schedule meeting the timing needs of the Flood Project and available funding can be determined.

Program Elements and Considerations

Washoe County staff has been holding discussions concerning the potential operation of the Home Elevation Program TRAction Project. A technical implementation committee was formed consisting of County staff members from the Flood Project, Public Works, Water Resources and Building & Safety. Washoe County currently does not have a program that addresses the issue of home elevation to serve as a program template or guidance, so a new program is being conceived and elements discussed as to how the program will function.

Members of the Flood Project staff visited two communities in California that have completed a home elevation program within the past 10 years (Granite Bay in Placer County, and The City of Tehama) to collect as much information as possible and to pose various questions to their respective staff as to the successes and problems experienced during their programs. To date, the following program principles are proposed:

- The program would be completely voluntary.
- Participants would be invited to apply to the program. Invitations will be based on meeting eligibility requirements depending on the finished floor elevation of the respective structures and the calculated elevation of the flood water. Application by the homeowners for the program will commit them to certain responsibilities which are designed to protect them as well as future owners of the property.
- Approximately 115 homes would be eligible for the program. This number is expected to vary somewhat pending the outcome of final eligibility study for each property that participates in the program.
    - Hidden Valley Subdivision (55 homes)
    - Eastside Subdivision (60 homes)
    - Others in nearly developments
- The Flood Project would cover all or a significant majority of the local share of the total cost of the project.
- The Flood Project will "front" the construction money, and at the appropriate time seek project crediting from the Corps or reimbursement from FEMA.
- The program will last approximately 8 years. AB 54 allows for this program to continue for up to 10 years from the date it became law (2009). Budgeting of the program will be based on a 7 year completion with the final year for program closeout.
- Each participant will contract directly with a building contractor. Neither the Flood Project or other governmental entity will be a party to the contract. This approach will:
    - Minimize liability exposure to Flood Project

- Facilitate warranty work by contractor
- Facilitate optional upgrades requested by homeowner not covered through the program

- The program will include flexibility to add additional qualified structures for elevation and the floodproofing structures currently in the NED and LPP. Staff is currently evaluating the potential for homeowners within the Rosewood Lakes Subdivision to participate in the program. Staff has delineated the area boundaries in the ordinance maps (Ordinance Attachment A) sufficiently to pickup all of the properties that are anticipated to qualify under the terms of this ordinance.

Staff expects to work closely with the Corps of Engineers team to ensure that the program being developed will contain all the elements as required by the Corps or this program. A Section 104 approval will be requested from the Corps prior to beginning construction.

Findings Summary

There are 5 findings in the ordinance that will be summarized in this section. Restated excerpts from the ordinance are shown in italics.

A. ***Significant flooding has occurred numerous times in Washoe County during the past 100 years.***

The following table lists some of the more significant storm events and peak discharges

Date	Peak Flow	Approx. Probability
March 18, 1907	18,500 cfs	90 yr
January 16, 1909	10,100 cfs	30 yr
March 26, 1928	18,800 cfs	90 yr
November 21, 1950	17,000 cfs	80 yr
December 4, 1950	11,700 cfs	35 yr
December 23, 1955	20,800 cfs	95 yr
February 1, 1963	18,400 cfs	90 yr
February 17, 1986	14,400 cfs	50 yr
January 1, 1997	23,200 cfs	117 yr
December 31, 2005	16,000 cfs	70 yr

B. ***In areas likely to be flooded, the adverse effect of flooding may be reduced by (i) building flood control structures such as levees, floodwalls, flood prevention facilities, ground and river bank terracing and the like, or (ii) by nonstructural methods such as***

elevating or otherwise flood proofing individual buildings, or (iii) by relocating structure outside of an areal likely to be flooded.

As explained in this Appendix, extensive structural flood control solutions have been proposed historically to protect large numbers of properties. When solutions to protect small numbers of properties are considered, usually the large structural solutions do not meet the cost to benefit test as is the case for the properties being considered for the Financial Assistance Program being presented. The non-structural home elevation or relocation solutions proposed for the residential areas noted in this staff report all meet a higher benefit to cost ratio than the other structural alternatives considered.

C. ***...the adverse effects of flooding to the public health, safety and welfare may be reduced by elevating structures to be above the floodwaters, or relocating structures outside the flood zone altogether.***

Public Welfare:

1. As noted in this finding, public property damage will be minimized with every individual that participates in this program. Each home elevation project will lift or relocate the structure up and away from floodwater contact to a safe level established by the Administrator. Each project will also make watertight some utility connections to the structure and elevate others such as power and heating and air conditioning equipment to allow them to continue to function during the duration of the storm event. For homeowners, the program will require that flood insurance be carried permanently on the property. Then through action of home elevation, FEMA will allow a deep discount for said insurance and move the structure out of harm's way. For commercial and multi-family properties, the mere action of application of floodproofing techniques to the building will minimize the exposure to flooding and thus reduce the potential for damages. Floodproofing techniques also address each of the utilities to allow them to remain in service during the storm event.
2. When flood waters are allowed to pool outside of the river beds and banks, downstream attenuation (shifting) of peak flows occurs. This attenuation of peak discharge quantity is of direct benefit to the public and property owners downstream by reducing their potential for flood damage.
3. Allowing for flood water to circulate around and beneath residential structures has the effect of slowing the velocity of flow which in turn reduces the destructive force of the water and overall damage to property. Reducing the velocity also has the added safety benefit of reducing the potential for individuals that find themselves knee deep in flood water from loosing their footing and falling.

Public Safety:

1. The non-structural flood solutions promoted by the Financial Assistance Program all provide safe locations where public and private property owners may congregate and remain safe throughout major storm events. Each facility that is

addressed either through home elevation, relocation or flood proofing will remain self contained during the event and all public services such as water, power, and sewer should continue to function during the event. Also floodwaters in and around the Truckee Meadows do not remain for extended periods of time as is the case in the eastern United States, so it is not expected that those participating in this program would be isolated for long periods during the storm events.

Public Health:

1. Storm water itself consists of a combination of pollutants and sewage overflows and bacteria, as well as excessive flows. Public entry into flooded water is potentially extremely dangerous through contact with the flood water. Safe locations are ultimately established through the Financial Assistance Program to the protect the public from having to expose themselves to this health threat.

D. ***Providing financing for non-structural flood proofing of multifamily or commercial building in downtown Reno in Approved Areas....is a more functional, cost effective and reasonable public safety, health and welfare solution than to build and maintain massive floodwall or levee structures.***

The dry floodproofing alternative recommended for the Reno downtown areas will eliminate the need for constructing significant structural alternatives once considered for this area, in some cases, for just protecting one building. Although flood insurance rates are usually not reduced through implementation of dry floodproofing techniques, the property is protected from flooding to the same degree as if a structural wall had been built, the overall costs of construction and maintenance are all reduced, and the property is still protected.

E. ***...this Commission finds that the creation of this program to provide financial assistance to owners of public and private property .....is necessary to promote and protect the public health, safety and welfare.***

Upon inception of the Federal Project, all of the areas which flood as a direct result of the Truckee River swelling beyond the limits of its bed and banks were examined for appropriate and efficient solutions to protect the public, including their lives and property from repetitive damage. Each area was reviewed and solutions proposed to eliminate or substantially reduce the treat of flooding from the river. Significant structural solutions which include floodwalls and levees are proposed for many areas to protect greater areas but when it makes good economic sense, non-structural solutions were proposed to protect the exposed pocket areas. It has been the intention throughout this project to protect all citizens from this frequent flood threat and this Financial Program is in keeping with this goal.