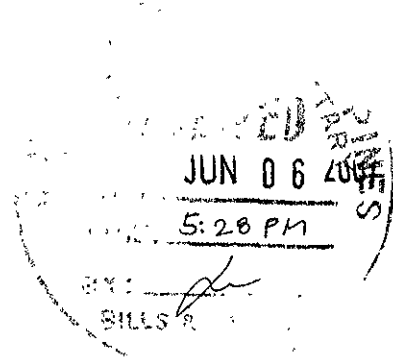


THIRTEENTH CONGRESS OF THE REPUBLIC )  
OF THE PHILIPPINES )  
Third Regular Session )



**SENATE**

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**COMMITTEE REPORT NO. 311**

Submitted by the Committee on Environment and Natural Resources and Youth, Women and Family Relations on JUN 06 2007

Re : Proposed Senate Resolution No. 480, taking into consideration  
Proposed Senate Resolution No. 282

Recommending the adoption of this Report and the implementation of its recommendations

Sponsor : Senator Cayetano

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**Mr. President:**

The Committees on Environment and Natural Resources and Youth, Women and Family Relations, to which was referred Proposed Senate Resolution No. 480, introduced by Sen. Madrigal, entitled:

**"A RESOLUTION  
DIRECTING THE COMMITTEE ON YOUTH, WOMEN AND FAMILY RELATIONS TO  
CONDUCT AN INQUIRY, IN AID OF LEGISLATION, ON THE PRIVATIZATION OF A 59  
HECTARE PORTION OF THE LA MESA RESERVATION AREA FOR THE PURPOSE  
OF ESTABLISHING HOUSING UNITS THEREIN, WHICH POSES CLEAR AND  
IMMINENT DANGER TO THE WATER SUPPLY OF METRO MANILA, AND EXPOSE  
THE MOST VULNERABLE MEMBERS OF THE POPULATION CONSISTING OF  
WOMEN AND CHILDREN TO WATER CONTAMINATION, WITH THE END IN VIEW OF  
RECOMMENDING APPROPRIATE REMEDIAL LEGISLATION"**

taking into consideration Proposed Senate Resolution No. 282, introduced by Sen. Cayetano, entitled:

**"A RESOLUTION  
DIRECTING THE SENATE COMMITTEE ON ENVIRONMENT AND NATURAL  
RESOURCES TO EXAMINE, IN AID OF LEGISLATION, THE CONDITION OF ALL  
LAKES AND WATERSHEDS IN THE COUNTRY"**

have considered the same and have the honor to submit the report it back to the Senate, recommending the adoption of this Report and the implementation of its recommendations.

*My committee was not consulted in preparing this report. The committee would not in any way protect the interests of the Executive House of Representatives. This committee report should be recommended that the DENR deny approval of EIA to the proposed mineral exploration activity of the DENR.*

Respectfully submitted:

Committee Chairpersons:

*M.A. Madrigal*  
**M.A. MADRIGAL**  
 Youth, Women and Family Relations

*Ria S. Cayetano*  
**"COMPANERA" RIA S. CAYETANO**  
 Environment and Natural Resources

Committee Vice Chairperson:

*Luisa P. Ejercito Estrada*  
**LUISA "LOI" PEJERCITO-ESTRADA**  
 Youth, Women and Family Relations

Members:

*Franklin M. Drilon*  
**FRANKLIN M. DRILON**

*Rodolfo G. Biazon*  
**RODOLFO G. BIAZON**

*Richard J. Gordon*  
**RICHARD J. GORDON**

*Juan Ponce Enrile*  
**JUAN PONCE ENRILE**

*Ramon B. Magsaysay, Jr.*  
**RAMON B. MAGSAYSAY, JR.**


*Manuel "Lito" M. Lapid*  
**MANUEL "LITO" M. LAPID**

*Ramon "Bong" Revilla, Jr.*  
**RAMON "BONG" REVILLA, JR.**

*Ralph G. Recto*  
**RALPH G. RECTO**

*This committee report is perpetuating the alleged terrorism cases!*

  
EDGARDO J. ANGARA

  
MAR ROXAS  
*of reputation and success  
Object to Executive Housing*

  
PANFILO M. LACSON


  
SERGIO OSMEÑA III

*I strongly object to the presence of the  
Executive Housing. They should be removed from  
La Mesa Dam.*

~~ALFREDO S. LIM~~

Ex-Officio members:

  
FRANCIS N. PANGILINAN  
Majority Leader

  
JUAN M. FLAVIER  
President Pro-tempore

AQUILINO Q. PIMENTEL, JR.  
Minority Leader

HON. MANNY VILLAR  
Senate President  
Pasay City

## I. PREFATORY STATEMENT

This controversy arose from the proposed MWSS housing project site for MWSS employees, which is located within the La Mesa watershed area. The proximity of the proposed site to the watershed has raised concerns on its potential impact on the safety of the water in the reservoir, which is the source of potable water for 12 million residents of Metro Manila.

Responding to the resolutions thus filed, the Committee on Environment and Natural Resources, joint with the Committee on Youth, Women and Family Relations, together with the Joint Congressional Oversight Committee on the Clean Water Act of 2004, conducted *two (2) hearings* on this issue on May 16, 2006 and June 22, 2006.

The Joint Committee had the unenviable task of placating the highly-emotional undercurrents attendant to this issue, by emphasizing that its role is limited to environmental concerns. In this case, the primary concern is the condition of La Mesa and other sources of water in the country amid threats of contamination, pollution and depletion of water in the country's watersheds.

Therefore, this Committee Report is limited to the essential issues relevant to the mandate of the Senate Environment Committee and the Joint Committee and the issues concerning the La Mesa watershed.

## II. FACTS

### **The La Mesa Watershed**

In the heart of Metro Manila lies the La Mesa watershed which is considered as one of the primary sources of potable drinking water for close to 12 million residents of the region. Sources indicate that 1.5 million liters of water passes through it daily.<sup>1</sup>

The La Mesa watershed is composed of 2,700 hectares of forest and watershed area. Of the total land area, 2,000 hectares are forested and 700 hectares comprise a man-made lake, which serves as a water reservoir.

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<sup>1</sup> "La Mesa Dam Quickfacts", Philippine Daily Inquirer (May 28, 2006) p.A-16 [http://opinion.inq7.net/inquireropinion/talkofthetown/view\\_article.php?article\\_id=3326](http://opinion.inq7.net/inquireropinion/talkofthetown/view_article.php?article_id=3326)

The water reservoir portion of the La Mesa watershed is basically an earth dam built in 1929. In 1959, its storage capacity was raised to 50.5 million cubic meters to accommodate and safeguard the water from Angat Dam and Ipo Dam, along with the water from the La Mesa watershed.<sup>2</sup> This water then passes through the treatment plants located within the La Mesa compound before its final distribution.

It is also the last remaining forest of its size in Metro Manila.<sup>3</sup> However despite its importance, the La Mesa watershed remains unprotected. It has not been formally declared as a watershed reservation<sup>4</sup>, forest reserve<sup>5</sup> or protected area either by executive or legislative action.<sup>6</sup>

### **The MWSS Housing Project**

On June 18, 1968, the National Waterworks and Sewerage Authority (NWSA, presently the MWSS) approved **Resolution No. 415, Series of 1968**. This Resolution segregated and set aside 58 hectares of land below the La Mesa Dam as the initial site for the housing of its workers and employees.

This was done in compliance with its obligation under the Collective Bargaining Agreement it entered into with its two labor unions, *Kaisahan at Kapatiran ng Manggagawa at Kawani sa NWSA* (KKK-NWSA) and *Balara Employees and Laborers Association* (BELA).

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<sup>2</sup> "The La Mesa Dam", [http://www.manilawater.com/au\\_water.cfm](http://www.manilawater.com/au_water.cfm)

<sup>3</sup> *Ibid.*

<sup>4</sup> Watershed reservation is a forest land reservation established to protect or improve the conditions of the water yield thereof or reduce sedimentation [**Section 3 (l), Presidential Decree no. 705 Revised Forestry Code**].

<sup>5</sup> Forest reservations refer to forest lands which have been reserved by the President of the Philippines for any specific purpose or purposes [**Section 3 (g), Presidential Decree no. 705 Revised Forestry Code**].

<sup>6</sup> "Protected area" refers to identified portions of land and water set aside by reason of their unique physical and biological significance, managed to enhance biological diversity and protected against destructive human exploitation. [**Sec. 4(b), Republic Act no. 7586 The National Integrated Protected Areas System Act of 1992**]

The initial components of the NIPAS were made up of areas proclaimed, designated or set aside by law, presidential decree, presidential proclamation or executive order, before the effectivity of this Act in 1992. Any additional areas shall be by recommendation of the DENR Secretary to the President, who shall then issue a Presidential Proclamation protecting the area until such time when Congress shall have enacted a law declaring it as a protected area [**Sections 5 and 6, Republic Act no. 7586 The National Integrated Protected Areas System Act of 1992**]

The housing project is located downstream from the water reservoir (dam) and outside the forested portion of the 2,700 hectare La Mesa watershed.

Due to the limited area available, the 1,411 beneficiaries were selected through a raffle among the union members. In 1969, the MWSS Board of Trustees approved **Resolution No. 113, Series of 1969** for the sale of the subject realty in favor of the 1,411 awardees. On June 17, 1969, the Acting General Manager, Sergio M. Isada, was given the authority to sign the Deeds of Sale for the awardees, on behalf of the MWSS through **Resolution No. 283, Series of 1969**.

Despite this authority, Mr. Isada refused to sign the said deeds forcing the beneficiaries to file a case in 1971 to compel MWSS to execute the deeds of sale in their favor. In 1975, the Supreme Court ruled with finality that the MWSS must execute the necessary deeds of sale in favor of the 1,411 beneficiaries.<sup>7</sup>

In July 29, 1976, President Marcos issued **Letter of Instruction No. 440** mandating the transfer of the said 58-hectare tract of land to another site to give way to the Maynilad filtration plant. The said letter of instruction also directed the reservation of 60 hectares of the land, then being leased to the Capitol Hills Golf Club, as the new location for the housing project. However, the transfer to the new site was not immediately implemented because of the said existing lease. As it turned out, it was never implemented.

In 1989, the said housing site was again transferred to its present proposed site, which is upstream of the water reservoir. The site is also adjacent to Quirino Highway, across Amparo Subdivision and in the boundary of the cities of Quezon and Caloocan.

In 2006, a Deed of Absolute Sale was finally executed between the MWSS and the employee-beneficiaries, subject to the following important terms and conditions:

4. The VENDEES undertake to secure for their account the requisite Environmental Compliance Certificate (ECC) prior to the actual ground implementation of the Housing Project ...

5. *In the event, the requisite ECC for the ground implementation of the Housing Project will not be issued by the appropriate government agency, the parties hereby agree to execute such deeds, instruments or agreements as would provide for an alternative means by which the rights and*

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<sup>7</sup> Sergio M. Isada vs. Judge Juan L. Bocar, et.al., L-33535, January 17, 1975.

interests of both parties shall be equally protected and effectively carried out.<sup>8</sup>

The employee-beneficiaries remitted a total amount of Php3,091,400.00, as payment for the parcel of land.<sup>9</sup> The employee-beneficiaries then received the corresponding documents pertaining to the sale and Transfer Certificate of Title (TCT) no. 61126.

### ***Bantay Kalikasan and Save the La Mesa Coalition***

The Metropolitan Waterworks and Sewerage Systems (MWSS), as the principal distributor of water, was the main administrator of the La Mesa watershed for several years. However, MWSS was unable to maintain the whole area.

In 2001, the ABS-CBN Foundation environmental group, *Bantay Kalikasan* noticed that the forest cover of the La Mesa was already half gone and that there was a proliferation of informal settlers or squatters in the area.

On January 8, 2002, a Memorandum of Understanding (MOU) was signed between *Bantay Kalikasan*, as represented by its Managing Director Regina L. Lopez and the MWSS, as represented by its then administrator Hon. Jose F. Mabanta. The MOU turned over the maintenance of some 1,250 hectares of the watershed to *Bantay Kalikasan*.

The 15-year MOU contains a *Reservation Resource Management Framework* that involved a Re-forestation Programme; Species Re-introduction and Bio-diversity Programme; Environmental Education Campaign; Security Implementation Assistance; and Restoration of Abandoned resort/recreation facilities.<sup>10</sup>

Through this MOU, the *Bantay Kalikasan* initiated the *Save The La Mesa Watershed Project*, which has three phases: reforestation, protection and sustained protection. The project has successfully raised P68 million pesos in donations and has received the help of 15,000 volunteers. It has covered 1,338 hectares and has reached a 92.5% survival rate in

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<sup>8</sup> Deed of Absolute Sale between MWSS and the 1,411 awardees of the NWSA Employees Housing Project (NEHP) dated February 28, 2006.

<sup>9</sup> The previous remittance by the employee-beneficiaries of Php 98,600.00 has been deducted from the original purchase price of Php 3,190,000.00.

<sup>10</sup> "Memorandum of Understanding between ABS-CBN Foundation Inc. and MWSS" dated January 8, 2002.

the trees planted. The *Bantay Kalikasan* has also undertaken the relocation of close to 2,000 informal settlers from the La Mesa.

### **MWSS Employees v. *Bantay Kalikasan***

On January 25, 2003, *Bantay Kalikasan* received a letter from Mr. Genaro Bautista, the attorney-in-fact of the 1,411 beneficiaries of the MWSS Housing Project. The letter informed them of the forthcoming implementation of the MWSS Housing Project, situated near the La Mesa Watershed. The said implementation was by virtue of the Supreme Court decision<sup>11</sup> upholding the validity of the housing project and the subsequent line of resolutions issued by the MWSS transferring the project site to its present location.<sup>12</sup>

At first, *Bantay Kalikasan* posed no objection to the project and even stated that MWSS may commence the project once it has already identified the location, since the recognition of the housing project was also indicated in the 15-year MOU. The only limitations set by *Bantay Kalikasan* in that letter were the need for putting environmental mitigating measures to protect the watershed and to avoid contamination and ample compensation for whatever trees felled in the process of construction.<sup>13</sup>

Later that same year, the MWSS Board of Trustees commissioned the University of the Philippines - National Hydraulic Research Center (UP-NHRC) to conduct a study. The study dwelt on the potential effects of the housing project on the water of the La Mesa and the possible mitigating measures to ensure the water quantity and quality of the La Mesa watershed and reservoir.<sup>14</sup>

In 2004, the UP-NHRC released the Executive Summary of its Final Report and recommended that:

***...it will be in the best interest of MWSS and the general public who eventually utilize for drinking the water in the La Mesa Reservoir that the 58 hectares of the La Mesa watershed area being proposed for the MWSS Housing***

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<sup>11</sup> Sergio M. Isada vs. Judge Juan L. Bocar, et.al., L-33535, January 17, 1975.

<sup>12</sup> MWSS Board of Trustees Resolution nos. 55-89 dated March 21, 1989 and 187-90 dated September 27, 1990.

<sup>13</sup> Letter addressed to MWSS Administrator Hon. Orlando C. Hondrade from Ms. Gina Lopez of *Bantay Kalikasan* dated February 21, 2003.

<sup>14</sup> Excerpts from the Minutes of the Second Regular Meeting of the MWSS Board of Trustees dated April 25, 2003 by Ma. Lourdes R. Naz (OIC, Board Secretariat).



***Project shall remain a protected watershed area and not be converted to a housing project area.*** (Emphasis theirs).

The most compelling reason for this recommendation is the potential contamination of the reservoir water due to soil erosion caused by rainfall-induced runoff from the top soil layer that can be contaminated due to groundwater seepage and transport of pollutants from potential spill areas inside the proposed housing area into the outside watershed areas which lead to the reservoir.

There are also other reasons such as the foreseen difficulty or possible failure to secure a clearance from the Amparo Subdivision and the concerned LGUs to allow the discharge of the treated wastewater and the stormwater coming from the proposed housing area. At the same time, said treated wastewater and stormwater can not be allowed to enter the La Mesa Reservoir.<sup>15</sup>

MWSS Administrator Orlando C. Honrade sent a letter to then DENR Secretary Michael T. Defensor, echoing the concerns and recommendations of the UP-NHRC. Thereafter, *Bantay Kalikasan* wrote to Department of Environment and Natural Resources (DENR) Secretary Angelo Reyes posing its continuing opposition to the issuance of an Environmental Compliance Certificate for the construction of the housing units.

### **III. ISSUES**

The mandate of the Joint Committee is to ensure the protection of the environment. With this end in view, it conducted two (2) hearings on this specific controversy to shed light on the following issues:

- (1) The steps to be taken to protect the La Mesa watershed;
- (2) The possible effects of the construction of housing units on the quality and quantity of the water of the La Mesa watershed and the availability of mitigating measures to prevent contamination of the water and the cost thereof; and
- (3) The suitability of establishing a housing project within the watershed.

### **IV. FINDINGS**

#### **FIRST ISSUE: STEPS TO BE TAKEN TO PROTECT THE LA MESA WATERSHED**

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<sup>15</sup> Leonardo Q. Liongson, "A Study on the Effects of the Proposed MWSS Housing Project on the La Mesa Watershed and Reservoir: An Executive Summary," *University of the Philippines -National Hydraulic Research Center* (2004).

All resource persons present during the hearings agreed that the La Mesa watershed deserves utmost protection. However, the DENR itself acknowledged that the failure to declare the La Mesa watershed as a protected area has led to the present situation wherein the lands within the reservoir are used for purposes other than preserving the water therein. This highlights the need for the immediate execution of measures to protect the watershed, that is, either through: 1) a presidential proclamation, decree or executive order that would include La Mesa as an the initial component of the National Integrated Protected Area Systems (NIPAS) Law; or 2) through the passage of a law that would declare La Mesa as a protected area.

During the second hearing of the Committee, the DENR manifested that it is in the process of completing the Protected Area Sustainability Assessment (PASA), which is the necessary first step for the inclusion of La Mesa watershed as an initial component of the NIPAS. **The PASA will determine the biodiversity within the La Mesa watershed and the extent of protection that must be accorded to it.**

The inclusion of the La Mesa watershed as an initial component of NIPAS and its eventual declaration as a protected area through Congressional action will prevent MWSS from further alienating lands within the reservoir just to satisfy its contractual obligations.

In the meantime, both the DENR and Bantay Kalikasan agree that the activities within La Mesa watershed should be limited and regulated consistent with its original purpose as a reservoir and the need to protect it.

## **SECOND ISSUE: EFFECTS OF THE HOUSING PROJECT ON THE WATER QUALITY AND QUANTITY OF THE LA MESA WATERSHED**

### **The UP-NHRC Study**

From August to December 2003, the UP-NHRC conducted a study on the potential effects of the MWSS Housing Project on the water quality and quantity of the La Mesa watershed and the possible mitigating measures that could be utilized to address these effects. The UP-NHRC came up with an executive summary which recommended that the La Mesa watershed should not be converted into a housing project area. The executive summary was based on an original report, which the UP-NHRC did not submit to the

Committee. Despite several invitations, the author of the report, Dr. Leonardo Q. Liongson, also did not appear before the Committee.

Some of the salient findings under the executive summary are quoted hereunder:

### **Location**

The proposed MWSS housing project lies in the two sub-basins of the La Mesa Watershed...the proposed housing area crosses two major creeks of the watershed.<sup>16</sup>

### **Surface Water Quality<sup>17</sup>**

- "The pH of the water is within standard (Class A) except for sample 1."
- "The organic matter content is...higher than standard. The possible sources...are excreta from grazing animals and decaying plants and animal matter."<sup>18</sup>
- "The total coliform level in samples 1 and 2 are about 100% higher than standard."
- "The present levels [metals, cyanide] are lower than standard levels."<sup>19</sup>

### **Groundwater Quality**

Total dissolved solids are higher than standard levels. The 5-day BOD at 20 [degrees centigrade] and the coliform content (both local and fecal) are higher than standard levels. **The presence of such levels of organic matter and fecal coliform content is attributable to the existing settlements within the vicinity of the proposed housing site.** The levels of the heavy metals of interest are all much lower than standard levels.<sup>20</sup> (*Emphasis ours*)

### **Hydrologic Analysis of Rainfall-runoff and Flood and Drainage Study**

Being inside the watershed, the ground terrain of the subdivision generally slopes towards the reservoir. **Storm run-off and domestic sewage would therefore naturally flow into the reservoir carrying with them pollutants that could contaminate the reservoir and thereby endangering its water quality.**<sup>21</sup> (*Emphasis ours*)

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<sup>16</sup> Leonardo Q. Liongson, "A Study on the Effects of the Proposed MWSS Housing Project on the La Mesa Watershed and Reservoir: Final Report," University of the Philippines -National Hydraulic Research Center (December 2003), p. 3.

<sup>17</sup> The surface water quality was tested and compared to the class A standard in DENR Administrative Order no. 34, Series of 1990. This is the type of water that requires complete treatment.

<sup>18</sup> This statement explicitly means that the water is already polluted. However, this water will undergo treatment and filtration before distribution.

<sup>19</sup> Liongson, *ibid.* p. 35.

<sup>20</sup> *Ibid.* p. 41.

<sup>21</sup> Liongson, *ibid.* p.43.

## Land Use

...project is considered environmentally critical. The La Mesa Reservoir is the major source of water supply for Metro Manila and its Watershed falls under the "protected area" category. As per the Housing and Land Use Regulatory Board (HLURB) Town Planning Guidelines, any form of development within an area zoned as a Watershed and Reservoir shall not be allowed owing to the sensitive nature of a watershed, especially one which provides the water supply requirements of the metropolitan population. The Land Use Plan and Zoning Ordinance of Quezon City designates the area as a "protected area" and discourages any type of development.<sup>22</sup> (Emphasis ours)

### 20-year Simulation for Groundwater Flow and Contaminant

Simulations indicate that the contaminant plume progresses towards the reservoir. However, because of dilution...movement of the plume based on the detectible concentration becomes negligible after ten or more years although the real extent of the plume goes beyond the boundary of the housing area. Since the top soil is also contaminated, the possibility of soil erosion could be the means by which the reservoir will be contaminated.<sup>23</sup>

### Conclusion and Recommendations from the Executive Summary of the UP-NHRC Study<sup>24</sup>

The findings of Dr. Leonardo Q. Liongson were summarized as follows:

Study Components	Methodology/Schemes	Results / Findings	Conclusion/Remarks Recommendations
<b>C. Flood Control &amp; Drainage</b>	10-year return period	Cost Estimates:	1. Detailed design, construction, operations and maintenance of the main flood control and drainage system are responsibilities of the prospective homeowners and developer/contractor.  2. Design and construction of the drainage laterals is also the responsibility of prospective
	Storm Flood Hydrograph;	<i>Prelim. &amp; General: 1.87M</i>	
	Engineering Measures:	<i>Detention Pond: 19.78M</i>	
	Drainage mains	<i>Main Drains: 8.19M</i>	
	Detention pond	<i>Earth Embank.: 0.45M</i>	
	Pumping station	<i>Diversion Canal: 0.14M</i>	
	Discharge pipe	<i>At Quirino Ave:</i>	
	Collector canal		

<sup>22</sup> *Ibid.*, p.97.

<sup>23</sup> *Ibid.*, p.113.

<sup>24</sup> Leonardo Q. Liongson, "A Study on the Effects of the Proposed MWSS Housing Project on the La Mesa Watershed and Reservoir: An Executive Summary," University of the Philippines -National Hydraulic Research Center (2004).

	<p>Cross culverts at Quirino Ave.</p> <p>Earth embankment</p> <p>Diversion canal</p> <p>(freeboard of the detention pond can accommodate a 40-year flood event).</p>	<p><i>Drainage Canal: 4.00M</i></p> <p><i>Outfall Culverts: 0.26M</i></p> <p><i>Pumping Station: 6.81M</i></p> <p>Total Cost: P41.51M</p>	<p>homeowners and developer/contractor.</p> <p>3. Right-of-way for drainage canal and outfall culverts at Quirino Avenue towards Amparo Subdivision will need to be secured from the DPWH, LGU of Caloocan, &amp; homeowners of Amparo Subdiv.</p>
<b>D. Potential Environmental Impact</b>	<p>Impacts of construction activities</p> <p>Impacts of domestic solid and liquid wastes</p> <p>Other impacts</p>	<p>Surface run-off during rainfall of silts and sediments; groundwater contamination and surface run-off to the reservoir due to potential chemical sources during construction; dust deposition; disruption of soil and vegetation; soil compaction due to heavy machinery.</p> <p>Potential groundwater contamination; surface water contamination of receiving streams and reservoir.</p> <p>Felling of trees; increase of impervious area due to housing project, thus increasing run-off and leading to more sedimentation and siltation in streams and degradation of stream biota; introduction of invasive exotic species.</p>	<p>1. Impose a temporary and a permanent erosion control plan; limit if not prohibit storage sites of chemicals; adopt a low concentration termite-control system; minimize clearance of vegetation.</p> <p>2. Mitigating measures for solid waste management: absolute prohibition of dumpsites or temporary holding place for solid waste; adoption of the municipal solid waste collection system.</p> <p>3. Mitigating measures for wastewater management (described in the following row entries for Wastewater Treatment)</p>
<b>E. Wastewater Treatment</b>	<p>1600 households, 6 persons per household</p> <p>Treated wastewater is mixed with storm water and pumped out to the drainage outfalls at</p>	<p>Option I:</p> <p><i>Equipment Cost: 19.18M</i></p> <p><i>Sewer System: 11.83M</i></p>	<p>1. Domestic wastewater should not be discharged with or without treatment inside the watershed and/or leading to the reservoir.</p>

	<p>Quirino Ave.</p> <p>Option I: Combined black and gray water</p> <p>Option II: Separately collected black and gray water</p>	<p><u>Land: 15.18M</u></p> <p>Total Capital Cost: 46.19M</p> <p>Ann. Oper. Cost: 17.58M</p> <p>Ann. Depreciation 1.55M</p> <p>Option II:</p> <p><i>Equipment Cost: 16.25M</i></p> <p><i>Sewer System: 20.70M</i></p> <p><u>Land: 13.85M</u></p> <p>Total Capital Cost: 50.80M</p> <p>Ann. Oper. Cost: 8.16M</p> <p>Ann. Depreciation 1.85M</p>	<p>2. Wastewater from houses should be brought to the treatment facility by means of leak-free and impermeable sewer pipes.</p> <p>3. Effluents from septic tanks should not be allowed to leak into the soil.</p> <p>4. Treated effluent may be brought to streams of neighboring villages provided there is prior approval from concerned LGU.</p> <p>5. The homeowners and developer/contractor will need to spend for the capital cost (equipment + sewer system + land cost) of the wastewater treatment plant;</p> <p>6. The homeowners will shoulder the operating cost of the wastewater treatment plant.</p> <p>7. The adoption of Option II is recommended, since its lower operating cost offsets its higher capital cost and it is easier to maintain.</p>
<p><b>F. Groundwater Modeling</b></p>	<p>FEMWATER module of the Groundwater Modeling System (GMS) for sub-surface contaminant transport simulation;</p> <p>Model area – entire northwest subcatchment of the La Mesa</p>	<p>Groundwater contamination from leakage reaches the three layers within the first 30 to 90 days;</p> <p>Infiltration of water from rainfall dilutes the contaminant plume;</p>	<p>After leakage of pollutants (due to accidental spillage or possible structural failures of sewer lines and treatment tanks during major earthquakes), the contaminant transport in the top soil layer</p>

	watershed;  Three-layer model;  20-year simulation of non-reactive, no-decay contaminant.	Contaminant plume progresses towards the reservoir at diluted or negligible concentration but the areal extent of the plume goes beyond the boundary of the housing area  The top soil is highly contaminated by leakage; and soil erosion will be the means by which the reservoir will be contaminated.	will move beyond the boundary of the housing area; the natural soil erosion in these outside contaminated areas during later rainfall-run-off events will be the means by which the reservoir will be contaminated more rapidly.
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It is important to note that apart from the findings of the study on possible contamination, it also discussed that the mitigating measures were too costly to be applied feasibly to the project. The estimated cost to construct the mitigating measure is Php50.80 million while the estimated annual operation cost for this measure is Php8.16 million.<sup>25</sup>

#### **Opposition to the UP-NHRC Findings and Conclusion**

Arguments raised by the MWSS employees against the final recommendation of the UP-NHRC study are as follows:

- (1) the Executive Summary which contained the final recommendation is contrary to the original report;
- (2) the cost of the mitigating measures presented in the study is too high and that there are at present low-cost, but efficient measures to prevent pollution of the water;
- (3) there are many existing subdivisions in the area of the La Mesa watershed including the so-called "executive housing" situated within the La Mesa watershed, which could likewise cause contamination but were nonetheless allowed; and
- (4) the La Mesa watershed is not the main source of water for Metro Manila.

Dr. Edgardo Alabastro, an advocate for the refining and strengthening of the Environmental Impact Assessment system, is of the position that the recommendation in

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<sup>25</sup> *Ibid.*

the Executive Summary was not in conjunction with the findings as contained in the Final Report

Dr. Alabastro refuted the reason given by the Liongson report that there is a possibility of soil erosion by saying that mitigating measures can be provided to address the said issue. Furthermore, he stated that such soil erosion only happens during the on-site preparation stage.<sup>26</sup>

He also asserts that the given costs of the mitigating equipment were too high and that there are other technologies, which are more cost-effective. Dr. Alabastro opined that the issue of affordability of possible technology is an internal issue of the MWSS employees and that there are current institutional mechanisms under the Implementing Rules and Regulations of the Clean Water Act "that will significantly reduce the cost exposure for waste water treatment."<sup>27</sup>

Another point raised by Dr. Alabastro is that the contamination will only come from domestic wastes which "are in fact currently experienced since the existing commercial establishments and housing subdivisions within the vicinity of the Reservoir are located upstream of this infrastructure."<sup>28</sup>

### **Findings of the Committee**

The Committee is of the view that the cost of mitigating measures should not remain an internal issue between MWSS and the employee-beneficiaries because of the possible deleterious effects of the non-implementation or improper execution of said measures. The safety of the Metro Manila residents dependent on water from La Mesa should not be premised on the discretion of the two parties, but rather by the appropriate government agencies. This is consistent with the provision of the 2006 deed of sale which requires for its effectivity the prior grant of an ECC. Moreover, as testified by NAMRIA, the location of the proposed housing site is within the La Mesa watershed's mountain divide and therefore

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<sup>26</sup> According to the UP-NHRC study, the project area is predominantly level to rolling terrain (0 to 18% slope), which is considered to be non-environmentally critical (Liongson, *ibid.*, p.99).

<sup>27</sup> "An Initial Environmental Examination of the Proposed Housing Project of the National Waterworks and Sewerage Administration Employees." (July 2006) (pp.1-5-6) (p.90).

<sup>28</sup> "An Initial Environmental Examination of the Proposed Housing Project of the National Waterworks and Sewerage Administration Employees- Executive Summary." (July 2006) (p.ES-18-19).



all water discharge from the proposed housing will naturally flow in the impounding dam. Thus, the risk of contamination of the water of La Mesa will always be present if the housing project pushed through in the current proposed site.

### **THIRD ISSUE: CONSTRUCTION OF THE HOUSING PROJECT AT THE LA MESA WATERSHED**

#### **Classification of the La Mesa Watershed**

The root of the controversy may be traced to the lack of a formal declaration characterizing the La Mesa watershed as an environmentally-critical area. Although, the formal declaration by itself would not completely prevent construction in the area since the same may be necessary for the processing of the water and for eco-tourism, the NIPAS law can limit and/or restrict certain activities in an area designated as protected area. As pointed out by DENR Secretary Angelo T. Reyes,<sup>29</sup> the designation of La Mesa as a protected area can serve as an invisible cloak to protect the area against further abuse as activities therein will be restricted.

During the hearing last June 22, 2006, Secretary Reyes stated that the department is already in the process of classifying the area. The department is currently undertaking an independent study to look into the biological significance of the area, in relation to the Environmental Compliance Certificate that is necessary for the structures built or to be built in this area. He said that the results will be available in one month.

The latest update from the Secretary revealed that the DENR is currently conducting a Protected Area Sustainability Assessment (PASA) on the area. The initial findings showed the biological significance of the area, in the following manner:

...there are 86 species of flora planted belonging to 31 families. Five species are critically endangered, 3 are endangered, and 4 are vulnerable under the IUCN category. For fauna, there are 12 species of endemic birds, 7 migrant, 1 migrant resident and 23 residents. Among the threatened species in the area are the osprey and the monitor lizard.<sup>30</sup>

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<sup>29</sup> "An Initial Environmental Examination of the Proposed Housing Project of the National Waterworks and Sewerage Administration Employees- Executive Summary." (July 2006) (p.ES-18).

<sup>30</sup> Letter from DENR Secretary Angelo T. Reyes to Sen. Pia Cayetano dated July 21, 2006.

The Secretary also stated that more detailed studies will be conducted in the coming days to enable them to “recommend the most appropriate protection and management mechanism for the La Mesa watershed, based on best scientific information available.”<sup>31</sup>

### **Environmental Compliance Certificate**

The Deed of Absolute Sale of the MWSS beneficiaries provides that the prior issuance of an ECC is necessary for them to begin construction in the area. The MWSS beneficiaries raise the following issues to this provision:

- (1) In 1999, an ECC was issued for what has been reported as the “executive housing” of MWSS; and
- (2) *Bantay Kalikasan* has no ECC.

The MWSS Administrator Orlando Hondrade asserted that an ECC was issued to 3.3 of the 4.5 hectare housing site. LLDA stated that the MWSS should secure a new ECC for the entire “executive housing.” Administrator Hondrade assured the Committee that they will be applying for a new ECC for the said housing project.

For *Bantay Kalikasan’s* part, the project director, Mr. Jaime Jose Fernandez and later Ms. Regina Lopez countered that there was no need to get an ECC for refurbishing or renovating the existing structures.<sup>32</sup> They also noted that they have written to both the *Environmental Management Bureau-NCR (EMB-NCR)*<sup>33</sup> and the *Laguna Lake Development Authority (LLDA)*<sup>34</sup> requesting for the issuance of a Certificate of Non-Coverage (CNC).

During the hearing, it was revealed that these letters were not acted upon because the documents submitted were insufficient. When the LLDA was asked why *Bantay Kalikasan* was not informed about this, the LLDA merely said that they have no further

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<sup>31</sup> *Ibid.*

<sup>32</sup> However, they do agree that they have to get ECCs for the new structures to be built for the park. These structures are in conjunction with the further development of the area as an eco-tourism site and would not be inconsistent with their goal of protecting the environment. An example of an eco-park in a forest area is the Amazon Ecopark Jungle Lodge “built amid the largest concentration of flora and fauna in the middle of the Amazonian basin and the banks of Rio Taruma a tributary of the Rio Negro...” (<http://www.amazonecopark.com.br/en-us/Localizacao.asp>). Another example is Kula Eco Park in Fiji which is “in a valley of coastal forest less than 1,000 meters from the ocean...” (<http://www.fijiwild.com/pages/about.htm>).

<sup>33</sup> Letter to Hon. Sixto E. Tolentino, Jr., Regional Director of the Environmental Management Bureau-NCR dated April 20, 2005.

<sup>34</sup> Letter to Hon. Edgardo C. Manda, General Manager, Laguna Lake Development Authority dated May 5, 2005.

information about the matter. Currently, *Bantay Kalikasan* has already filed the necessary documents in support for their application for a CNC.

However, the issuance of an ECC in favor of the “executive housing” and the absence of an ECC in favor of *Bantay Kalikasan* do not squarely answer the issue of the ECC provision in the Deed of Absolute Sale of the MWSS beneficiaries.

### **Executive Housing**

During the hearings, the existence of a so-called “executive housing” of the MWSS officers was brought to the fore. Administrator Hondrade has repeatedly insisted that this was hardly an “executive housing” because of its diminutive size.

NAMRIA testified that the “executive housing” is located outside the mountain divide, which means that wastewater won’t drain into the impounding dam. However, it is worth noting that the so-called “executive housing” is situated nearer to the impounding dam, compared to the proposed “rank-and-file” housing.

The Committee maintains that the fact that the “executive houses” have already been constructed makes it all the more necessary for the MWSS administration to apply the same stringent standards required for the “rank and file housing,” that is to secure an ECC and to implement the necessary mitigating measures to protect the watershed.

### **An Alternative Housing Site**

Due to the possible environmental impact of the housing site and the absence of an ECC, the MWSS has called upon the provisions of the Deed of Absolute Sale issued in favor of the MWSS beneficiaries<sup>35</sup> and proposed an alternative site located in Antipolo.

During the June 22, 2006 hearing, Mr. Bautista voiced out the strong opposition of the MWSS beneficiaries against the proposed new site. They said that the place was too far

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<sup>35</sup> The relevant provision of the Deed of Absolute Sale is as follows:

5. In the event, the requisite ECC for the ground implementation of the Housing Project will not be issued by the appropriate government agency, the parties hereby agree to execute such deeds, instruments or agreements as would provide for an alternative means by which the rights and interests of both parties shall be equally protected and effectively carried out. [**Deed of Absolute Sale between MWSS and the 1,411 awardees of the NWSA Employees Housing Project (NEHP) dated February 28, 2006**].

and dangerous. They did not waver in this opposition, even when *Bantay Kalikasan's* Ms. Gina Lopez offered to construct a road and a school building in the area. Mr. Bautista finally stated that they will only be open to an alternative site within Quezon City.<sup>36</sup>

However, this does not bar the MWSS beneficiaries from submitting a complete study to the DENR and securing an ECC. The study would have to show that the mitigating measures proposed will be more than sufficient to prevent prejudice to the water quality and quantity of the La Mesa. Furthermore, it must show that the costs of such mitigating measures would be affordable to the beneficiaries and that it can be operated continuously.

The MWSS beneficiaries must be given this opportunity, because they did not choose the area. It was MWSS that primarily caused this confusion, because it parceled out lands for a use inconsistent with the protection of the watershed. Despite passage of time however, the MWSS beneficiaries have not yet filed an application for an ECC nor had they submitted to this Committee a study outlining the proposed mitigating measures to prevent the pollution of the water and the cost of construction and operation thereof.

## **V. CONCLUSIONS**

Without doubt, the La Mesa watershed deserves protection since it is the primary sources of potable water in Metro Manila. Studies have shown that the construction of the MWSS housing project will have possible deleterious effects in the water quality and quantity of the La Mesa watershed.

Based on the initial findings of the DENR and the nature of the watershed's use, it is indisputable that the La Mesa watershed should be protected. It is imperative that the PASA be finalized at the soonest possible time to determine the system that should be adopted so a law that will prohibit the further privatization or alienation of the land within the watershed can be put into place.

The Committee recognizes and honors the right of the employees to the housing project, which has been deprived from them for decades. Concomitantly, the Committee also acknowledges that Metro Manila residents depend largely on the La Mesa reservoir for

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<sup>36</sup> In reference to the provisions of Letter of Instruction no. 440, issued by President Marcos on July 29, 1976.

potable water supply. Sustainable development dictates that there should be a balance between social progress and environmental protection. For this reason, the Committee endeavors to strike a balance between these rights to arrive at an equitable and just solution.

The Committee also takes note of the existence of an "executive housing" purportedly owned by several officers of the MWSS and apparently nearer to the La Mesa watershed. This too has been taken into account by the Committee so as to ensure that social equity between MWSS officers and employees are observed.

Considering, the potential risk of the said housing project to the water quality and quantity of the La Mesa watershed, the MWSS is duty-bound under the terms of the Deed of Absolute Sale to find an alternative site for the MWSS beneficiaries which is acceptable to them. This is the most feasible alternative in this case.

## **VI. RECOMMENDATIONS**

Based on the foregoing findings, one thing remains true --- the safety of the water quality and quantity of the Philippines can never be compromised. The plight of the 1,411 employee-beneficiaries, though deplorable, must be weighed against the heavier general public interest in the preservation of the La Mesa watershed. Towards this end, the Committee recommends:

### **1. THE EXECUTIVE BRANCH OF GOVERNMENT**

#### **1.1. For the Department of Environment and Natural Resources to:**

- 1.1.1. Submit at the soonest possible time the Protected Area Sustainability Assessment (PASA) on the La Mesa Watershed;
- 1.1.2. Cause the inclusion of the La Mesa watershed from the coverage of NIPAS;
- 1.1.3. Cause the cancellation of the TCT of La Mesa watershed to prevent further alienation of the parcel of land covered by the said TCT;
- 1.1.4. Cause the clarification of jurisdiction of relevant government agencies in the ECC process; and
- 1.1.5. Strictly implement the provisions of PD 705 which protects the country's watersheds from exploitation and destruction.

**1.2. For the Laguna Lake Development Authority to:**

- 1.2.1. Strictly enforce the provisions of Presidential Decree no. 1586 or the Environmental Impact Statement Systems Law and ensure that the La Mesa watershed is amply protected from polluters;
- 1.2.2. Ensure that the “executive housing” will not affect the quality of water in La Mesa; and
- 1.2.3. Penalize or close establishments which pose risk of contamination to the water of the La Mesa watershed;

**1.3. For the MWSS to:**

- 1.3.1. Look for an alternative site reasonably acceptable to the MWSS beneficiaries preferably in the Quezon City area;
- 1.3.2. Cease and desist from further alienating and disposing the land within the La Mesa watershed;
- 1.3.3. Fully comply with its mandate to ensure adequate and safe drinking water to the residents of Metro Manila.
- 1.3.4. Secure the necessary ECC for the “executive housing”; and
- 1.3.5. Implement in the “executive housing” the necessary mitigating measure to guarantee that the water of La Mesa will not be affected by the said housing project.

**2. THE LEGISLATIVE BRANCH OF GOVERNMENT TO:**

- 2.1 In furtherance with the Constitutional guarantees on the protection of the environment, enact a law declaring the La Mesa Watershed as a protected area;
- 2.2 Continue to perform its oversight function to ensure faithful compliance with the provisions of R. A. No. 9275 or the Clean Water Act;

**3. For the MWSS Beneficiaries to:**

- 3.1 Accept a reasonable alternative site for their housing project or look for an alternative site for their housing project which is reasonably acceptable to MWSS; and
- 3.2 Execute the necessary documents for the settlement of the issue regarding their housing project.

**4. For Bantay Kalikasan to:**

- 4.1 Secure the necessary ECC or exemption from coverage thereto from the DENR/LLDA for the operation of the eco-park within the La Mesa Watershed;
- 4.2 Ensure that the La Mesa watershed is amply protected from the visitors of the eco-park;

- 4.3 Continue their reforestation project in the La Mesa watershed until the same is fully covered; and
- 4.4 Expand and strengthen their environmental awareness programs.